



SONOMA DEVELOPMENTAL CENTER SPECIFIC PLAN



Draft Environmental Impact Report

SCH # 2022020222

AUGUST 2022



Sonoma Developmental Center Specific Plan

Draft Environmental Impact Report

August 2022

Prepared for:
The County of Sonoma

Prepared by:
DYETT & BHATIA
Urban and Regional Planners

This page intentionally left blank

Table of Contents

Executive Summary.....	1
ES.1 Proposed Plan	3
ES.2 Areas of Known Controversy.....	7
ES.3 Alternatives to the Proposed Plan	10
ES.4 Impacts Summary and Environmentally Superior Alternative	13
1 Introduction	40
1.1 Purpose of the EIR.....	41
1.2 Approach and Scope of the EIR.....	43
1.3 Planning Process and Public Involvement	45
1.4 Other Relevant Plans and Environmental Studies	47
1.5 Organization of the EIR	48
2 Project Description.....	50
2.1 Location and Setting	51
2.2 Planning Context and Process	61
2.3 Purpose and Guiding Principles of the Proposed Plan	63
2.4 Proposed Plan	67
2.5 Project Buildout.....	77
2.6 Intended Uses of this EIR.....	81
3 Environmental Analysis	83
3.1 Aesthetics.....	85
3.2 Agriculture and Forestry Resources.....	110
3.3 Air Quality.....	138
3.4 Biological Resources	203
3.5 Cultural, Historic, and Tribal Cultural Resources	260
3.6 Energy and Greenhouse Gas Emissions	201
3.7 Geology, Soils, and Mineral Resources	201
3.8 Hazards and Hazardous Materials	236
3.9 Hydrology and Water Quality.....	270
3.10 Land Use and Planning	303
3.11 Noise	323
3.12 Population and Housing.....	360
3.13 Public Services and Recreation.....	379

3.14	Transportation	409
3.15	Utilities and Service Systems	453
3.16	Wildfire	490
4	Alternatives.....	523
4.1	Alternatives Analysis.....	524
4.2	Alternatives Analyzed in This EIR	529
4.3	Alternatives Considered but Not Evaluated in Detail in this EIR	535
4.4	Impact Analysis of Alternatives.....	536
4.5	Environmentally Superior Alternative	570
5	CEQA Required Conclusions	578
5.1	Growth-Inducing Impacts.....	579
5.2	Cumulative Impacts	584
5.3	Significant and Unavoidable Impacts	605
5.4	Significant Irreversible Environmental Changes	606
6	List of Preparers	610
6.1	List of Preparers.....	611
A	Appendices	A
	Appendix A: NOP and Comment Letters.....	A-A
	Appendix B: Air Quality and GHG Data	A-B
	Appendix C: Cultural Resources.....	A-C
	Appendix D: Water Supply Assessment	A-D
	Appendix E: Noise Data.....	A-E
	Appendix F: Traffic Model Data	A-F
	Appendix G: Hazard Resource Materials	A-G

List of Figures

Figure 2.1-1: Regional Context.....	52
Figure 2.1-2: Planning Area Boundaries	54
Figure 2.1-3: SDC Core Campus	60
Figure 2.4-1: Proposed Land Uses	69
Figure 2.4-2: Districts.....	74
Figure 3.1-1: Scenic Landscape Units and Corridors	92
Figure 3.2-1: Farmland	126

<i>Figure 3.2-2: Distribution of Mapped Riparian-Specific Forest Types at SDC and in Vicinity</i>	<i>127</i>
<i>Figure 3.2-3: Distribution of Mapped Mixed Evergreen and Redwood Forests at SDC and in Vicinity.....</i>	<i>128</i>
<i>Figure 3.2-4: Distribution of Mapped Oak Woodlands at SDC and in Vicinity</i>	<i>129</i>
<i>Figure 3.3-1: BAAQMD Permitted Stationary Sources (2018), Mobile Sources, and Sensitive Receptors</i>	<i>164</i>
<i>Figure 3.4-1: Habitat Types</i>	<i>212</i>
<i>Figure 3.6-1: California Energy Consumption by Source, 2020</i>	<i>224</i>
<i>Figure 3.7-1: SDC Project Geologic Map</i>	<i>211</i>
<i>Figure 3.7-2: Fault Zone Map</i>	<i>214</i>
<i>Figure 3.7-3: Regional Liquefaction Map</i>	<i>217</i>
<i>Figure 3.7-4: Mineral Resources Map</i>	<i>223</i>
<i>Figure 3.8-1: Site Features Related to Phase I RECs</i>	<i>258</i>
<i>Figure 3.8-2: Site Features Related to Phase II Investigation</i>	<i>259</i>
<i>Figure 3.8-3: Hand Auger Sampling Locations</i>	<i>260</i>
<i>Figures 3.9-1: Flood Hazard Areas</i>	<i>288</i>
<i>Figure 3.9-2: Map of Fern Lake Dam Inundation Hazards</i>	<i>289</i>
<i>Figures 3.9-3: Map of Suttonfield lake Dam Inundation Hazards</i>	<i>290</i>
<i>Figure 3.10-1: Existing Uses at SDC.....</i>	<i>309</i>
<i>Figure 3.10-2: Current Zoning</i>	<i>310</i>
<i>Figure 3.11-1: Future Noise Contours (2040)</i>	<i>355</i>
<i>Figure 3.14-1: Existing Circulation Network</i>	<i>419</i>
<i>Figure 3.14-2: Existing and Proposed Bicycle Network.....</i>	<i>423</i>
<i>Figure 3.14-3: Proposed Mobility Framework</i>	<i>430</i>
<i>Figure 3.14-4: Proposed Street Network.....</i>	<i>431</i>
<i>Figure 3.14-5: Average Daily Traffic Volumes on Arnold Drive</i>	<i>442</i>
<i>Figure 3.16-1: Slope</i>	<i>504</i>
<i>Figure 3.16-2: Fire Constraints.....</i>	<i>505</i>
<i>Figure 3.16-3: Evacuation Analysis – Scenario 1</i>	<i>513</i>
<i>Figure 3.16-4: Evacuation Analysis – Scenario 2</i>	<i>514</i>

List of Tables

<i>Table ES-1: Comparison of Key Characteristics.....</i>	<i>13</i>
<i>Table ES-2: Summary of Impacts.....</i>	<i>15</i>
<i>Table 2.5-1: Planning Area Residential Buildout Summary.....</i>	<i>79</i>
<i>Table 2.5-2: Planning Area Population Buildout Summary.....</i>	<i>80</i>

<i>Table 2.5-3: Planning Area Non-Residential and Employment Buildout</i>	
<i>Summary</i>	80
<i>Table 3.3-1: Federal and State Ambient Air Quality Standards</i>	140
<i>Table 3.3-2: CARB Recommendations on Siting New Sensitive Land Uses</i>	143
<i>Table 3.3-3: BAAQMD Construction Best Practices</i>	149
<i>Table 3.3-4: Ambient Air Quality Monitoring Data of Stations Nearest to the</i> <i>Planning Area (2018-2020)</i>	162
<i>Table 3.3-4: Ambient Air Quality Monitoring Data of Stations Nearest to the</i> <i>Planning Area (2018-2020)</i>	162
<i>Table 3.3-5: San Francisco Bay Area Air Basin Attainment Status</i>	165
<i>Table 3.3-6: BAAQMD Project-Level Air Quality Thresholds of Significance</i> <i>for Regional Criteria Pollutants and Precursors</i>	170
<i>Table 3.3-7: Proposed Policies that Support 2017 Clean Air Plan Control</i> <i>Measures</i>	185
<i>Table 3.3-8: Estimated Maximum Daily Operational Emissions with</i> <i>Proposed Plan (pounds per day)</i>	193
<i>Table 3.4-1: Special-Status Wildlife Observed at SDC</i>	221
<i>Table 3.4-2: Potential Special-Status Wildlife</i>	222
<i>Table 3.4-3: Potential Special-Status Plants</i>	228
<i>Table. 3.6-2: Estimated Operational Energy Consumption</i>	246
<i>Table 3.6-3: Transportation Energy Consumption by Mode</i>	247
<i>Table 3.6-4: Estimated Proposed Plan Operational GHG Emissions</i>	253
<i>Table 3.6-5: Comparison of GHG Emissions Efficiency Metrics</i>	254
<i>Table 3.6-6: Proposed Plan Implementation of Plan Bay Area 2050</i> <i>Strategies</i>	200
<i>Table 3.6-7: Support of Sonoma Climate Mobilization Strategy</i>	201
<i>Table 3.7-1: Soils Survey Characteristics</i>	219
<i>Table 3.10-1: Proposed Land Use Summary</i>	311
<i>Table 3.11-1: Groundborne Vibration Impact Criteria</i>	324
<i>Table 3.11-2 : Maximum Allowable Exterior Noise Exposures for Non-</i> <i>transportation Noise Sources</i>	327
<i>Table 3.11-3: Typical Noise Levels in the Environment</i>	333
<i>Table 3.11-4: Typical Levels of Groundborne Vibration</i>	341
<i>Table 3.11-5: Vibration Source Levels for Construction Equipment</i>	342
<i>Table 3.11-6: Vibration Damage Potential Threshold Criteria Guidelines</i>	343
<i>Table 3.11-7: Vibration Annoyance Potential Criteria Guidelines</i>	343
<i>Table 3.11-8: Typical Noise Levels for Construction Equipment</i>	350
<i>Table 3.11-9: Traffic Noise Analysis Summary</i>	352

<i>Table 3.12-1: Sonoma County Population, Housing, and Employment Projections, 2020–2040.....</i>	<i>367</i>
<i>Table 3.13-1: Fire Department Stations Serving the Planning Area.....</i>	<i>389</i>
<i>Table 3.13-2: Sonoma Valley Unified School District Schools.</i>	<i>391</i>
<i>Table 3.13-3: Sonoma Valley Unified School District Student Yield Factors</i>	<i>392</i>
<i>Table 3.13-4: Sonoma Valley Unified School District Student Generation Rates</i>	<i>402</i>
<i>Table 3.14-1: Existing VMT Summary.....</i>	<i>427</i>
<i>Table 3.14-2: Applied VMT Thresholds of Significance</i>	<i>435</i>
<i>Table 3.14-3: Projected Traffic Volumes in Plan Area</i>	<i>441</i>
<i>Table 3.14-4: Planning Area VMT Metrics</i>	<i>446</i>
<i>Table 3.15-1: Water Demand Estimates</i>	<i>468</i>
<i>Table 3.15-2: Wastewater Generation in the Planning Area</i>	<i>471</i>
<i>Table 3.15-3. Primary Solid Waste Disposal Facilities Serving the Planning Area ..</i>	<i>472</i>
<i>Table 3.15-4: Annual Solid Waste Disposal Per Capita (Sonoma County).....</i>	<i>487</i>
<i>Table 3.16-1: Peak Hour Travel Times with Fire Evacuation</i>	<i>517</i>
<i>Table 4.1-1: Summary of Alternatives.....</i>	<i>534</i>
<i>Table 4.5-1: Summary of Impacts for Alternatives.....</i>	<i>572</i>
<i>Table 5.1-1: Planning Area Population, Housing, and Job Growth Projections, 2020–2040.....</i>	<i>581</i>
<i>Table 5.1-2: Jobs-to-Housing Unit Ratio (2020 and 2040)</i>	<i>582</i>

This page intentionally left blank.

0 Executive Summary

Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential impacts of the proposed Sonoma Developmental Center (SDC) Specific Plan, referred to as the “Proposed Plan,” located in unincorporated Sonoma County, California. The State of California enacted Government Code Section 14670.10.5 that outlines the State’s goals and objectives for the Proposed Plan and disposition of the 945-acre property following the facility’s closure in 2018. In light of the statewide affordable housing crisis, State law stipulates that the Proposed Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities, and stipulates that the open space surrounding the 180-acre Core Campus be preserved as open space.

In December 2019, the State and the County of Sonoma entered into an agreement for the County to prepare a Specific Plan and related EIR that furthers the State’s objectives as outlined in State legislation for the site, undertake technical studies, and provide for community engagement in land use planning. The planning process was informed by land use, transportation, design, and policy considerations provided by the Planning Advisory Team (PAT), community, Planning Commission, County Board of Supervisors, and the State Department of General Services (DGS). This Draft EIR has been prepared on behalf of the County of Sonoma, in accordance with the California Environmental Quality Act (CEQA). The County of Sonoma is the lead agency for this EIR, as defined by CEQA.

An EIR is intended to inform decision-makers and the general public about the potential significant environmental impacts of a proposed project. See Chapter 1: Introduction for an overview of the purpose of the EIR and the organization of this document. The EIR also considers policies of the Proposed Plan that minimize significant impacts and evaluates feasible alternatives to the Proposed Plan that may reduce or avoid one or more significant environmental impacts. Based on the alternatives analysis, the EIR identifies an environmentally superior alternative.

This EIR is a program EIR that examines the potential effects resulting from implementing designated land uses, goals, and policies in the Proposed Plan. The impact assessment evaluates the Proposed Plan as a whole and identifies the broad, area-wide and regional effects that may occur with implementation. As a programmatic document, this EIR does not assess project-specific impacts that may result from developments pursuant to the Proposed Plan. To the extent that any future development project made possible by the Proposed Plan may have individual, site-specific impacts not addressed in this program EIR, such projects would be subject to separate, project-level environmental review, as

required by State law. Projects consistent with the Proposed Plan and the findings of this EIR may also be eligible for streamlined environmental review as permitted under CEQA. This EIR represents the County's best effort to evaluate the implementation and buildout of the Proposed Plan through its horizon year of 2040. While it is anticipated that conditions may change, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of development.

ES.1 Proposed Plan

The Proposed Plan was developed to guide development of the SDC Core Campus and preserve open space and natural resources on the SDC property. In 2019, the State and Sonoma County entered an agreement that allows the County to prepare a Specific Plan and related environmental review for future reuse of the property. The State owns the entire property and continues to control and operate the property throughout the Specific Plan process. Government Code Section 14670.10.5, the State legislation governing the planning and potential disposition framework for the site does not mandate that the State will accept the outcome of the County-driven process and requires DGS to proceed with actions that best represent the interests of the State. However, should the State dispose of the site to private or other non-State entities, the property will be subject to County regulatory control and the policies established in the Specific Plan.

The Proposed Plan was initiated to comprehensively examine the existing conditions in the SDC property (Planning Area) and to create a vision for the Planning Area's future. Although the Proposed Plan does not mandate or require a date by which buildout of the Planning Area must occur, a horizon year of 2040 is assumed for planning purposes. The purpose and objectives of the Proposed Plan, included below, inform the policies and implementing actions of the Proposed Plan. A full project description is included in Chapter 2 of this Draft EIR.

ES.1.1 Planning Area

The Planning Area includes all SDC property, encompassing approximately 945 acres – which includes a developed Core Campus covering approximately 180 acres, the 755 acres of contiguous open space, and the 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park. Open space includes many acres of valuable wildlife habitat, former agricultural land, recreational uses, and the Eldridge Cemetery, as

well as an existing network of trails and access roads. In addition, the site includes an extensive water system that includes two large reservoirs and water intake from Sonoma Creek, among other infrastructure. The Proposed Plan establishes ten districts within the Core Campus subarea—Historic Core, Core North Residential, Maker Place, Core South Residential, Fire House Commons, Creek West, Eldridge North, Agrihood, and Utilities—each of which is envisioned to have a distinct character and intermix of uses and products.

ES.1.2 Purpose

California Government Code Section 65450 states that planning agencies may prepare specific plans for the systematic implementation of the general plan for all or part of the area covered by the general plan. Once a specific plan is adopted, no rezoning, subdivision, use permit, development plan, or other entitlement for use shall be authorized for construction within the specific plan area that is not in substantial conformance with that specific plan. The Proposed Plan will guide the future of the SDC property, containing policies and programs to guide decision-making related to land use, circulation, infrastructure, historic preservation, community design, and the environment. The Proposed Plan is a document to be adopted by the County Board of Supervisors that serves the following purposes:

- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision;
- Establish long-range standards and criteria by which development will proceed that will guide County departments, Planning Commission, and Board of Supervisors decision-making, and establish standards for the conservation, development, and utilization of natural resources as applicable;
- Provide a basis for judging whether specific development proposals and public projects are aligned with plan policies;
- Plan in a manner that meets future land needs based on the projected population and job growth;
- Allow County departments, other public agencies, and private developers to design projects that will enhance the character of the Planning Area, preserve environmental resources, and minimize hazards; and
- Provide the basis implementing regulations, programs, capital improvements, implementation actions, and financing measures.

ES.1.3 Objectives

The Proposed Plan provides the basis for the Planning Area's land use and development policy and represents community priorities that will govern development and conservation. Specific guiding principles that underpin the overall strategy, policies, design, and investments that are included in the Proposed Plan include the following:

- **Promote a Vibrant, Mixed-Use Community.** Promote a diverse and integrated mix of residential development and employment uses, including research, education, office, retail, and small businesses, to promote optimal development patterns and site revitalization, and provide economic opportunities for Sonoma Valley communities.
- **Emphasize a Cohesive Sense of Place and Walkability.** Establish a cohesive visual landscape with consistent streetscapes and improved sidewalks within the district. Locate land uses and enhance the existing street network to encourage development of a walkable and pedestrian-friendly environment with gathering spaces, diverse activities, and connections within and to surrounding communities and regional trail systems. Ensure that new development complements the adjacent communities of Glen Ellen and Eldridge.
- **Integrate Development with Open Space Conservation.** Promote a sustainable, climate-resilient community surrounded by preserved open space and parkland that protects natural resources, fosters environmental stewardship, and maintains and enhances the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. Support the responsible use of open space as a recreation resource for the community.
- **Balance Redevelopment with Existing Land Uses.** Use recognized principles of land use planning and sustainability to gauge how well proposed land uses protect public trust resources and fit the character and values of the site and surrounding area, as well as benefit local communities and residents.
- **Promote Sustainability and Resiliency.** Promote sustainable development practices in building and landscape design. Plan infrastructure efficiently and sustainably, conserving water and creating opportunities for water reuse and recharge. Proactively plan for community safety in natural disasters, especially ensuring that emergency plans and egress routes are in place with adequate capacity, and landscapes and buildings are designed with fire defenses.

- **Support Housing Development and Provide a Variety of Housing Types.** Promote housing to address Sonoma County's pressing housing needs and the State's key development objectives for the site. Support a range of housing opportunities, including affordable housing, workforce housing, mid-income housing, housing for individuals with developmental disabilities, senior housing, and market rate housing.
- **Balance Development with Historic Resource Conservation.** Preserve and adaptively reuse the Main Building and the Sonoma House complex, conserve key elements of the site's historic landscape, and strive to maintain the integrity of the historic district to the west of Arnold Drive by adaptive reuse of contributing buildings where feasible. Support a cohesive community feel and character, while allowing a diversity of architectural styles.
- **Promote Multi-Modal Mobility.** Promote car-free circulation within the site and promote transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, including through transit access, safe sidewalks and crossings, and regional bicycle routes. Ensure that new development takes into consideration resultant traffic and levels of transportation activity from when SDC was operational.
- **Ensure Long-Term Fiscal Sustainability.** Ensure that the proposed plan is financially feasible and sustainable, as financial feasibility is essential to the long-term success of the project. Ensure that the proposed plan supports funding for necessary infrastructure improvements and historic preservation while supporting the Sonoma Valley community's needs and galvanizing regional economic growth.
- **Embrace Diversity.** Accommodate the needs of people of diverse backgrounds, interests, and income levels, creating an inclusive, accessible, inviting, and safe place that preserves SDC's legacy of care and creates opportunities for marginalized communities.

ES.1.4 Projected Buildout of the Proposed Plan

Buildout refers to the estimated amount of new development and corresponding growth in population and employment that is likely to take place under the Proposed Plan through the planning horizon year of 2040. Buildout estimates should not be considered a prediction for growth, as the actual amount of development that will occur through 2040 is based on many factors, such as economic conditions, outside of the County's control.

Therefore, buildout estimates represent one potential set of outcomes rather than definitive figures. Additionally, the designation of a site for a specific land use in the Proposed Plan does not guarantee that a site will be developed or redeveloped at the assumed density during the planning period, as future development will rely primarily on the property owners' initiative and because the Specific Plan provides flexibility and development ranges. Buildout projections of this EIR do not include the total amount of potential development that could be accommodated by the Proposed Plan; rather, the buildout outlines the most likely development that would occur by 2040, including additional bonus housing units that would result from provision of affordable housing as mandated by the Proposed Plan.

The Proposed Plan is anticipated to result in a total buildout of approximately 2,400 residents, 1,000 housing units, and 940 jobs,¹ which would all be an increase from the current conditions of the SDC facility, closed in 2018 and largely vacant with some remaining uses.

ES.2 Areas of Known Controversy

Pursuant to Section 15123 of the CEQA Guidelines, the summary identifies areas of controversy known to the lead agency, including issues to be resolved. During the drafting of the Proposed Plan and this EIR, public agencies and members of the public were invited to provide feedback at various stages. The following topics are identified as areas of controversy, based on comments at public meetings on the Proposed Plan and at the EIR Scoping Meeting, and responses to the Notice of Preparation (NOP):

- **Amount of development.** Many members of the public expressed opposition to new housing development in the area, with many advocating for fewer housing units to be included, as well as elimination of the proposed hotel land use. Many of these community members were concerned about the potential impacts to traffic and to the “small town” community character of neighboring communities that could result from increased development. Conversely, some community members

¹ The 2040 population projection assumes 2.50 persons per household and a 5.0 percent housing vacancy rate. The total number of future jobs was calculated based on jobs-per-square-foot assumptions for retail/service, office, industrial and institutional/public jobs.

- pushed for more housing development to alleviate the housing crisis and regional need for affordable housing.
- **Connection to Highway 12.** The Proposed Plan features a new connection from SDC to Highway 12. Community members were split on the desirability of this connection. Some community members felt that such a connection would improve traffic conditions and could help during wildfire evacuations, while others felt that such a connection was not essential or would be detrimental to wildlife habitat.
 - **Wildlife corridor.** The majority of the responses to the NOP focused on biological resources, particularly on the established regionally-important wildlife corridor that runs along the northern edge of the Planning Area, linking large habitat areas of the Sonoma and Mayacama mountain ranges to the west and east of the site. This corridor is a critical habitat connection for special-status species, as well as other local wildlife, including mountain lions. Many community members expressed concern that new development could adversely impact the animals that use the wildlife corridor through greater exposure to humans, noise, and domestic pets, as well as to barriers like new buildings, fencing, and landscaping. Others wanted to see the corridor substantially widened from present conditions to alleviate the pinch-point near Lake Suttonfield.
 - **Wildfires and wildfire evacuation.** Since the 2017 Nuns Fire caused evacuations throughout Sonoma Valley and burned several utilitarian buildings in the open space on the far-eastern side of the SDC site, stopping just short of reaching the Core Campus, many community members have been resistant to any additional development that could impact evacuation times or could put new and existing residents at risk from wildfires.

Additionally, environmental impacts classified as significant and unavoidable have been identified in the resource topics of cultural and historic resources and transportation; in as much as they may be controversial to the general public, agencies, or stakeholders, they are described briefly here.

ES.2.1 Cultural, Historic, and Tribal Resources

Analysis of cultural and historic resources have been combined with tribal resources in Section 3.5 of this EIR. However, significant and unavoidable impacts pertain only to cultural and historic resources.

Development under the Proposed Plan would potentially entail the demolition of at least 13 percent of historically contributing resources that were originally documented as part of the Sonoma State Home Historic District (SSHHD), which has been determined eligible for listing in the California Register of Historical Resources (CRHR) and qualifies as a historical resource under CEQA. Further, new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of proposed goals 2-I and 2-J and policies 4-20 through 4-32 as well as the Standard Conditions of Approval (LU1 through LU-6) would partially compensate for the impact associated with demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable.

ES.2.2 Transportation

Goals and policies in the Proposed Plan are designed to reduce VMT in the Planning Area by fostering a greater diversity of land uses focused within a centralized, compact development footprint within the Core Campus area of the SDC property. This would be achieved through multi-modal transportation improvements—including increased pedestrian, bicycle, and transit connectivity. The Proposed Plan will have less than significant impacts for work-based VMT and for total VMT. While the Proposed Plan calls for measures such as traffic calming, transportation demand management, parking-related demand management, and other trip reduction measures, implementation of these VMT reduction measures—including a policy requiring future development projects under the Proposed Plan to meet a 15 percent reduction in VMT—and thereby reduce VMT performance metrics at the countywide level, this outcome is not guaranteed. This EIR conservatively assumes that VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than-significant levels, resulting in significant and unavoidable impacts, with no other feasible mitigation measures available. These impacts would also be cumulatively considerable.

ES.3 Alternatives to the Proposed Plan

The following alternatives are described and evaluated in Chapter 4 of this Draft EIR. Projected buildout for each of the alternatives and the Proposed Plan is summarized in **Table ES-1**.

ES.3.1 No Project Alternative

In light of the statewide affordable housing crisis, State law stipulates that the SDC Specific Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources to the greatest extent feasible. State law seeks to achieve these objectives while retaining flexibility in its actions, including through "...sale, lease, exchange, or other transfer" of the property to achieve the desired outcomes, and directs the Director of the California Department of General Services that, "A transfer, sale, or final disposition of any portion of the property or property interest authorized pursuant to this section shall not occur until the director has determined that the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state."

While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. Thus, the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan, and like in the Proposed Plan, these uses would be located at the Core Campus, and the surrounding land would be preserved as open space. However, the No Project Alternative could differ in the amounts and mixes of uses, densities/intensities of proposed development, and variations in development footprint within the Core Campus.

The probable range of development under the No Project Alternative is further fleshed out in the form of a No Project: Low Development and a No Project: High Development scenario. Development under No Project: Low Development would result in approximately 25 percent fewer housing units and jobs, leading to a possible population of 1,800 people, 750 housing units, and 700 jobs, with slightly more open space in the Core Campus

compared to the Proposed Plan. Development under No Project: High Development would result in approximately 25 percent additional housing units and an equal number of jobs compared to the Proposed Plan, as the market demand for non-residential uses (with the exception of a hotel) is limited and higher employment levels will reduce financial feasibility. This Alternative would lead to a possible population of 3,000 people, 1,250 housing units, and 940 jobs, and an increase in housing types, including affordable housing, compared to the Proposed Plan.

ES.3.2 Reduced Development Alternative

The Reduced Development Alternative would allow for similar housing development densities to the Proposed Plan, excluding the Agrihood District which would be entirely preserved open space. The buildout assumption for non-residential development would also slightly differ from the Proposed Plan, reducing the amount of non-residential square footage and employment in favor of greater active open space areas (parks, paseos). The remaining mix of land uses in the Reduced Development Alternative would be roughly similar to the Proposed Plan. Thus, the Reduced Density Alternative would use the same land use diagram as the Proposed Plan but would eliminate the Agrihood District for preserved open space and reduce the square footage of the Maker Place District in order to add more active open space uses. The Reduced Development Alternative would include a connection to Highway 12 as an emergency access route only, rather than a local road as in the Proposed Plan. Compared to the Proposed Plan, development under the Reduced Development Alternative could result in approximately 250 fewer housing units, leading to a possible population decrease of 600 people, and roughly 340 fewer jobs, and an increase in open space compared to the Proposed Plan. It is noted that that because of the reduced level of development and high-level of infrastructure and other costs involved, this alternative will be less economically viable—which is a defined project objective under State law—than the Proposed Plan.

Overall, the Reduced Development Alternative is projected to result in approximately 1,800 new residents, 750 new housing units, and 600 new jobs in the Planning Area by 2040.

ES.3.3 Historic Preservation Alternative

The Historic Preservation Alternative would achieve a higher level of historic preservation, with a focus on adaptively reusing existing buildings to the maximum extent and limiting development to within the current built footprint of the SDC facility (Core Campus) as with the other alternatives while incorporating existing sustainable features of the Proposed Plan (e.g., microgrid). Further, because the historic character of the existing buildings within the Sonoma State Home Historic District would be retained as much as possible, intensity and density of future development would be more constrained than with the Proposed Plan. As a result, overall development would be less than that of the Proposed Plan.

The mix of land uses in the Historic Preservation Alternative would be roughly similar to the Proposed Plan, with lower densities for residential and non-residential uses. Thus, the Historic Preservation Alternative would use the same general land use diagram as the Proposed Plan. Compared to the Proposed Plan, development under the Historic Preservation Alternative could result in approximately 550 fewer housing units, leading to approximately 1,320 fewer residents and roughly 340 fewer jobs than envisioned by the Proposed Plan. The open space available within the Core Campus in this Alternative would likely be less than in the Proposed Plan due to the lower densities of the existing buildings, and the location of existing buildings within areas reclaimed as open space in the Proposed Plan. The Historic Preservation Alternative also does not include a new connection to Highway 12.

Overall, the Historic Preservation Alternative is projected to result in approximately 1,080 new residents, 450 new housing units, and 600 new jobs in the Planning Area by 2040.

Table ES-1: Comparison of Key Characteristics

	<i>Growth Increment by 2040</i>			
<i>Plan/Alternative</i>	<i>Population</i>	<i>Housing (units)</i>	<i>Jobs</i>	<i>SR 12</i>
Proposed Plan	2,400	1,000	940	Local road connection
No Project: Low Development Alternative ¹	1,800	750	700	Emergency access connection only
No Project: High Development Alternative ¹	3,000	1,250	940	Local road connection
Reduced Development Alternative	1,800	750	600	Emergency access connection only
Historic Preservation Alternative	1,080	450	600	No

1. As discussed under the No Project Alternative, State decisions and actions if the Proposed Plan is not adopted may result in a range of outcomes. No Project: Low Development and No Project: High Development represent possible outcomes.

Source: Dyett & Bhatia, 2022

ES.4 Impacts Summary and Environmentally Superior Alternative

ES.4.1 Impacts Summary

Table ES-2 presents the summary of the significant impacts of the Proposed Plan identified in the EIR, and the Proposed Plan measures that reduce these impacts. Detailed discussions of the impacts and proposed policies that reduce impacts are in Chapter 3.

ES.4.2 Identification of Environmentally Superior Alternative

CEQA Guidelines (Section 15126.6) require the identification of an environmentally superior alternative among the alternatives analyzed. For the Proposed Plan, two impacts are expected to be significant and unavoidable, and 60 impacts were expected to be less than significant. The Reduced Development Alternative, No Project Low Development Alternative, and No Project High Development Alternative have the same outcomes of significance. The Historic Preservation Alternative would also have similar outcomes, except with less than significant historic resources impacts. Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan.

The Proposed Project fulfills the project objectives most completely, including providing greater levels of housing including affordable housing, and superior financial feasibility, with overall environmental impacts that are largely comparable between the Proposed Plan and the alternatives, with the exception of greater preservation of historic resources in the Historic Preservation Alternative.

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.1 Aesthetics			
3.1-1 Development under the Proposed Plan would have a substantial adverse effect on a scenic vista.	None required	Less than significant	Not applicable
3.1-2 Development under the Proposed Plan would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	Less than significant	Not applicable
3.1-3 Development under the Proposed Plan would not substantially degrade the existing visual character or quality of public views of the site and its surroundings in non-urbanized areas or conflict with applicable zoning and other regulations governing scenic quality in urbanized areas.	None required	Less than significant	Not applicable
3.1-4 Development under the Proposed Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.2 Agriculture and Forestry Resources			
3.2-1 Development under the Proposed Plan would not Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	None required	No impact	Not applicable
3.2-2 Development under the Proposed Plan would not conflict with existing zoning for agricultural use, or a Williamson Act contract.	None required	Less than significant	Not applicable
3.2-3 Development under the Proposed Plan would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).	None required	No Impact	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.2-4 Development under the Proposed Plan would not result in the loss of forest land or conversion of forest land to non-forest use.	None required	Less than significant	Not applicable
3.2-5 Development under the Proposed Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.3 Air Quality			
3.3-1 Implementation of the Proposed Plan would not conflict with or obstruct implementation of the applicable air quality plan.	None required	Less than significant	Not applicable
3.3-2 Implementation of the Proposed Plan would not result in a cumulatively considerable net increase of criteria pollutants for which the Project region is nonattainment under an applicable federal or State ambient air quality standard.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.3-3 Implementation of the Proposed Plan would not expose sensitive receptors to substantial pollutant concentrations.	None required	Less than significant	Not applicable
3.3-4 Implementation of the Proposed Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.4 Biological Resources			
3.4-1 Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.4-2 Implementation of the Proposed Plan would not have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.	None required	Less than significant	Not applicable
3.4-3 Implementation of the Proposed Plan would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	None required	Less than significant	Not applicable
3.4-4 Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.4-5 Implementation of the Proposed Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required	Less than significant	Not applicable
3.4-6 Implementation of the Proposed Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	None required	No impact	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.5 Cultural, Historic, and Tribal Resources			
3.5-1 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of individually significant historical resources pursuant to § 15064.5.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.5-2 Implementation of the Proposed Plan would cause a substantial adverse change to the significance of a historic district, as defined as physical demolition, destruction, relocation, or alteration of the historic district or its immediate surroundings such that the significance of the historic district would be materially impaired pursuant to § 15064.5.	None required. The Proposed Plan includes policies and actions that encourage the preservation of much of the historic character of the SDC campus. This includes retention, rehabilitation, and adaptive reuse of buildings, structures, and landscape features in the Core Campus area that contribute to the SSHHD, as well as the retention of contributing resources that are located in the hog and poultry area east of the Core Campus and the SDC water and sewage system to the west and north. New construction still has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. While proposed policies would help reduce these impacts to the maximum extent practicable, there are no mitigation measures available to avoid impacts to the historic district entirely.	Significant and unavoidable	Not applicable
3.5-3 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.5-4 Development allowed by the Proposed Plan would not have the potential to disturb any human remains, including those interred outside of dedicated cemeteries.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
<p>3.5-5 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <p>(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or</p> <p>(b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
Cumulative Impacts		Not Cumulatively Considerable	
3.6 Energy and Greenhouse Gas Emissions			
3.6-1 Implementation of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	None required	Less than significant	Not applicable
3.6-2 Implementation of the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	None required	Less than significant	Not applicable
3.6-3 Implementation of the Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	None required	Less than significant	Not applicable
3.6-4 Implementation of the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.7 Geology, Soils, and Mineral Resources			

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.7-1 Implementation of the Proposed Plan would not expose residents, visitors and employees, as well as public and private structures, to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismically related ground failure, including liquefaction; or landslides.	None required	Less than significant	Not applicable
3.7-2 Implementation of the Proposed Plan would not result in substantial soil erosion or the loss of topsoil.	None required	Less than significant	Not applicable
3.7-3 Implementation of the Proposed Plan would not locate structures on expansive soils or on a geologic unit or soil that is unstable, or that would become unstable as a result of new development under the Proposed Plan, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, or create substantial risks to life or property.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.7-4 Implementation of the Proposed Plan would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	None required	No impact	Not applicable
3.7-5 Implementation of the Proposed Plan would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	None required	Less than significant	Not applicable
3.7-6 Implementation of the Proposed Plan would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.8 Hazards and Hazardous Materials			
3.8-1 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	None required	Less than significant	Not applicable
3.8-2 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	None required	Less than significant	Not applicable
3.8-3 Implementation of the Proposed Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required	No impact	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.8-4 Implementation of the Proposed Plan would not result in development located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	None required	Less than significant	Not applicable
3.8-5 Implementation of the Proposed Plan would not result in development located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety hazard or excessive noise for people residing or working in the Planning Area.	None required	No impact	Not applicable
3.8-6 Implementation of the Proposed Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.9 Hydrology and Water Quality			
3.9-1 Implementation of the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements.	None required	Less than significant	Not applicable
3.9-2 Implementation of the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.9-3 Implementation of the Proposed Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion, siltation, or flooding on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.	None required	Less than significant	Not applicable
3.9-4 Implementation of the Proposed Plan would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.9-5 Implementation of the Proposed Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.10 Land Use and Planning			
3.10-1 Development under the Proposed Plan would not physically divide an established community.	None required	No impact	Not applicable
3.10-2 Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.11 Noise			

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.11-1 Implementation of the Proposed Plan would not generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the Planning Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	None required	Less than significant	Not applicable
3.11-2 Implementation of the Proposed Plan would not result in generation of excessive groundborne vibration or groundborne noise levels.	None required	Less than significant	Not applicable
3.11-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, implementation of the Proposed Plan would not expose people residing or working in the Planning Area to excessive noise levels.	None required	No impact	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.12 Population and Housing			

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.12-1 Development under the Proposed Plan would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	None required	Less than significant	Not applicable
3.12-2 Development under the Proposed Plan would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	None required	No impact	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.13 Public Services and Recreation			

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.13-1 Development under the Proposed Plan would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.	None required	Less than significant	Not applicable
3.13-2 Development under the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	None required	Less than significant	Not applicable
3.13-3 Development under the Proposed Plan would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
Cumulative Impacts		Not Cumulatively Considerable	
3.14 Transportation			
3.14-1 Implementation of the Proposed Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities.	None required	Less than significant	Not applicable
3.14-2 Implementation of the Proposed Plan would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) pertaining to Vehicle Miles Traveled.	None required. Policies in the Proposed Plan are designed to reduce VMT in the Planning Area through required TDM reductions, establishment of a TMA to oversee VMT reduction strategies and programs, multi-modal transportation improvements, and parking-related demand management strategies. While these VMT reduction measures can be expected to reduce VMT, their effectiveness cannot be guaranteed, and they may be insufficient to reduce residential VMT per capita in the Planning Area below the applicable significance threshold or fully offset the effects of induced VMT. There are no other feasible mitigation measures available.	Significant and unavoidable	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.14-3 Implementation of the Proposed Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment).	None required	Less than significant	Not applicable
3.14-4 Implementation of the Proposed Plan would not result in inadequate emergency access.	None required	Less than significant	Not applicable
<p>Cumulative Impacts</p> <p>As described above, policies in the Proposed Plan are designed to reduce VMT in the Planning Area. While these VMT reduction measures can be expected to reduce VMT, their effectiveness cannot be guaranteed, and they may be insufficient to reduce residential VMT per capita in the Planning Area below the applicable significance threshold or fully offset the effects of induced VMT. There are no other feasible mitigation measures available. Impacts would be cumulatively considerable.</p>		Cumulatively Considerable	

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.15 Utilities and Service Systems			
3.15-1 Full Buildout of the Proposed Project will require or result in the relocation or construction of new or expanded water, wastewater and stormwater drainage conveyance systems, and electric power, natural gas, and telecommunications distribution facilities, the construction or relocation of which could cause significant environmental effects.	None required	Less than significant	Not applicable
3.15-2 Development under the Proposed Plan would have sufficient water supplies available to serve the Planning Area and reasonably foreseeable future development during normal, dry and multiple dry years.	None required	Less than significant	Not applicable
3.15-3 Development under the Proposed Plan would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.15-4 Development under the Proposed Plan would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	None required	Less than significant	Not applicable
3.15-5 Development under the Proposed Plan would not conflict with federal, state, and local management and reduction statutes and regulations related to solid waste.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	
3.16 Wildfire			
3.16-1 Development under the Proposed Plan would not substantially impair an adopted emergency response plan or emergency evacuation plan.	None required	Less than significant	Not applicable
3.16-2 Development under the Proposed Plan would not exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	None required	Less than significant	Not applicable

Table ES-2: Summary of Impacts

<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.16-3 Development under the Proposed Plan would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	None required	Less than significant	Not applicable
Cumulative Impacts		Not Cumulatively Considerable	

Note: The Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts to the to the greatest extent feasible and no mitigation measures are required.

1 Introduction

1 Introduction

This Draft Environmental Impact Report (EIR) has been prepared on behalf of the County of Sonoma in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*). The EIR analyzes potential environmental impacts of the adoption and implementation of the proposed Sonoma Developmental Center (SDC) Specific Plan, referred to as the “Proposed Plan.” This chapter outlines the purpose and overall approach to the preparation of the EIR. The County of Sonoma is the lead agency responsible for ensuring that the Proposed Plan complies with CEQA. “Lead agency” is defined by Section 21067 of CEQA as “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment.”

1.1 Purpose of the EIR

The primary intent of CEQA is to ensure that public agency decision-makers document and consider the environmental implications of their actions in order to avoid or minimize environmental damage that could result from the implementation of a project wherever feasible, and to balance environmental, economic, and social objectives. The purpose of an EIR is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided (California Public Resources Code [PRC] Section 21002.1).

1.1.1 Purpose

This EIR serves the following purposes:

- To satisfy CEQA requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of adopting and implementing the Proposed Plan;
- To recommend a set of measures to mitigate any significant adverse impacts;
- To analyze a range of reasonable alternatives to the Proposed Plan;
- To inform decision-makers and the public of the potential environmental impacts of the Proposed Plan prior to taking action on the Proposed Plan, and to assist County officials in reviewing and adopting the Proposed Plan; and

- To provide a basis for the review of subsequent development projects and public improvements proposed within the Planning Area. Subsequent environmental documents may be tiered from the Final EIR.

The Proposed Plan consists of policies, diagrams, and standards to guide the future development of the Planning Area, as described in Chapter 2: Project Description. This EIR contains analysis of all potential environmental impacts expected to result from implementation of the various policies and programs identified as part of the Proposed Plan, including those that serve to avoid or minimize adverse environmental impacts. In accordance with CEQA requirements, this EIR also identifies and evaluates alternatives to the Proposed Plan, including the No Project Alternative, should the Board of Supervisors not adopt the Specific Plan. An environmentally superior alternative is identified as part of the Alternatives analysis.

This EIR evaluates at a programmatic level the potential environmental impacts of the Proposed Plan. It can be anticipated that conditions will change; however, the assumptions used are the best data and information available at the time of preparation and reflect existing knowledge of patterns of development.

1.1.2 Intended Uses of the EIR

The CEQA Guidelines (Section 15124(d)) require EIRs to identify the agencies that are expected to use the EIR in their decision-making, and the approvals for which the EIR will be used. This EIR will inform the County of Sonoma, in addition to other responsible agencies, persons, and the general public, of the potential environmental effects of the Proposed Plan and the identified alternatives. The County of Sonoma will use the EIR as part of its review and approval of the Proposed Plan. Other agencies that may use the EIR include local and regional agencies such as the Sonoma Valley Unified School District, Sonoma County Water Agency (Sonoma Water), Sonoma Valley Groundwater Sustainability Agency (GSA), Sonoma Valley County Sanitation District (SVCSD), Valley of the Moon Water District (VOMWD), and Sonoma County Transit (SCT) which operates transit service via bus routes through the Planning Area. State agencies may also use the EIR, such as the California Department of General Services (DGS) and Transportation (Caltrans), and the California State Water Resources Control Board (SWRCB).

1.2 Approach and Scope of the EIR

1.2.1 Type of EIR

This EIR is a program EIR, defined in paragraph (a) of Section 15168 of the CEQA Guidelines as: “[An EIR addressing a] series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) A[s] logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways.”

Program EIRs can be used as the basic, general environmental assessment for an overall program of future projects, policies, and related implementation actions, such as the Proposed Plan. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative effects.

As a programmatic document, this EIR presents an assessment of the potential impacts of the Proposed Plan for the entire Planning Area. It does not separately evaluate subcomponents of the Proposed Plan nor does it assess project-specific impacts of potential future projects under the Proposed Plan, all of which are required to comply with CEQA and/or the National Environmental Policy Act (NEPA) as applicable.

As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals). As noted, individual projects may be required to prepare a more precise, project-level analysis to fulfill CEQA and/or NEPA requirements. State law also exempts certain projects from CEQA that carry out a Specific Plan for which an EIR has been prepared. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, countywide, or cumulative impacts, provided that the projects are consistent with the Proposed Plan and the data and assumptions used in this EIR remain current and valid.

1.2.2 Environmental Issue Areas

Information gathered about the environmental setting is used to define relevant planning issues, determine thresholds of significance, and evaluate potential impacts. Based on the initial analysis of environmental setting and baseline conditions, and comments on the Notice of Preparation (NOP), the following issues are analyzed in this program EIR:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy Resources
- Geology, Soils, and Mineral Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire Hazards

This EIR also presents a summary of the impacts of the Proposed Plan in several subject areas specifically required by CEQA, including growth-inducing impacts, cumulative impacts, significant and unavoidable impacts, and significant irreversible environmental changes. These findings can be found in Chapter 5: CEQA Required Conclusions and are based, in part, on the analysis provided in Chapter 3: Environmental Settings and Impacts.

1.2.3 Planning Horizon

For analytic purposes in this EIR, the base year is 2022 unless otherwise noted, and the horizon year representing future conditions is 2040. In cases where current data is not available, the most recent known data is used to depict baseline conditions. The horizon year of 2040 represents the target year of the Proposed Plan when projects and programs are anticipated to be fully implemented.

1.2.4 Alternatives

CEQA requires EIRs to evaluate a reasonable range of alternatives to the Proposed Plan that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts. This EIR evaluates three alternatives, including a Reduced Development Alternative, a Historic Preservation Alternative, and the No Project Alternative should the Board of Supervisors not adopt the Specific Plan.

1.3 Planning Process and Public Involvement

1.3.1 Notice of Preparation and Public Participation

A NOP for the EIR on the Proposed Plan was submitted to the State Clearinghouse on February 9, 2022 and circulated among relevant State and local agencies, as well as to members of the public. The NOP and comments on the NOP received by the County are included as Appendix A of this EIR and noted briefly at the beginning of each topical section. The County received 148 individual comments, including six from public agencies and 116 written comment letters from the public. Twenty-six oral and written comments were received at a public scoping meeting during a 45-day review period, which ended March 25, 2022. Consistent with legal requirements and State guidance, the EIR Scoping Meeting was held on February 17, 2022 via Zoom to receive comments and suggestions on scope and content for the EIR; solicit input on potential impacts, mitigation measures, and alternatives to consider; and consult with public agencies responsible for natural resources, other regulatory bodies, neighboring communities, Native American tribes, and members of the public. Comments on the NOP, along with input received during public

workshops and meetings over the course of the SDC Specific Plan process, have helped to identify the major planning and environmental issues and concerns and establish the framework of this EIR.

1.3.2 Tribal Consultation (SB 18 and AB 52)

Senate Bill (SB) 18, codified in California Government Code (CGC) Section 65352.3, requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places prior to the adoption or amendment of a specific plan. Additionally, Assembly Bill (AB) 52 requires tribal cultural resources to be addressed under CEQA and established requirements for consultation with Native American tribes as part of the CEQA process, providing both federal and non-federally recognized tribes the right to formal consultation with project lead agencies (California Public Resources Code [PRC] Section 21080.3.1). In accordance with SB 18 and AB 52, the County contacted nine tribal representatives in February 2022, providing information about the planning process and inviting them to initiate consultation under AB 52 if desired. One response was received from the Federated Indians of Graton Rancheria requesting further consultation. In addition, the Lytton Rancheria of California shared knowledge of historical Native American occupants. Correspondence tribal contacts is included in Appendix C. Additionally, the NOP was shared with the NAHC and in February 2022, the NAHC responded with recommendations for conducting cultural resources assessments.

The environmental setting in the Planning Area and the sites of known Native American archaeological resources in the Planning Area indicate that there is potential for the Planning Area to contain tribal cultural resources from past Native American activities.

1.3.3 Draft EIR Review

The CEQA Guidelines establish that the public review period for a draft EIR shall be no shorter than 30 days and no longer than 60 days. The public review period for a draft EIR that has been submitted to the State Clearinghouse for review by State agencies shall be no shorter than 45 days (CCR 15105). This Draft EIR is available for review to the public and interested and affected agencies for a period of 45 days. The purpose of the review period is to obtain comments “on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant

effects of the project might be avoided and mitigated” (CCR Section 15204). The Draft EIR and appendices are available for review at Permit Sonoma at 2550 Ventura Avenue, Santa Rosa, CA 95403 and online at <https://www.sdcspecificplan.com/>.

Please submit comments on this Draft EIR in writing or via email to:

Brian Oh, Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
Brian.Oh@sonoma-county.org

After the close of the public review period, County staff and CEQA consultants will review the comments, respond to the comments received, and determine whether any changes are required to the Draft EIR. As described in Sec. 23A-25 of the County Code, the Lead Department shall present the Final EIR to the Planning Commission. The Planning Commission may make its recommendations to the Board of Supervisors regarding the EIR and the public project. The Board of Supervisors will then consider certification of the Final EIR. Subsequent to certification of the Final EIR, the Board of Supervisors may approve the Proposed Plan. If the Board of Supervisors approves the Proposed Plan, a Notice of Determination will be filed with the State Office of Planning and Research and the Clerk of the County of Sonoma.

1.4 Other Relevant Plans and Environmental Studies

A Profile and Background Report was published in September 2020 to provide background information on the existing land use patterns, regulatory framework, urban form, socioeconomic data, transportation and infrastructure networks, environmental hazards, historic resources, and market demand analysis in the Planning Area. The report seeks to identify issues and opportunities within the Sonoma Developmental Center site and surrounding area, so that the community may better envision potential for future development. The Profile and Background Report included the following topics by chapter: Land Use, Nearby Public Services, Socioeconomic Profile, Transportation, Infrastructure, Natural Areas and Open Space, Natural and Man-Made Hazards, and Market Demand Analysis.

The Profile and Background Report can be viewed online at:

<https://www.sdcspecificplan.com/documents>. Other plans and studies relevant to the Proposed Plan include the following:

- Sonoma County Transportation Authority Countywide Bicycle and Pedestrian Master Plan (2008)
- Sonoma County Regional Climate Action Plan (2016)
- Sonoma Developmental Center Existing Conditions Assessment (2018)
- County of Sonoma General Plan 2020 and EIR (2020)
- Sonoma County Multijurisdictional Hazard Mitigation Plan (2021)
- Moving Forward 2050 Sonoma County Comprehensive Transportation Plan (2021)

1.5 Organization of the EIR

This Draft EIR is organized into the following chapters, plus appendices:

- ES. **Executive Summary.** Summarizes the EIR by providing an overview of the Proposed Plan, the potentially significant environmental impacts that could result from the Proposed Plan, the mitigation measures identified to reduce or avoid these impacts, alternatives to the Proposed Plan, and identification of the environmentally superior Alternative.
1. **Introduction.** Introduces the purpose of the EIR, explains the EIR process and intended uses of the EIR, and describes the overall organization of this EIR.
 2. **Project Description.** Describes in detail the Proposed Plan, including its location and boundaries, purpose and objectives, and projected buildout.
 3. **Environmental Analysis.** Analyzes the environmental impacts of the Proposed Plan. Impacts are organized by major topic. Each topic area includes a description of the environmental setting, significance criteria, methodology, and potential impacts.
 4. **Analysis of Alternatives.** Presents a reasonable range of alternatives to the Proposed Plan, provides discussion of environmental impacts associated with each alternative, compares the relative impacts of each alternative to those of the

- Proposed Plan and other alternatives, discusses the relationship of each alternative to the Proposed Plan's objectives, and identifies the environmentally superior alternative.
5. **CEQA Required Conclusions.** Summarizes significant environmental impacts, including growth-inducing, cumulative, and significant and unavoidable impacts; significant irreversible environmental change; and impacts found not to be significant.
 6. **List of Preparers.** Identifies the persons and organizations that contributed to the preparation of the EIR.
 7. **Appendices.** Includes the NOP and compilation of agency and public comments received on the NOP, as well as other technical appendices including data used for environmental analysis in this EIR.

2 Project Description

2 Project Description

The project analyzed in this Environmental Impact Report (EIR) is the proposed Sonoma Developmental Center Specific Plan (Proposed Plan or Project) in the County of Sonoma (County). The Proposed Plan is both a policy document and an implementation tool. It contains strategies, policies, and standards to guide open space retention and future development within the approximately 945-acre Sonoma Developmental Center (SDC) Specific Plan Planning Area, which includes the approximately 180-acre SDC Core Campus, and approximately 755 acres of surrounding land. In addition, the Specific Plan aims to be self-mitigating. Appendix A of the Specific Plan contains a Standard Conditions of Approval document that shall consist of conditions required to be implemented upon development of the Proposed Plan to mitigate potential environmental impacts. In addition, the Proposed Plan includes amendments to the County's General Plan and Zoning Code. The County is the Lead Agency for environmental review.

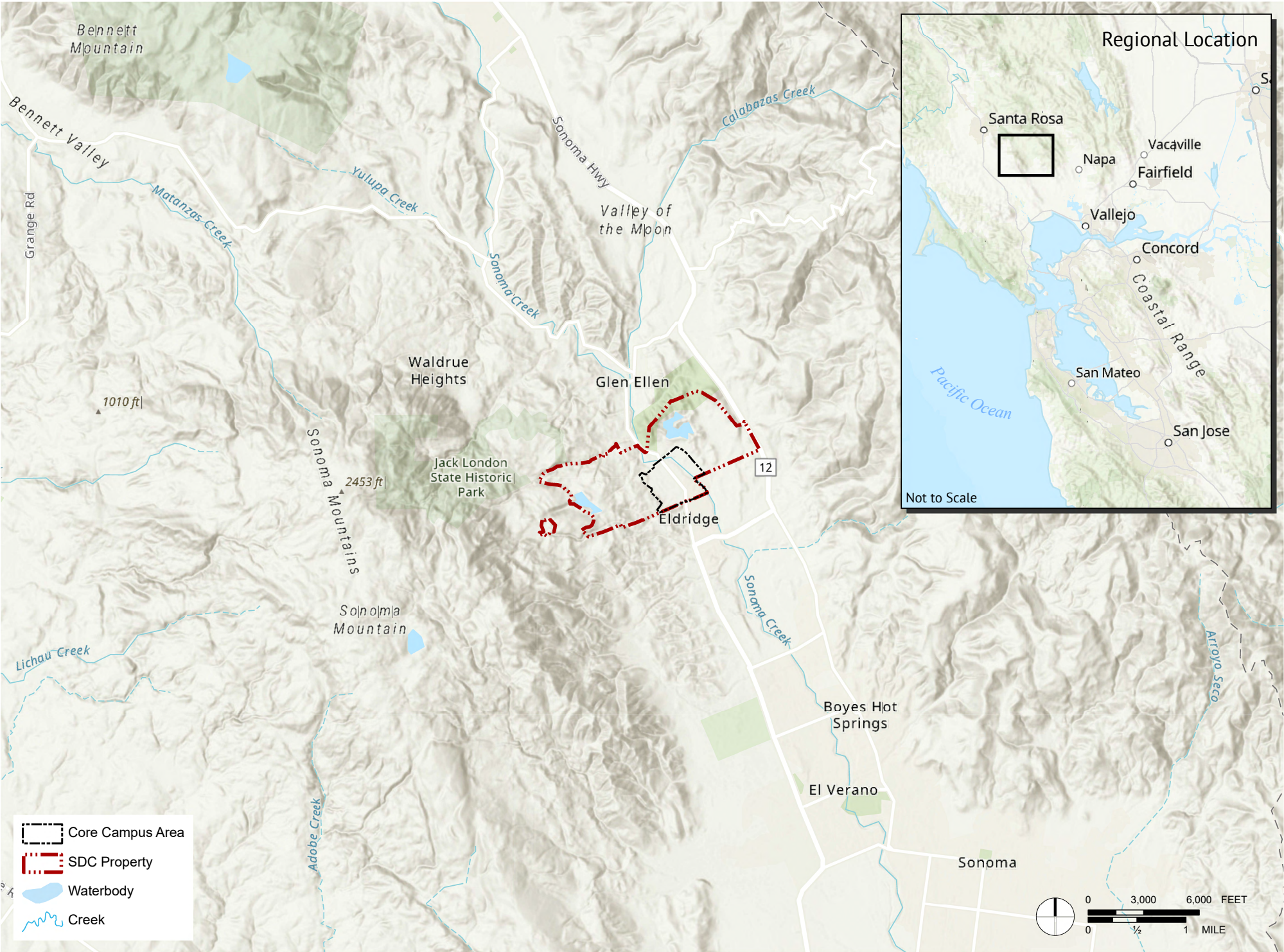
This chapter summarizes the key components of the Proposed Plan, including a description of its location and setting (Section 2.1); an overview of the planning process and the Proposed Plan's relationship to other past and ongoing planning efforts (Section 2.2); a description of the Proposed Plan's Guiding Principles (Section 2.3); a summary of the Proposed Plan's key components and planning strategies (Section 2.4); a statement of project buildout and phasing assumptions (Section 2.5); and a description of intended uses of this EIR (Section 2.6). The information in this Project Description is intended to provide a general description of the project's technical, economic, and environmental characteristics. A detailed analysis and context of specific CEQA topics can be found in Chapter 3 of this EIR and the EIR appendices.

2.1 Location and Setting

2.1.1 Regional Location

The SDC site is located in the Sonoma Valley region of southern Sonoma County, about six miles north of the City of Sonoma and about 15 miles south of Santa Rosa, between the unincorporated communities of Glen Ellen and Eldridge. The 17-mile-long Sonoma Valley lies nestled between Mayacamas and Sonoma Mountain ranges along Sonoma County's eastern edge (**Figure 2.1-1**).

2.1-1: Regional Context



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

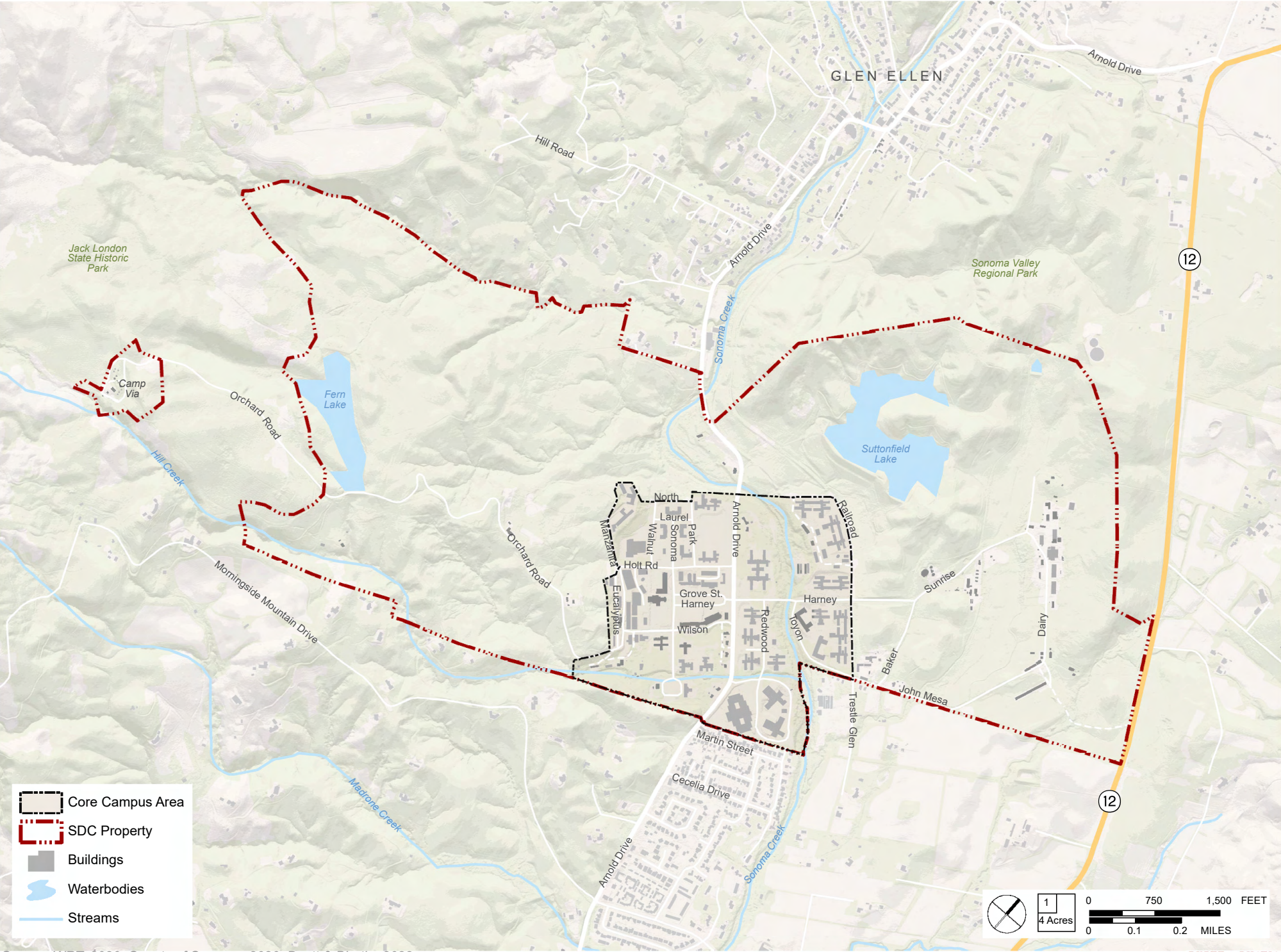
2.1.2 Planning Area

This section provides a general overview of the Planning Area; detailed setting for each topic area can be found in Chapter 3 of this EIR. The SDC Specific Plan Planning Area includes all of the SDC property, encompassing an area of 945 acres (about 1.5 square miles), with former agricultural land, oak woodlands, native grasslands, wetlands, forests, large riparian woodlands along Sonoma Creek and other tributaries, a major wildlife corridor, a cemetery, and two reservoirs surrounding the Core Campus, a historical 180-acre built area. Arnold Drive bisects the property. Sonoma Valley Regional Park is directly to the north; portions of Sonoma Valley Regional Park, Martin Street, and Mill Creek to the south; Jack London State Historic Park to the west; and Sonoma Valley Regional Park and Highway 12 to the east. The SDC Specific Plan area also includes the approximately 11-acre non-contiguous Camp Via grounds within Jack London State Historic Park. The developed campus area west of Arnold Drive is part of the Sonoma State Home Historic District and includes two individually contributing historic resources—the Sonoma House and the Main Building, which is a National Historic Landmark. See **Figure 2.1-2** for a map of the Planning Area boundaries.

2.1.2.1 Land Use

The State of California purchased the SDC site in 1889 as a 1,670-acre stretch of prime land and natural resources to expand the small existing institution. Medical facilities, residential buildings, classroom facilities, and administrative buildings were built on the campus over several decades, designed in a relatively compact footprint within the expansive grounds to maximize the benefits of the tranquility and peacefulness of the site. Since the closure of SDC in 2018, most of the buildings on the Planning Area are vacant. The Core Campus consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed. A cluster of utility and support buildings, and fire station sit at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses, including the former Sunrise Industries farm, had several support buildings, many of which were burned in the 2017 Sonoma Complex fires. The Sonoma Ecology Center is one of the only buildings that continues to operate on the eastern side of the Core Campus, as do some offices in the Porter Administration/Post Office Building, and some of the recreational uses in the Planning Area, including Camp Via and the Ropes Course in the western portion of the Planning Area.

Figure 2.1-2: Planning Area Boundaries



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

2.1.2.2 Transportation

Access to land uses such as employment, schools, retail, and commercial uses from the Planning Area is primarily provided by Arnold Drive and Highway 12. Arnold Drive runs in a north-south orientation and provides access to the adjacent communities of Glen Ellen, Eldridge, El Verano, and Temelec. Although generally an east-west route, Highway 12 also spans from north to south through Sonoma Valley and is located approximately a mile east of Arnold Drive. Highway 12 provides access to Sebastopol, Santa Rosa, and Kenwood to the west, and to Boyes Hot Springs, Sonoma, and Napa to the east.

Transit service in the Planning Area is provided by Sonoma County Transit (SCT) fixed route bus service in Sonoma County. Route 30 provides regional service to the project site and surrounding communities including Santa Rosa, Oakmont Village, Kenwood, Glen Ellen, Agua Caliente, and Sonoma. Route 34 provides regional service to the project site and surrounding communities including Santa Rosa, Kenwood, Glen Ellen, Agua Caliente, Boyes Hot Springs, and Sonoma. Similarly, Route 38 provides regional service to the project site and surrounding communities including Kenwood, Glen Ellen, Agua Caliente, Boyes Hot Springs, El Verano, Sonoma, and San Rafael.

Dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Sonoma County Paratransit is designed to serve the needs of individuals with disabilities within Sonoma County; eligible individuals can reserve a ride via telephone.²

2.1.2.3 Environmental Resources and Natural Setting

The Planning Area includes all SDC property, encompassing approximately 945 acres, or about 1.5 square miles, which includes a developed Core Campus covering approximately 180 acres, the surrounding approximately 755 acres of contiguous open space, and the 11-acre, non-contiguous Camp Via grounds within Jack London State Historic Park. Open space includes former agricultural land, recreational uses, the Eldridge Cemetery, and many acres of valuable wildlife habitat. Embedded in the open space is an existing network of trails and access roads as well as a water system consisting of two surface water reservoirs, aqueducts, spring head, storage tanks, treatment plant, pipelines and a water intake in Sonoma Creek.

² Sonoma County Transit. 2022. Available: <http://sctransit.com/>. Accessed: April 25, 2022.

The SDC property is fully embedded in, connected to, and part of the larger mountain-valley landscapes of eastern Sonoma County, and specifically is part of the Sonoma Valley landscape and ecosystem. The spine of this landscape is Sonoma Creek and its tributaries. Sonoma Creek bisects the SDC property from north to south. The SDC property, from its high ground on the east of Sonoma Creek to its high ground to the west of Sonoma Creek, represents a relatively structurally intact (in terms of hydrology, soils, vegetation) portion of the Sonoma Valley ecosystem from its lower western sides to its lower eastern sides. The forests, woodlands, grasslands and wetlands that make up the SDC property (discussed below) are fully connected to a larger matrix of natural habitats and protected lands and comprise a linchpin connection of a significant wildlife movement corridor (discussed below).

Considering the SDC property as an ecosystem planning unit by itself, it consists of several identifiable landscape elements:

- **Eastern woodlands and grasslands.** A mix of oak woodlands, non-native grasslands, and native grasslands predominates on the eastern side of the property. Portions of this system have been converted to road, reservoir, and agricultural uses.
- **Large headwater wetland complex in former agricultural area.** Parallel to the complex of agricultural buildings mostly lost to the 2017 fires, a large headwater wetland persists. Although altered and degraded by past land use activities, this wetland is a prime preservation and restoration opportunity.
- **Shallow water supply impoundments (Fern Lake, Suttonfield Lake).** As part of the complex water supply collection system, two small reservoirs (lakes) were constructed, one on the west side and one on the east side of the property. These now function as open water habitats with fringing wetlands.
- **Small, embedded slope, depressional, and riverine wetlands.** Although not inventoried or mapped, numerous small wetlands are embedded in the forest, woodland and grasslands of the property (Mack, personal observation). The most significant unmapped wetland is the large slope (ground water or seepage) wetland associated with the Roulette Springs located to the northwest of Fern Lake on the west side of the property.
- **Western forests, woodlands, and grasslands.** The natural areas on the western side of the property represent an even more heterogeneous and ecologically intact mix of multiple forest types (redwood, California bay, madrone, Douglas fir), oak

woodlands (blue oak, coast live oak, Oregon oak, valley oak), and predominantly native grasslands.

- **Streams and riparian corridors.** Three perennial stream systems cross the property: Sonoma Creek bisects the middle of the site from north to south and Asbury and Hill Creeks parallel the north property line and south property line, respectively, of the western side of the property. Extensive riparian woodlands are mapped along Sonoma Creek and riparian corridors and forest species also exist along Asbury and Hill creeks (Mack, personal observation). During the historical construction of the SDC campus, large areas of riparian corridor along Sonoma Creek as well as the lower stretches of Hill Creek were developed.
- **Developed campus and facilities.** While the developed campus has largely converted natural habitats to mowed lawns, roads and structures, as a landscape element and ecosystem component, a main feature of the SDC campus is the old-style curb and gutter storm water conveyance system, which collects and moves storm water as quickly as possible and discharges it directly to Sonoma and Hill Creeks without water quality treatment or volume capture. The campus also encroaches to the top of bank of large areas of Sonoma and Hill Creeks. Given that the entire SDC campus, particularly its reach of Sonoma Creek, is an important corridor for wildlife passage, reestablishing riparian corridors represents a significant ecological restoration opportunity.

2.1.2.4 Utility Infrastructure

Water

The historical SDC water distribution system is a complex, self-contained system consisting of lakes (or surface water reservoirs) (840 acre/feet), natural springs, wells, a raw water and potable water distribution system, a 1.8-million-gallons-per-day (MGD) Water Treatment Plant (WTP), and 1.3-million-gallon surface water reservoirs that have the capacity to provide drinking water, irrigation, and fire suppression to a resident population in the neighborhood of 6,600 people. SDC maintained a 6-inch metered connection to the Sonoma Aqueduct as an alternate water source when their system was inoperable. The existing system provided drinking water, irrigation, and fire protection for the SDC.

Operation and maintenance of all water treatment facilities have not been active since late 2019 and Sonoma Water currently supplies the campus with water. The system would require an operation and maintenance staff of at least three for daily operations similar to a local jurisdiction. While the lakes provide an abundance of surface water and the WTP is in relatively good condition, the water distribution systems (piping) need rehabilitation or replacement and are described as “beyond useful life” and “obsolete” by previous studies.

Wastewater

The first common sewer collection and treatment plant system serving the entire SDC property was constructed in the 1920s and 1930s, originally independent of larger sewer districts, with its own wastewater treatment plant. Underground collection systems were constructed using primarily vitrified clay and cast-iron pipe. The wastewater treatment plant was abandoned in 1954 and the existing gravity collection system was directed to the Sonoma Valley County Sanitation District (SVCSD) main sewer line via two sewer lift stations. Most of these existing pipes, many of which run between and under buildings, should be abandoned in favor of new sewer mains installed in the streets, connecting to SVCSD’s sewer main that runs along Arnold Drive. All updated piping will run along existing and new street alignments and continue to operate as a gravity system, assuming that additional connections can be made to the main sewer line at the south side of the site.

Stormwater

The SDC site is a large, substantially undeveloped area that lays across the Sonoma Valley which drains into the Sonoma Creek. Sonoma Creek is large enough to contain the 100-year storm within the limits of the SDC. Portions of the existing 100-year-old storm drain system may be reusable for new development, especially with a holistic stormwater strategy that uses centralized and distributed bioretention areas throughout the site, which function as soil and plant-based filtration and infiltration feature that removes pollutants and enhances water quality through natural processes. Additional measures that will ensure high water quality within Sonoma Creek include adherence to the Bay Area Stormwater Management Agencies Association’s (BASMAA) Manual, which specifies best practices for Low Impact Development (LID) stormwater management.

Natural Gas and Electricity

Gas and electric services in Sonoma Valley are provided by Pacific Gas and Electric (PG&E), which has an extensive network of underground and overhead facilities located

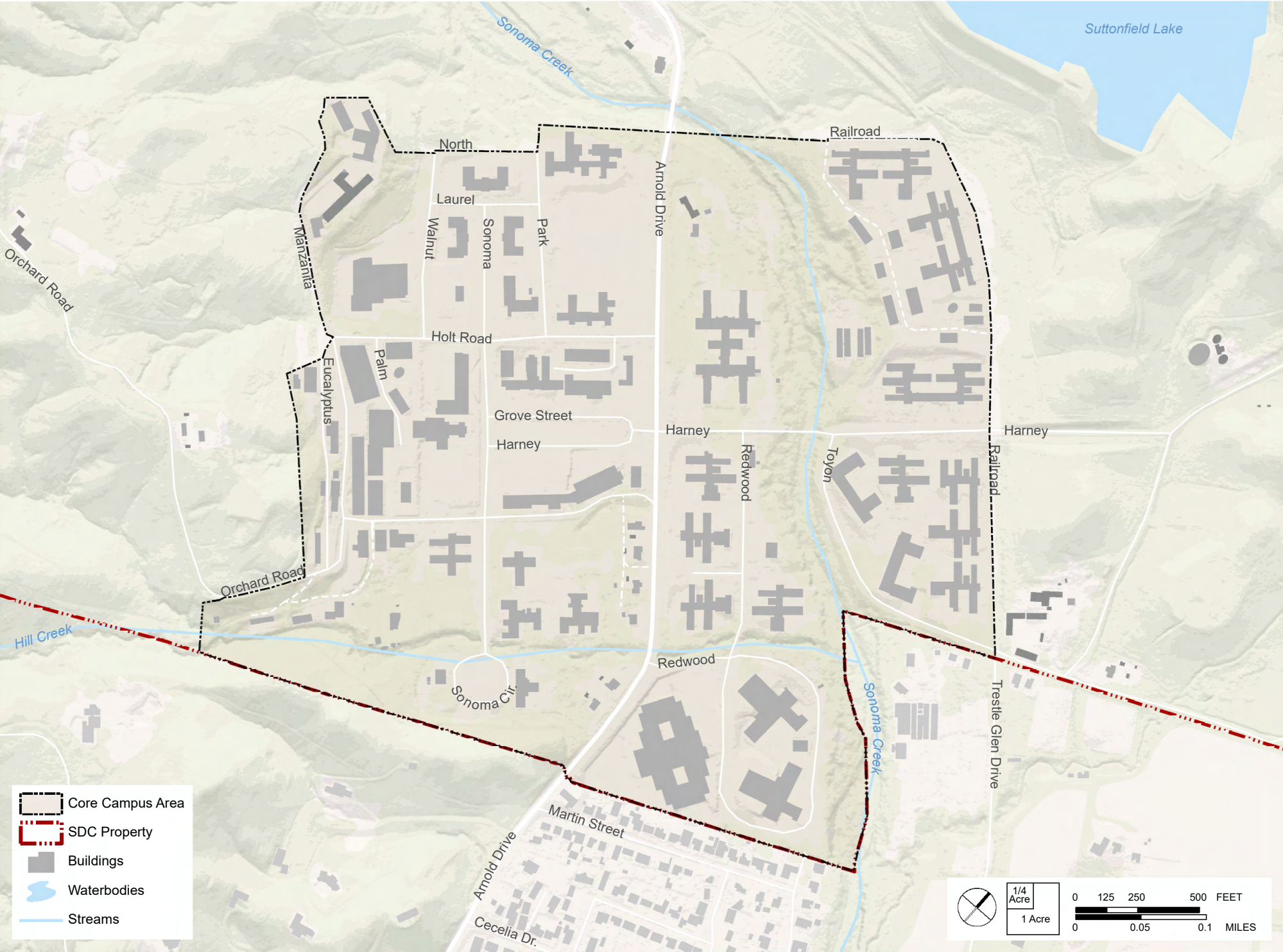
on or adjacent to all parcels in the Planning Area. In light of the growing risk of wildfires in Sonoma County, all existing and new power lines on the site should be moved or constructed underground. The SDC site will also be eligible for a PG&E program that allows communities that are at higher fire risk and include critical facilities, like SDC's future fire station, to create a "microgrid" at the campus – an electrical grid that is connected to PG&E's larger system, but that can be isolated from the larger grid in case of emergency and can generate its own power. The site will have a system of distributed energy resources (DERs) that will generate electricity on-site, which could include solar, wind, geothermal, and methane gas co-generation, a process that captures and burns the potent methane gases that are emitted from solid waste, such as from landfills, wastewater treatment plants, dairies, and other facilities. In an emergency, SDC can be separated from PG&E's larger grid, maintaining self-sufficiency and avoiding system-wide shut-offs that target dangerous overhead powerlines in windstorms.

2.1.3 Planning Sub-area

2.1.3.1 SDC Core Campus

The SDC Core Campus is approximately 180-acres of developed area. The Core Campus consists primarily of residential buildings, with medical, educational, recreational, and administrative buildings interspersed that total 61 buildings and approximately 383,000 square feet of floor space. A cluster of industrial and support buildings sits at the western edge of the Core Campus. On the eastern portion of the site, historic agriculture uses, including the former Sunrise Industries farm, had several support buildings, many of which were burned in the 2017 Sonoma Complex fires. Today, most of the buildings on the SDC property are vacant. The Sonoma Ecology Center continues to operate on the eastern side of the Core Campus, as do some offices in the Porter Administration/Post Office Building, and some of the recreational uses in the Planning Area, including Camp Via and the Ropes Course in the western portion of the Planning Area. All new development that occurs under the Proposed Plan will be located in the already previously developed Core Campus. See **Figure 2.1-3** for a map of the approximate extent of the Core Campus.

2.1-3: SDC Core Campus



Source: Page & Turnbull, 2021; County of Sonoma, 2020; Dyett & Bhatia, 2022

2.2 Planning Context and Process

Established in 1891 in the heart of the Sonoma Valley, the SDC property consists of a developed campus and natural areas adjacent to the Sonoma Valley Regional Park and the Jack London State Historic Park. SDC is the oldest facility in California created specifically to serve the needs of individuals with disabilities and was sited at its current location for its picturesque, therapeutic setting, gaining national renown as a place of healing and community. In 2018, the State of California officially closed the facility, and relocated clients to smaller, community-based care facilities. SDC was also the valley's largest employer until its closure, with ties to adjacent communities of Glen Ellen and Eldridge.

Through an agreement signed in 2019, the State and the County forged a unique partnership that allows the County, together with the community, to chart the future role of the State-owned property through preparation by the County of a Specific Plan, focused on redevelopment transition and overall vision and related environmental review. Until the property is purchased, the State will continue to control and operate the property. That includes all funding needs encompassing on-going maintenance, security, firefighting, landscaping, and fire prevention.

2.2.1 Planning Process

Government Code Section 14670.10.5, enacted in 2019, outlines the State's goals and objectives for the SDC Specific Plan. In light of the statewide affordable housing crisis, State law stipulates that the SDC Specific Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation recognizes the exceptional open-space, natural resources, and wildlife characteristics of SDC, and it is the intent of the legislature that the lands outside of the core developed campus and its related infrastructure be preserved as public parkland and opens space. The legislation also recognizes the need for conservation of water resources to preserve or enhance habitat, fish and wildlife resources, groundwater resources, and recreation. Other required components of the planning process include involvement of the community in order to reduce uncertainty, increasing land values, expediting marketing, and maximizing interest of potential purchasers. The legislation contemplates that these efforts

will require environmental review and amendments to the County's General Plan and zoning ordinances, while addressing the economic feasibility of future development.³

The Specific Plan planning process began in early 2020, and includes the following four phases, with robust and diverse methods of community engagement that build upon themes and findings from previous studies and community outreach efforts throughout all of the phases:

1. **Identification of Issues and Opportunities.** An intensive "deep-dive" to identify and understand stakeholder priorities and concerns, and to establish a coordinated and realistic direction for the future of the planning founded on community vision. The Vision Statement and Guiding Principles were released in January 2021.
2. **Alternatives Exploration.** Based on the results of the visioning exercises and background research, the planning team will prepare and analyze a series of alternative design concepts. After additional public outreach and decision maker input, the options will be narrowed to a single "Preferred Alternative" (also known as the "Proposed Plan"). This alternatives exploration was completed in December 2021.
3. **Draft Specific Plan and Environmental Review.** Based on the Preferred Alternative, a public review draft of the Specific Plan was be prepared—including policies, designated land uses and densities, and design guidelines for future development of the SDC site—along with this Environmental Impact Report (EIR) that analyzes the potential effects of implementation of Specific Plan policies and development on the environment as well as several alternatives.
4. **Adoption.** Following a public review period, a final Specific Plan will be presented to the Planning Commission and the County Board of Supervisors for adoption at public hearings, along with consideration and certification of the Final EIR.

³ State of California, Government Code Section 14670.10.5.

2.3 Purpose and Guiding Principles of the Proposed Plan

Under California law, counties may use the specific plan process to develop policies, programs, and regulations for implementing their general plans on specific sites or in specific areas. A specific plan frequently serves as the bridge between the general plan and site development plans in this regard. Once a specific plan is adopted, no rezoning, subdivision, use permit, development plan, or other entitlement for use shall be authorized for construction within the specific plan area that is not in substantial conformance with that specific plan. The Proposed Plan is intended to serve as the County's guide for development of the SDC Core Campus and protection of the surrounding open space, recreational, and agricultural areas, establishing policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment.

2.3.1 Vision and Guiding Principles

Based on extensive community engagement and input by a Planning Advisory Team, the County's Planning Commission, and the Board of Supervisors, a Vision Statement and Guiding Principles were developed. These have shaped development of detailed Specific Plan proposals and policies.

2.3.1.1 Vision Statement

The former Sonoma Developmental Center is reinvigorated as a vibrant and sustainable community in the heart of Sonoma Valley. A mixed-use, pedestrian-oriented core provides a diverse array of housing choices, and serves as a magnet of innovation, research, education, and visitation. The surrounding open spaces flourish as natural habitats and as agricultural and recreational land linked to regional parks and open space systems. Development builds on the site's rich historic legacy while meeting contemporary needs, emphasizing resiliency and sustainable building practices. Civic uses, community gathering places, and events attract visitors from Glen Ellen, Eldridge, and the broader Sonoma region, making the center a hub of community life in Sonoma Valley.

The former Sonoma Developmental Center (SDC) site has emerged as a culturally and ecologically vibrant and resilient community. A core 180-acre developed area is surrounded by a vast protected open space of oak woodlands, native grasslands, wetlands, forests, creeks, and lakes that provide habitats and wildlife movement corridors; agricultural land; and recreational open space integrated with the surrounding park systems.

The developed core area comprises a complementary mix of housing, commercial, and institutional uses. The SDC site is financially independent and supporting infrastructure is up to date and well maintained. A variety of housing—including affordable, workforce, mid-income, and market-rate housing; senior housing; housing for people with developmental disabilities; and in new and adaptively re-used buildings—will foster a diverse and inclusive community. New development complements the adjacent communities of Glen Ellen and Eldridge. Residents enjoy pedestrian access to essential services and parks, and seamless connections to surrounding open spaces. Employment opportunities reflect the site’s legacy of care and emphasize innovation, research, education, environment, and ecology, together with supporting commercial and visitor-serving uses. Sonoma Valley’s former largest employment hub is reinvigorated as a regional model for sustainable development.

The reinvigorated community builds upon the site’s rich historic legacy while embracing the future. Key historic resources—including the Sonoma House and the Main Building—have been repurposed for contemporary uses, and elements of the historic landscape preserved. Site design patterns—streets layout, building/street relationship, streetscape character—maintain east-west views to the Sonoma and Mayacamas mountains and foster a harmonious sense of place. Contemporary buildings are intermixed with repurposed historic structures, creating a rich and visually cohesive development fabric.

A comprehensive network of pedestrian and bicycle paths connects residents to local and regional destinations, and to transit. Well-designed bus stops, crosswalks, and protected bike lanes create an inviting sense of safety for those of all ages and abilities and provide better walking and biking access to Glen Ellen and Eldridge, and to the regional bicycle network.

New land uses contribute positively to the site’s financial feasibility, enabling efficient and sustainable construction of necessary infrastructure. Water is conserved and reused, and safety and fire protection built into the landscape, with defensible design, new fire-resistant buildings, and well-planned evacuation routes. Reuse of historic buildings has saved resources needed for new construction, and building designs reflect sustainable practices

and wildfire resiliency. The surrounding open spaces, preserved in perpetuity, are home to countless local species that use SDC's habitat corridors. Sightings of wildlife throughout the site and along Sonoma Creek enrich life for residents.

The SDC site has become a multilingual gathering place for the Sonoma Valley, with public spaces for lingering and enjoying a cup of coffee or a meal; community amenities, cultural spaces, and events; playfields and recreational spaces for soccer games or a game of fetch; and seamless connections to the extensive trail networks of the SDC property, Jack London State Park, Sonoma Valley Regional Park, and the surrounding mountains.

2.3.1.2 Guiding Principles

1. **Promote a Vibrant, Mixed-Use Community.** Promote a diverse and integrated mix of residential development and employment uses, including research, education, office, retail, and small businesses, to promote optimal development patterns and site revitalization in the Core Campus, and provide economic opportunities for Sonoma Valley communities.
2. **Emphasize a Cohesive Sense of Place and Walkability.** Establish a cohesive visual landscape with consistent streetscapes and improved sidewalks within the Core Campus. Locate land uses and enhance the existing street network to encourage development of a walkable and pedestrian-friendly environment with gathering spaces, diverse activities, and connections within and to surrounding communities and regional trail systems. Ensure that new development complements the adjacent communities of Glen Ellen and Eldridge.
3. **Integrate Development with Open Space Conservation.** Promote a sustainable, climate-resilient community surrounded by preserved open space and parkland that protects natural resources, fosters environmental stewardship, and maintains and enhances the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. Support the responsible use of open space as a recreation resource for the community.
4. **Balance Redevelopment with Existing Land Uses.** Use recognized principles of land use planning and sustainability to gauge how well proposed land uses protect public trust resources and fit the character and values of the site and surrounding area, as well as benefit local communities and residents.
5. **Promote Sustainability and Resiliency.** Promote sustainable development practices in building and landscape design. Plan infrastructure efficiently and sustainably, conserving water and creating opportunities for water reuse and recharge. Proactively plan for community safety in natural disasters, especially

ensuring that emergency plans and egress routes are in place with adequate capacity, and landscapes and buildings are designed with fire defenses.

6. **Support Housing Development and Provide a Variety of Housing Types.** Promote housing to address Sonoma County's pressing housing needs and the State's key development objectives for the site. Support a range of housing opportunities, including affordable housing, workforce housing, mid-income housing, housing for individuals with developmental disabilities, senior housing, and market rate housing.
7. **Balance Development with Historic Resource Conservation.** Preserve and adaptively reuse the Main Building and the Sonoma House complex, conserve key elements of the site's historic landscape, and strive to maintain the integrity of the historic district to the west of Arnold Drive by adaptive reuse of contributing buildings where feasible. Support a cohesive community feel and character, while allowing a diversity of architectural styles.
8. **Promote Multi-Modal Mobility.** Promote car-free circulation within the site and promote transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, including through transit access, safe sidewalks and crossings, and regional bicycle routes. Ensure that new development takes into consideration resultant traffic and levels of transportation activity from when SDC was operational.
9. **Ensure Long-Term Fiscal Sustainability.** Ensure that the proposed plan is financially feasible and sustainable, as financial feasibility is essential to the long-term success of the project. Ensure that the proposed plan supports funding for necessary infrastructure improvements and historic preservation while supporting the Sonoma Valley community's needs and galvanizing regional economic growth.
10. **Embrace Diversity.** Accommodate the needs of people of diverse backgrounds, interests, and income levels, creating an inclusive, accessible, inviting, and safe place that preserves SDC's legacy of care and creates opportunities for marginalized communities.

2.4 Proposed Plan

This section provides a brief overview of key plan components, which integrate the Vision and Guiding Principles and include policies and standards for land use, transportation, infrastructure and public facilities, urban design, and environmental quality. Proposed Plan strategies, policies, and actions are considered throughout this EIR both in terms of their environmental impacts and, where relevant, of how those policies may reduce or avoid potential impacts.

2.4.1 Planning Horizon

Implementation and buildout of the Proposed Plan is anticipated to occur over a period of approximately 20 years through 2040.

2.4.2 Organization

The Proposed Plan is organized into seven chapters, listed below. Chapters 2 through 7 present background information and context followed by goals and policies intended to guide implementation. Goals are statements of broad direction, philosophy, or standards to be achieved. Policies are actionable statements that support the implementation of the goals. Implementation programs, discussed in Chapter 7, are measures including regulations, programs, public works projects, and financing measures necessary to carry out the Proposed Plan. These policies are to be used by the County and other stakeholders to guide regulatory changes, public investments, partnerships, and other actions over the course of the planning period. The contents of the chapters are as follows:

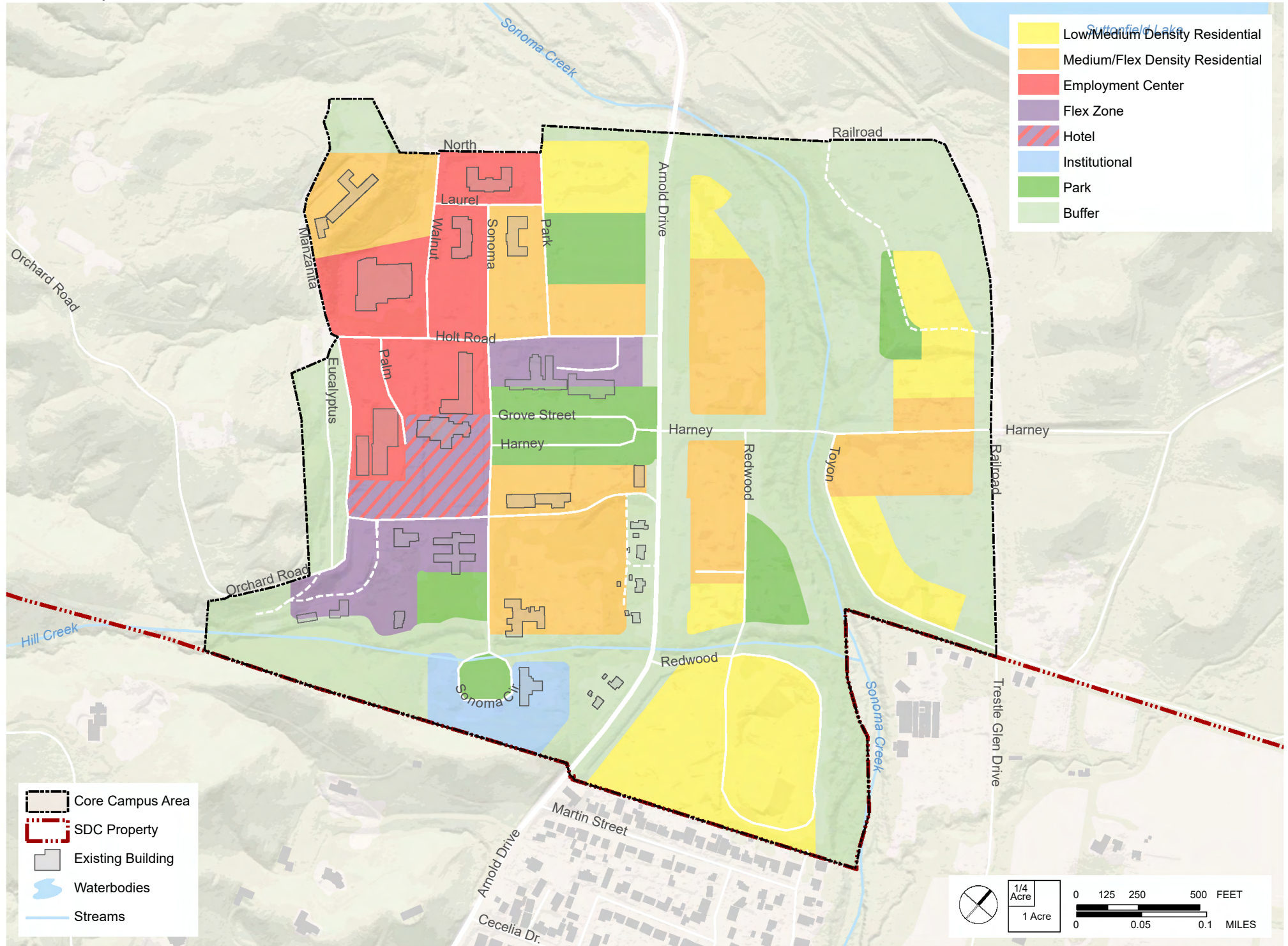
1. **Vision, Guiding Principles, and Project Context.** This chapter describes the Planning Area and its existing physical and regulatory context, outlines the vision and guiding principles for the Plan, and provides an overview of the planning process and plan organization.
2. **Open Space and Resources and Hazards.** This chapter discusses the existing open space management framework in the Planning Area, including biological resources, wildlife corridors, wildfire, and other hazards.
3. **Mobility and Access.** This chapter provides an overview of the Planning Area's existing and planned transportation system, including its pedestrian and bicycle network, and public transit options and accessibility.

4. **Land Use.** This chapter discusses existing land uses and the development potential in the Planning Area, including proposed land use classifications and development densities and intensities.
5. **Community Design.** This chapter provides guidance for the scale, design and character of blocks, buildings, streetscapes, parks, and other public spaces. This chapter includes building development standards for the Planning Area.
6. **Public Facilities, Services, and Infrastructure.** This chapter provides an overview of the existing and planned water, wastewater, stormwater, power, solid waste infrastructure, and public services for the Planning Area.
7. **Implementation and Financing.** This chapter summarizes the regulatory mechanisms for consistency with existing planning codes, gives an overview of how Affordable Housing will be provided on-site, and describes order of magnitude anticipated development costs and potential financing mechanisms.

2.4.3 Key Planning Strategies

The SDC Specific Plan envisions transformation of the SDC campus into a vibrant mixed-use, pedestrian-scaled district, with concentration of cultural, civic, retail, visitor, and other uses around the Central Green, creating a draw for the wider Sonoma Valley. It also aims to improve multi-modal access from the SDC to Highway 12 (State Route 12 or SR 12) by exploring the feasibility of constructing an additional east-west emergency access connection from the site. Utilities and infrastructure improvements are also incorporated into the Proposed Plan, such as the construction of new sewer laterals and mains, connections of each building within the Core Campus to a microgrid, and construction of all new utility lines underground. Further, the campus will be surrounded by a vast network of permanently preserved open spaces. The Specific Plan seeks to balance new development with conservation and rehabilitation and outlines a framework for land use designations and locations, including the overall amount of development and balance between uses, housing types, and added infrastructure improvements. Proposed land uses are shown in **Figure 2.4-1**.

2.4-1: Proposed Land Uses



Source: Page & Turnbull, 2021; County of Sonoma, 2020; Dyett & Bhatia, 2022

2.4.3.1 Land Use Classifications

The land use classifications and the associated density/intensity standards that follow represent proposed Specific Plan policy. Intensity is described in terms of Floor Area Ratio (FAR), or the permitted ratio of floor area (exclusive of area devoted to parking) to site area. Density is defined as the number of housing units per acre, exclusive of area devoted to streets, parks, and creeks. Specific Plan designations or policies may outline minimum or maximum densities or FARs.

Public schools, parks, safety services facilities (police and fire), emergency evacuation facilities, public community centers and other public facility uses that serve the community are permitted in all designations.

Land use classifications also specify or refer to housing types, which, consistent with State Department of Finance definition, are as follows:

- **Single-Family Detached.** Single-family units that are detached from any other buildings (with the exception of accessory dwelling units) and have open space on all four sides.
- **Single-Family Attached.** Single-family units that are attached to other units with one or more adjoining walls extending from ground to roof that separate it from other adjoining structures and form a property line. Each unit has its own heating system.
- **Multifamily.** Units with two or more housing units in one structure sharing a common floor/ceiling.

Apartments and condominiums are forms of ownership, not housing types; this is not regulated by the Specific Plan. Duplexes, triplexes, fourplexes, etc. refer to the number of housing units in a structure, not housing type – these could be in single-family attached or multifamily housing types.

The Specific Plan includes the following land use classifications; one overlay zone is also specified:

Low/Medium Density Residential

Low/Medium Density Residential accommodates a mix of housing types on smaller lots, either as detached (no walls shared with other properties), semi-detached (wall shared along one property line) or as attached units (walls shared with two adjacent properties), with density ranging from 6 to 14 units per gross acre and a maximum FAR of 1.0. Housing

types at the lower density range may include single-family detached or semi-detached units; housing types at the higher density range will be predominantly multi-family but may include single-family attached units. Multifamily units with shared parking are also permitted, provided they are not more than 25 percent of the total housing units within an area designated for Low/Medium Density Residential.

Medium/Flex Density Residential

Medium/Flex Density Residential accommodates a mix of housing types, with density ranging from 8 to 30 units per gross acre and a maximum FAR of 2.0. Housing types at the lower density range may include single-family attached dwellings; housing types at the higher density range may include multifamily buildings. Medium Density Residential sites are located within a short walk of the Central Green.

Employment Center

The Employment Center designation is intended to foster a mix of office, research and development, creative services, micro-manufacturing, institutional, and other supportive uses, and provide a active jobs center for the broader Sonoma Valley. New office and lab buildings mixed with reused/adaptively-reused buildings and shared parking facilities are envisioned as anchoring a walkable, bikeable environment, with public gathering places such as plazas and courtyards, in short walking distance to the Central Green. The Employment Center designation has a maximum FAR of 2.0.

Flex Zone

The Flex Zone designation allows for a broad mix of commercial, residential, office, hospitality, and entertainment uses, and is intended to allow flexibility in responding to market conditions as SDC evolves and finds its role in the regional economy. Local-, community-, and visitor-serving retail, commercial, and entertainment land uses, including restaurants, cafés, markets and bodegas, general retail, performing arts venues, art studios, and personal and business services are permitted; live-work spaces and maker-oriented uses are permitted subject to performance standards. The Flex Zone designation has a maximum FAR of 2.0 and a density range of 8 to 30 units per gross acre, with the exception of the Main Building, where the existing volume must be retained. Development in Flex Zone areas adjacent to the Central Green should provide at least one each residential, commercial, and office building fronting both the north and south sides of the Central Green, and should provide for retail and eating and drinking establishments that open out onto the Green.

Institutional

The Institutional designation accommodates adaptive reuse and new construction of a retreat/conference center located at the southern terminus of Sonoma Avenue; this area is envisioned as making use of the open spaces and scenic setting to support a conference center. Allowed uses include event spaces, workspace/office, museums, conference areas, and supportive uses such as food preparation, retail spaces, and short-term housing. The Institutional designation has a maximum FAR of 2.0.

Utilities

The Utilities designation allows for back-of-house functions such as electrical, water, wastewater, recycled or grey water, telecommunications, groundskeeping storage, and related functional uses. These uses should be located further from residential uses and off of the Central Green. The Utilities designation has a maximum FAR of 2.0.

Parks and Recreation

The Parks and Recreation designation provides for parks, recreation fields, and landscaped trails and pathways, and associated infrastructure structures. Park spaces may be active or passive, and could include dog parks, play areas, and other uses. These areas are intended to primarily consist of outdoor spaces, but they may contain support structures such as restrooms or small utility buildings. Park and recreation areas may have a secondary function as stormwater treatment and infiltration areas.

Buffer Open Space

The Buffer Open Space designation encompasses managed open space areas that create transitions between open space habitat and development. Along the edges of the Core Campus, the Buffer Open Space is intended as a defensible fire buffer area, with fire-resilient landscaping that protects buildings from fire; along the creeks, the Buffer Open Space creates floodable areas for stormwater management and ensures adequate riparian corridors for wildlife movement. Agricultural and active recreation uses are allowed within this designation as long as they are located further than 50 feet away from the top of Sonoma Creek's banks. Within the Buffer Open Space areas, built elements should be limited to trails and planters, permeable fencing, and informational signage.

Preserved Open Space

The Preserved Open Space designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, ecological services, water resources, and

agricultural uses. This space also contains some infrastructure, including water infrastructure, that is important for the continued functioning of local water systems.

Hotel Overlay Zone

The Hotel designation allows for a “boutique” hotel of up to 120 keys to be located in and near the historic Main Building. The Main Building is envisioned as the anchor and focal point of the Central Green, and must be at least partially open to the public with a mix of lobby space and publicly-accessible retail, food, and other support uses. Additional hotel wings and parking facilities should be built within the remaining overlay area. The maximum FAR will be as per the underlying district regulations.

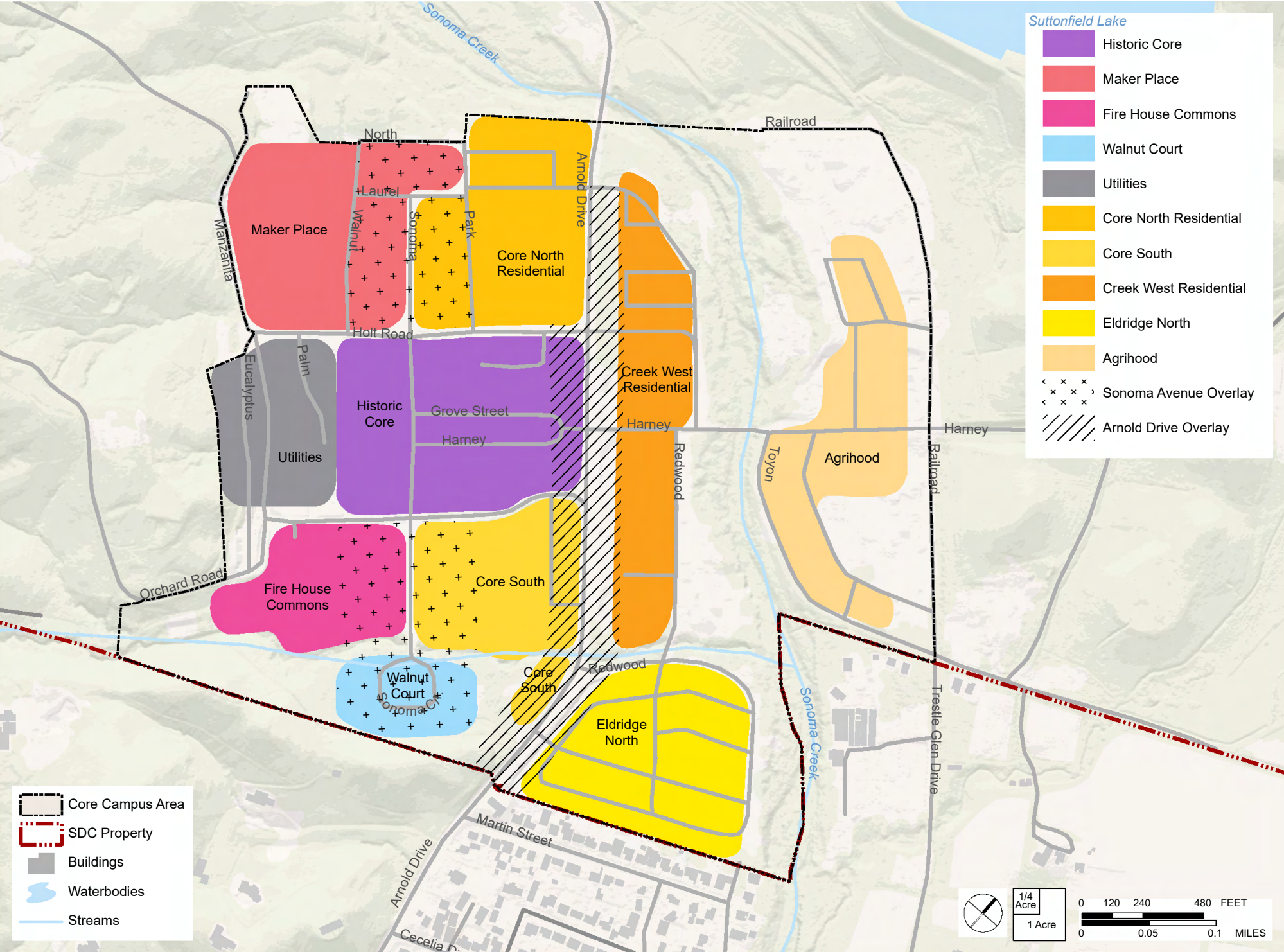
2.4.4 Sub-area Planning Strategies

2.4.4.1 Core Campus Districts

Within the overall structure of the Core Campus, there will be distinct districts. **Figure 2.4-2** shows the overall structure of the Core Campus, which includes the following districts: Historic Core, Core North Residential, Maker Place, Core South Residential, Fire House Commons, Walnut Court, Creek West, Eldridge North, Agrihood, and Utilities.

Each of these districts will have its own character and will intermix uses and products where possible to avoid homogeneity and improve neighborhood diversity and vibrancy. The districts are organized around defining features to create identity for each neighborhood, within the ethos of the larger campus and its legacy. Goals specific to each district are described below.

Figure 2.4-2: Districts



Source: Page & Turnbull, 2021; County of Sonoma, 2020; Dyett & Bhatia, 2022

Historic Core

Maintain and enhance the Core's historic character through cohesive scale and visual symmetry, reflecting the importance of the Central Green and the Main Building. Infuse the Central Green with energy and activation as the focus of the campus and a gathering place for the broader Sonoma Valley, with a vibrant mix of use and activities, and buildings adjacent to the Central Green that enhance the overall community character of the place.

Core North Residential

The Core North Residential district is envisioned as a neighborhood centered on the historic Baseball Fields that provides a transition and connection between the Historic Core and the expanded wildlife corridor to the north.

Maker Place

Maker Place is envisioned as a thriving district of employment uses including offices, research and development spaces, institutional uses with a research focus, and live-work artist studios anchored by a mix of historic buildings and new higher intensity working spaces, that maintains historic views and easy pedestrian access to the amenities of the Historic Core.

Core South Residential

Core South Residential is envisioned as a residential neighborhood that transitions from the higher intensity scale of the Historic Core to a scale that complements Mill Creek and the historic homes along Arnold Drive, with direct walking connections to the Central Green.

Fire House Commons

Fire House Commons is envisioned as a mixed-use district anchored by the historic Fire House with medium- to higher-density development, connected to the vibrant Historic Core, the western open space, and Mill Creek.

Walnut Court

Walnut Court is envisioned as a site for a small Institutional campus in an idyllic setting on the SDC site, adjacent to Mill Creek and surrounding the existing grove of redwood trees, and providing a space for offices, short term residential occupancy and other uses associated with and Institutional campus.

Creek West

Creek West is envisioned as a neighborhood between Arnold Drive and Sonoma Creek with a diversity of housing types and heights, active street frontages that respect the existing landscape setbacks

and mature tree canopies, and that maintains visual and physical access to the creek while minimizing impacts from development.

Eldridge North

Eldridge North is envisioned as a lower-intensity neighborhood that facilitates a visual transition between the town of Eldridge to the south and the main area of the SDC site, helping to blend the character of the two places and matching the existing scale of development.

Agrihood

The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east.

Utilities

The Utilities district is envisioned as the location of utilities and other “back-of-house” functions in a lower-intensity mix of existing and new buildings, that maintains views and access between the Historic Core and the open space to the west.

Overlays

- **Arnold Drive Overlay:** Along Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site.
- **Sonoma Avenue Overlay:** Along Sonoma Avenue, development should maintain the visual integrity of the north-south axis along Sonoma Avenue, terminating at historic buildings and lined with large leafy trees.

2.5 Project Buildout

This section provides a quantification of the future population, housing units, and jobs that could result from buildout of the Proposed Plan. Buildout projections have been developed in order to allow for an evaluation of the "reasonably foreseeable" direct and indirect impacts of the Proposed Plan, as required under CEQA. The reasonably foreseeable maximum development assumed for the EIR analysis (**Tables 2.5-1, 2.5-2, and 2.5-3**) attempts to project what might be feasible based on a number of factors, including but not limited to: available development sites; market demand for various uses; broader regional economic and market conditions; recent development and business investment in the vicinity; and properties likely to change due to vacancy or absence of existing development.

As of May 2022, the State of California Department of General Services (DGS) is seeking proposals from qualified parties to purchase the SDC site for potential redevelopment. According to Addendum #2 released in June 2022, the selected buyer will be announced on October 24, 2022. Thus, development of most of the properties in the Planning Area would be implemented through the market-driven decisions that the selected buyer(s) would make for their properties, and no development rights or entitlements are specifically conferred with the Proposed Plan. Furthermore, given that the majority of future development under the Proposed Plan is residential, varying levels of density bonuses are available under State depending on the level of affordable housing provided. Thus, it is difficult to project the exact amount and location of future development that may result. While the project buildout projection reflects a reasonably foreseeable maximum amount of development for the Planning Area through 2040, it is not intended as a development prediction or cap that would restrict development in any of the five subareas. Rather, the Proposed Plan allows for flexibility in the quantity and profile of future development within and between subareas, as long as it conforms to the policies and standards, including permitted densities and FARs, in the Specific Plan.

2.5.1 Methodology

In projecting the buildout for the 20-year planning horizon of the Proposed Plan, adaptive reuse development and new development were considered. These were derived as follows.

2.5.1.1 Adaptive Reuse Development

The buildout estimated the existing amount of residential units and non-residential square feet to be adapted from existing buildings on the SDC campus in 2040. Adaptive reuse development identified under this category refers to the process of reusing an existing building for a purpose other than for which it was originally built or designed. The potential for adaptive reuse on the SDC site is determined through a summary of critical assessments of the existing building forms and conditions. These include both prior objective studies prepared by the consulting team, and subjective evaluations based upon planning and architectural experience and an understanding of reuse potential of relevant building typologies. New development that is assumed to be redeveloped by 2040 is addressed below. Estimates of existing development were derived from previous studies and site analysis performed by Page & Turnbull for the Existing Conditions Assessment⁴, architectural drawings provided by DGS, and data created by Dyett & Bhatia based on aerial imagery.

2.5.1.2 New Development

Assumed reasonably foreseeable full development under the Proposed Plan is referred to as “buildout”. **Tables 2.5-1, 2.5-2, and 2.5-3** show a detailed breakdown of the potential residential units, non-residential development, population, and jobs that could result from buildout of the Proposed Plan. These tables also summarize the total buildout within the Planning Area (the sum of adaptive reuse development and new development). This total represents development that could be expected in 2040 if the Specific Plan is implemented according to the Land Use Diagram (**Figure 2.4-1**) and land use designations. Buildout information is presented for the SDC campus as a whole.

⁴ Wallace, Roberts, & Todd (WRT). August 2018. Sonoma Developmental Center Existing Conditions Assessment. Available: <https://transformsonoma.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>. Accessed: June 8, 2022.

Assumed reasonably foreseeable development potential is calculated by applying average densities/intensities (units per acre/FAR) to land use designations in the Proposed Plan. The SDC Specific Plan provides policies for new and modified land use districts and overlays, use and development standards, and density and intensity limits. Where specific standards are not listed within the Specific Plan, the applicable sections of the Sonoma County Zoning Ordinance will regulate development. Because site conditions and development regulations (e.g., building height limits or development standards) market conditions, and financial feasibility may prevent attainment of maximum allowable densities/intensities; assumed averages are used to represent a reasonably foreseeable estimate of development potential.

Table 2.5-1: Planning Area Residential Buildout Summary

<i>Type</i>	<i>Residential (units)</i>
New Market Rate	660
New Inclusionary	170
Adaptive Reuse Market Rate	70
Additional County-Provided Affordable Housing	100
Total	1,000

Notes: The base number of market rate units allowed is 550. With State and County density bonuses for inclusionary housing, the SDC site is anticipated to have around 660 new market rate units and a total of 1,000 housing units at buildout.

At least one additional income-restricted affordable housing project of around 100 units will be developed beyond the inclusionary housing; these units are anticipated to result from a County-led partnership with local affordable housing developers and the site developer

Table 2.5-2: Planning Area Population Buildout Summary

<i>Unit Type</i>	<i>Units</i>	<i>Population</i>
Non-Age-Restricted Units	780	1,872
Senior Units	220	528
Total	1,000	2,400

Source: Dyett and Bhatia, 2022

Table 2.5-3: Planning Area Non-Residential and Employment Buildout Summary

<i>Type</i>	<i>New Building Area (square feet)</i>	<i>Adaptive Reuse (square feet)</i>	<i>Total (square feet)</i>	<i>Employment (jobs)</i>
Commercial	20,000	20,000	40,000	90
Hotel	60,000	30,000	90,000	150
Office	60,000	130,000	190,000	540
Public	10,000	20,000	30,000	70
Institutional	10,000	30,000	40,000	90
Utility	10,000	10,000	20,000	-
Total	170,000	240,000	410,000	940

Note: Square footage rounded to nearest 10,000.

Source: Dyett and Bhatia, 2022

2.6 Intended Uses of this EIR

This EIR is intended to review potential environmental impacts associated with the adoption and implementation of the Proposed Plan and determine corresponding mitigation measures, as necessary. This EIR is a program-level EIR and does not evaluate the project-specific impacts of individual developments or projects that may be allowed under the Proposed Plan. Pursuant to CEQA Section 15152, subsequent projects that are consistent with the Proposed Plan may “tier” from this EIR, relying on the environmental analysis and mitigation measures it contains in order to streamline environmental review or to focus on project-specific environmental effects not considered in this EIR, if any. Additionally, subsequent projects that satisfy the requirements of CEQA Section 15182 or 15183 may be eligible for streamlined environmental review. Additionally, the Public Resources Code Section 21155.4 exempts from CEQA certain projects that are consistent with a specific plan. The exemption applies if a project meets all of the following criteria:

1. It is a residential, employment center, or mixed-use project;
2. It is located within a transit priority area;
3. The project is consistent with a specific plan for which an environmental impact report was certified; and
4. It is consistent with an adopted sustainable communities strategy or alternative planning strategy.

The specific plan exemption is also codified in Government Code section 65457. Government Code section 65457 provides a CEQA statutory exemption for any residential development project or zone change that is undertaken to implement and is consistent with a specific plan for which an EIR has been certified after January 1, 1980.

This EIR serves as the environmental document for all discretionary actions associated with development under the Proposed Plan. This EIR is also intended to assist other responsible agencies in making approvals that may result from the Proposed Plan. Federal, State, regional, and local government agencies that may have jurisdiction over development proposals in the Planning Area include:

- U.S. Army Corps of Engineers
- Federal Emergency Management Agency
- U.S. Fish and Wildlife Service
- California Department of General Services

- California Department of Fish and Wildlife
- California Department of Transportation
- Metropolitan Transportation Commission
- State Office of Historic Preservation
- California Department of Toxic Substance Control
- Bay Area Air Quality Management District
- San Francisco Bay Regional Water Quality Control Board
- Sonoma County Local Agency Formation Commission
- Sonoma County Transportation Authority
- Sonoma Valley County Sanitation District
- Sonoma Valley Groundwater Sustainability Agency
- Valley of the Moon Water District
- Sonoma Water

The Proposed Plan would require the following approvals and discretionary and ministerial actions by the County of Sonoma:

- **Planning Commission**
 - Recommendation to certify the EIR pursuant to CEQA
 - Recommendation to adopt the Proposed Plan
 - Recommendation regarding related ordinances, guidelines, programs, and other mechanisms for implementation of the Proposed Plan
- **Board of Supervisors**
 - Certification of the EIR pursuant to CEQA
 - Adoption of the Proposed Plan
 - Adoption of ordinances, guidelines, programs, and other mechanisms for implementation of the Proposed Plan

3 Environmental Analysis

3.1 Aesthetics

3.1 Aesthetics

This section evaluates the potential impacts to aesthetics that could arise from implementation of the Proposed Plan. The analysis includes possible impacts to scenic resources, visual character, and visual quality, as well as those arising from the possible introduction of new sources of light and glare.

There were 16 comments in response to the Notice of Preparation (NOP) pertaining to topics covered in this section. Specifically, the Sonoma Land Trust, Sonoma Mountain Preservation, the Sonoma Valley Citizens Advisory Commission, and several other community members voiced concerns about the effects of light pollution, particularly on wildlife movement through the Planning Area. Impacts pertaining to light and glare are addressed in Impact 3.1-4 and impacts pertaining to wildlife movement are addressed in Section 3.4: Biological Resources.

3.1.1 Regulatory Setting

3.1.1.1 Federal Regulations

No existing federal regulations pertain to visual resources in the Planning Area.

3.1.1.2 State Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Suitability for designation as a state scenic highway is based on vividness, intactness, and unity of the view, as described in Guidelines for Official Designation of Scenic Highways.⁵

⁵ California Department of Transportation (Caltrans). October 2008. Scenic Highway Guidelines. Available: <https://dot.ca.gov/-/media/dot-media/programs/design/documents/scenic-hwy-guidelines-04-12-2012.pdf>. Accessed: May 1, 2022.

- Vividness is the extent to which the landscape is memorable. This is associated with the distinctiveness, diversity, and contrast of visual elements. A vivid landscape makes an immediate and lasting impression on the viewer.
- Intactness refers to the integrity of visual order in the landscape and the extent to which the natural landscape is free from visual intrusions, such as buildings, structures, equipment, and grading.
- Unity describes the extent to which development is sensitive to and visually harmonious with the natural landscape.

Caltrans has designated State Route (SR) 12, which comprises the eastern edge of the Planning Area, as a scenic highway.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, as adopted by the California Air Resources Board (CARB). SB 375 requires Metropolitan Planning Organizations to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan to help achieve GHG reduction targets. The SCS must demonstrate attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

3.1.1.3 Local Regulations

Sonoma County General Plan 2020

The County's current General Plan addresses visual character and quality and scenic resources primarily in the Open Space and Resource Conservation Element. Goals place importance on preserving scenic vistas, reducing substantial light or glare, high-quality appearance of development, and a balance between open space, residential, and other land uses. The Land Use Element also addresses visual character through goals and policies that promote compact growth and preserve scenic features and biotic resource areas. The General Plan 2020 includes the following goals and objectives related to aesthetics and visual character:

Open Space and Resource Conservation

Goal OSRC-1: Preserve the visual identities of communities by maintaining open space areas between cities and communities.

Objective OSRC-1.1: Preserve important open space areas in the Community Separators shown on Figures OSRC-5a through OSRC-5i of the Open Space and Resource Conservation Element.

Objective OSRC-1.2: Retain a rural character and promote low intensities of development in Community Separators. Avoid their inclusion in City Urban Growth Boundaries or Spheres of Influence. Avoid their inclusion within Urban Service Areas for unincorporated communities.

Objective OSRC-1.3: Preserve existing groundwater recharge and stormwater detention areas within Community Separators.

Objective OSRC-1.4: Preserve existing specimen trees and tree stands within Community Separators.

Goal OSRC-2: Retain the largely open, scenic character of important Scenic Landscape Units.

Objective OSRC-2.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers.

Objective OSRC-2.2: Protect the ridges and crests of prominent hills in Scenic Landscape Units from the silhouetting of structures against the skyline.

Objective OSRC-2.3: Protect hills and ridges in Scenic Landscape Units from cuts and fills.

Goal OSRC-3: Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.

Objective OSRC-3.1: Designate the Scenic Corridors on Figures OSRC-5a through OSRC-5i along roadways that cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to cities.

Objective OSRC-3.2: Provide guidelines so future land uses, development and roadway construction are compatible with the preservation of scenic values along designated Scenic Corridors.

Goal OSRC-4: Preserve and maintain views of the nighttime skies and visual character of urban, rural and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.

Objective OSRC-4.1: Maintain nighttime lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve nighttime skies and the night time character of urban, rural and natural areas.

Objective OSRC-4.2: Ensure that nighttime lighting levels for new development are designed to minimize light spillage offsite or upward into the sky.

Land Use

Goal LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.

Objective LU-3.3: Encourage "infill" development within the expansion areas of the cities and unincorporated communities.

Sonoma County Code

Article 82 of Chapter 26 of the Sonoma County Code details general design review standards. The intent of Article 82 is not to stifle individual initiative, but to set forth the minimums necessary to achieve a healthful community whose property values are protected from unplanned developments. General development standards favor preserving natural topography, landmark sites and trees, views and vistas of the landscape, harmony with site characteristics and nearby buildings, and local architectural motifs.

Article 82 also details general development standards that pertain to light and glare. Requirements include that the number, location, size, design, lighting, materials, and use of colors in signs are compatible with the architectural style of the structure they identify and harmonize with their surroundings. The color, size, height, lighting and landscaping of appurtenant signs and structures shall be elevated for compatibility with local architectural motif and the maintenance of view and vistas of natural landscapes, recognized historic landmarks, urban parks, or landscaping. All lighting in parking areas shall be arranged to prevent direct glare or illumination onto adjacent properties.

Article 64 of Chapter 26 of the Sonoma County Code outlines the purpose and development criteria for the Scenic Resources Combining District which applies to the

Planning Area. The purpose of this district is to preserve the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the General Plan Open Space Element. Article 64 provides specific provisions that impact development for scenic landscape units and scenic corridors within the county. Such requirements include that structures should be sited below ridgelines, be screened by vegetation, and that development should be clustered.

Further, Article 64 outlines requirements regarding Community Separators which also apply to the Planning Area. Except for most of the Core Campus area, the SDC site is located within a local voter-approved Community Separator overlay that preserves lands with very low densities between communities. The Community Separators help to achieve the County's General Plan Land Use Element goal to maintain natural character and low intensities of development in open spaces between cities and communities. First passed in 1996 and renewed and expanded for another 20 years in 2016 with over 80% of voter support, a County-wide vote is required before the boundary of a Community Separator or existing land use designations and densities of land within a Community Separator may be changed, except in limited circumstances.

The Historic Combining District (HD) also applies to the Planning Area. As stated in Article 68 of Chapter 64 of the Sonoma County Code, the purpose of the HD is to protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors.

3.1.2 Environmental Setting

3.1.2.1 Scenic Resources

Most communities identify scenic resources as important visual assets that contribute to community identity. These resources can include landforms, trees, water features, and the built environment in so far as they enhance and define the visual character of a landscape. Scenic resources include natural and open spaces, as well as the built environment, particularly if certain architecture is of historic or artistic value.

Visual quality is defined as the overall visual impression or attractiveness of an area based on the scenic resources, both natural and built. The attributes of visual quality include variety, vividness, coherence, uniqueness, harmony, and pattern. Viewshed is a term used to describe a range of resources and their context that relate to what people can see in the immediate environment in terms of foreground, middle ground, and background distances.

Impacts to visual quality are perceived by different viewer types and to different degrees, depending on the viewer exposure. Different land uses, such as open space or commercial districts, derive value from the quality of their settings and, for the purposes of this study, include regionally designated scenic highways, gateways, and surrounding land features. Viewers driving in the county might be exposed to flat meadows to the rolling hills in the Sonoma Valley as they travel. Their exposure would vary based on proximity and ability to see the viewshed. Scenic resources are of particular importance relative to the way viewer sensitivity may be impacted. This sensitivity is determined by two measures: exposure and awareness. Exposure is the relative proximity of potential viewers to a given project implemented under the Proposed Plan, and awareness indicates the attention and focus viewers bring to the experience of the area.

Existing Visual Conditions

The Planning Area is in the heart to the Sonoma Valley region of southern Sonoma County, encompassing former agricultural land, oak woodlands, native grasslands, wetlands, forests, large riparian woodlands along Sonoma Creek and other tributaries, a major wildlife corridor, a cemetery, and two reservoirs surrounding the historical 180-acre built campus area. Arnold Drive bisects the property. The surrounding natural setting of Sonoma Valley Regional Park is directly to the north; portions of Sonoma Valley Regional Park, Martin Street, and Mill Creek to the south; Jack London State Historic Park to the west; and Sonoma Valley Regional Park to the east.

The overall urban structure of the 180-acre SDC Core Campus includes buildings intended for a mix of uses such as medical facilities, residential buildings, classroom facilities, administrative buildings, and recreational spaces. A baseball diamond sits toward the northern edge of the main campus. A cluster of utility and support buildings sits at the western edge of the Core Campus. The Sonoma Ecology Center continues to operate on the eastern side of the Core Campus, as do some of the recreational uses in the Planning Area. However, since the closure of the SDC campus in late 2018, most of the buildings on the SDC property are now vacant.

East of the Core Campus, historic agriculture uses, including the former Sunrise Industries farm, consisted of several support buildings, many of which were burned in the 2017 Sonoma Complex fires. To the west of the Core Campus, approximately 11-acres of non-contiguous land (within Jack London State Historic Park) were used as the Camp Via grounds. Suttonfield and Fern lakes also exist to the east and west of the Core Campus respectively. These hydrological features in the Planning Area are often valued for their scenic views and enjoyed by hikers and equestrians along the trails and unpaved roads.

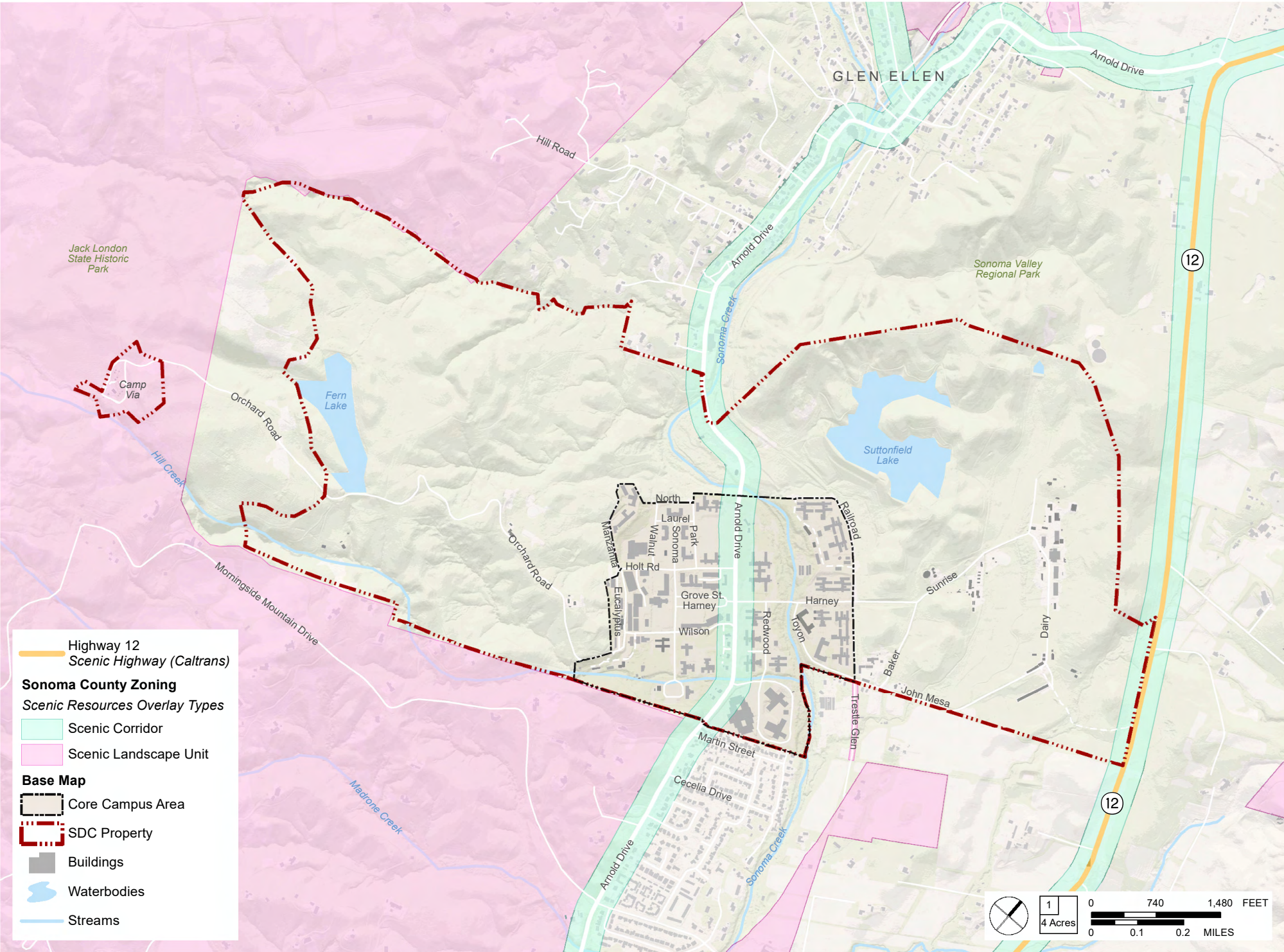
The SDC property is also part of the Sonoma State Home Historic District (SSHHD) which includes two individual resources, the Main Building and the Sonoma House, listed on the National Register of Historic Places. The SSHHD is also eligible for inclusion in both the National Register and California Register, as well as designation as a California Historical Landmark. The SSHHD contains 75 contributing historic resources. The Core Campus, between Railroad and Manzanita roads, contains 65 of these historic resources, which are almost exclusively to the west of Arnold Drive. There are several specific character-defining features that contribute to the SSHHD. Such features include the Core Campus, west of Arnold Drive, which creates the feeling of a traditional campus enclave with components that include a mix of buildings typical of different eras of institutional development, unified by clear east-west and north-south “axes,” lawns, and ornamental trees and landscape. See Section 3.5: Cultural, Historic, and Tribal Resources for more information regarding contributing historic resources.

Scenic Landscape Units and Corridors

Figure 3.1-1 shows the scenic landscape units and corridors located within the Planning Area. State Route (SR) 12, which comprises the eastern edge of the Planning Area, is a Caltrans-designated scenic highway.⁶ Arnold Drive, which runs through the center of the SDC property, and SR 12, at the eastern edge of the site, are Scenic Corridors that provide experiences of rural environments the General Plan seeks to preserve. Up to 200 feet on either side of these roads are subject to development restrictions and design criteria. In addition, the westernmost portion of the SDC site nearest to the Sonoma Mountain is designated as a Scenic Landscape Unit and is limited to agricultural or resource land use categories.

⁶ California Department of Transportation (Caltrans). July 2019. List of eligible and officially designated State Scenic Highways. Available: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>. Accessed : May 15, 2022.

Figure 3.1-1: Scenic Landscape Units and Corridors



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

Light and Glare

Glare refers to the discomfort or impairment of vision experienced when a person is exposed to a direct or reflected source of light, causing objectionable brightness greater than that to which the eyes are adapted. Sources of glare in urban settings include sunlight reflected in the windows of buildings, including glass façades, and cars. Lighted signs on multi-story buildings are another source of light. Existing development and motor vehicles produce light and glare throughout the county. Within the SDC site, pedestrian-scale lighting is present along streets within the previously developed Core Campus area. However, since the Planning Area is located within the rural Sonoma Valley and most of the existing buildings are currently vacant, sources of light and glare are minimal and can be primarily attributed to automobile headlights.

3.1.3 Impact Analysis

3.1.3.1 Significance Criteria

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

- Criterion 1: Have a substantial adverse effect on a scenic vista;**
- Criterion 2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;**
- Criterion 3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings in nonurbanized areas, or conflict with applicable zoning and other regulations governing scenic quality in urbanized areas; or**
- Criterion 4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

3.1.3.2 Methodology and Assumptions

Appreciation of aesthetics and visual resources is generally subjective by nature, and therefore the extent of visual impact associated with adoption and implementation of the Proposed Plan can be difficult to quantify. In addition, it is difficult to estimate the impact future development would have on scenic resources, since individual development projects can be designed to be compatible with and/or enhance the aesthetic quality of an area. As such, this analysis was based on the overall amount of new development at buildout of the Proposed Plan, the potential location of new development, and policies and standards in the Proposed Plan.

3.1.3.3 Relevant Policies and Implementing Actions

The following relevant goals and policies of the Proposed Plan address aesthetics:

Open Space and Resources and Hazards

Goals

- 2-A Open Space: Preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations.
- 2-B Balance: Promote a balance of habitat conservation, agriculture, and recreational open space, reflecting the recent historic use of the surrounding open space.

Policies

- 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.
- 2-7 Prohibit lights within the wildlife corridor and along the creek corridor.
- 2-11 Implement “dark skies” standards for all public realm lighting and all new buildings on the site, including by requiring that all outdoor fixtures are fully shielded, that outdoor lights have a color

temperature of no more than 3,000 Kelvins, and that lighting for outdoor recreational facilities be prohibited after 11pm.

- 2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public realm improvements around existing landscaping features.

Mobility and Access

Policies

- 4-1 Promote a fine-grained mix of land uses within the Historic Core, with housing, hospitality, office, commercial, and community uses fronting on the Central Green to create a vibrant community center with activity throughout the day.

Land Use

Goals

- 4-A Diverse Mix of Land Uses: Promote a diverse and integrated mix of residential development and employment uses, including research, creative services, education, office, retail, and small businesses, to create a vibrant, walkable community hub that provides economic and cultural opportunities for Sonoma Valley communities.
- 4-G Preserve the historic character of the SDC campus through the preservation and reuse of the National Register-eligible Sonoma House and the National Register-listed Main Building, key historic landscape elements, and of a portion of the contributing buildings to the National Register-listed Sonoma State Home Historic District, while balancing conservation with development and contemporary land use and development feasibility objectives.
- 4-H Select historic buildings for conservation to maximize their presence along streets and public places.
- 4-I Provide flexibility in design for conservation when conservation of an entire building is not feasible in keeping with the Secretary of the Interior Standards for rehabilitation.

Policies

- 4-1 Promote a fine-grained mix of land uses within the Historic Core, with housing, hospitality, office, commercial, and community uses fronting on the Central Green to create a vibrant community center with activity throughout the day.
- 4-2 Locate the primary commercial uses around the Central Green, including eating and drinking establishments, retail, and other local- and visitor-serving commercial uses, in order to reinforce the Central Green as the heart of the site. Give attention to ground floor activation and transparency of final designs to ensure a permeable edge between building interiors and the public realm. Smaller commercial uses may be located in other areas of the campus to the extent that they directly serve the surrounding land uses.
- 4-3 Require completion of at least 10,000 square feet of retail and eating and drinking establishments and of at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive.
- 4-4 Promote a mix of commercial uses that provides neighborhood services for residents, such as a market, bakery, coffee shop, to reduce the need for driving for everyday needs.
- 4-12 Prohibit auto-oriented establishments such as service and repair uses and drive-through establishments in the Planning Area.
- 4-20 Preserve and reuse the two historically significant buildings, the Main Building (PEC) and the Sonoma House Complex, including its six support structures.
- 4-21 Preserve and enhance the landscape elements that contribute to the significance and character of the Sonoma State Home Historic District, including the formal tree grid at the Central Green, the baseball field, Sonoma Bridge, the front entrance gate, and the Eldridge Cemetery, as well as primary circulation routes.
- 4-22 Require that the developer prepare a historic preservation plan, based on desired development and suitability of buildings for

adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows.

- 4-23 Preserve and reuse the contributing resources identified in Figure 4.3-1, to the greatest extent feasible.
- a) If all of the contributing resources identified in Figure 4.3-1 cannot be retained, the following buildings should be considered as least significant of those 28 contributors and studied for removal:
 - i. Acacia 2
 - ii. Goddard
 - iii. Workshop
 - b) If all 28 contributing resources identified in the Sonoma Developmental Center Land Use Diagram cannot be retained, in addition to those listed above as least significant contributors, the following buildings should be considered less significant of those 28 contributors and studied for removal:
 - i. Walnut (significant damage)
 - ii. Firehouse
 - iii. Main Store Room
 - iv. Maintenance Shop
 - v. Acacia I
- 4-24 Preserve and reuse buildings at both the north and south terminus of Sonoma Avenue, including Wagner, Dunbar and Wright to the north, and Walnut and Hatch to the south.
- 4-25 Preserve and reuse at least 8 of the 10 contributing buildings fronting Sonoma Avenue (including Sonoma Circle), as listed below.

- a) Wagner
 - b) Dunbar
 - c) Wright
 - d) Finnerty
 - e) McDougall
 - f) Oak Lodge
 - g) Hill
 - h) Walnut
 - i) Hatch
 - j) Main Building
- 4-26 Preserve and reuse all the contributing buildings and structures that surround the Central Green, as listed below.
- a) Main Building
 - b) Chamberlain Hospital
 - c) Palm Court
 - d) Pines
 - e) Entrance Gate
- 4-27 Preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Require that the developer hire a preservation architect to undertake a conditions assessment and reconstruction plan prior to demolishing and reconstructing houses on Arnold Drive that are in poor condition. Reconstruction should adhere to the Secretary of the Interior's Standards for Reconstruction.
- 4-28 Prepare interpretive signage, art, or other exhibition onsite to educate residents and visitors about the history of the site, including pre-history, Native American history and the history of the Sonoma State Home. Signage should be available in English and Spanish and Native American tribal language as appropriate.
- 4-29 Ensure that proper documentation is made prior to any substantial change to or demolition of a contributing historic structure, as described in Appendix A.

- 4-30 For any contributing historic structures that are demolished within the Planning Area, require that materials be made available as salvage as described in Appendix A, in order to facilitate the reuse of materials and historic detailing, and to reduce demolition waste.
- 4-31 Require that construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings, as described in Appendix A.

Community Design

Goals

- 5-K Creek West: Creek West is envisioned as a neighborhood between Arnold Drive and Sonoma Creek with a diversity of housing types and heights, active street frontages that respect the existing landscape setbacks and mature tree canopies, and that maintains visual and physical access to the creek while minimizing impacts from development.
- 5-O Arnold Drive Overlay: Along Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site.
- 5-P Sonoma Avenue Overlay: Along Sonoma Avenue, development should maintain the visual integrity of the north-south axis along Sonoma Avenue, terminating at historic buildings and being lined with large leafy trees.
- 5-Q Site Structure: Maintain and enhance the overall structure of the SDC site, with activity and intensity focused on the Central Green, streetscapes framed by continuous mature trees, and vistas that terminate at historic buildings and that extend to the Mayacamas and Sonoma Mountain ranges.
- 5-R Development Scale: Ensure that new development is in keeping with the overall scale and development height variation at the current SDC campus, while providing flexibility in how buildings of

various heights are dispersed at the campus and meeting the design goals and policies of individual districts.

- 5-S Built Environment: Support a cohesive community feel and character, while allowing a visually rich palette of diverse architectural styles, materials, and planting.

Policies

- 5-25 Maintain and enhance views and view corridors along the Central Green and Sonoma Avenue.
- 5-27 Maintain views of the Main Building and the Baseball Fields from Arnold Drive.
- 5-29 Orient balconies, stoops, decks, and porches to look out over the Baseball Fields.
- 5-31 Transition building heights and intensities from highest along Holt Road to lowest along the northern boundary.
- 5-32 Orient building activity and entrances away from the wildlife corridor at the north of the district, and ensure that thick vegetation and compliance with dark-sky requirements buffer wildlife from exposure to human activities.
- 5-34 Design building orientations and layouts to maximize visual connections with the Main Building and the Central Green.
- 5-36 Transition building heights and intensities from highest at the intersection of Sonoma Avenue and Wilson to lowest along the south and east edges along Mill Creek and the historic homes along Arnold Drive.
- 5-37 Replace historic homes along Arnold Drive as needed with buildings of similar size, height, style, and material palette as the existing structures.
- 5-39 Maintain the thick buffer of existing vegetation between Fire House Commons and Mill Creek in order to buffer lights and human activities to protect wildlife in the Mill Creek riparian corridor.

- 5-43 Use thickly-planted deciduous and evergreen trees and shrubs, in tandem with dark-sky compliant lighting, to buffer the Sonoma Creek habitat corridor from lights and human activity, particularly along Redwood, interspersed with small clearings for visual access to the creeks.
- 5-47 Lay out new streets and buildings in such a way as to maximize views of the preserved open space at the east side of the Core Campus.
- 5-51 Design utilities buildings to shield adjacent districts from visual clutter, noise, and odors by using screening, enclosed buildings, and landscaped buffers.
- 5-56 Ensure that building heights are consistent with Figure 5.3-1.
- 5-57 Require buildings to define street edges as outlined in Figure 5.3-2, lining up streets with main entrances, and designing buildings to be easily accessed by pedestrians, with parking tucked behind buildings.

Standard Conditions of Approval

Policies

MOB-1 Construction of the Highway 12 connector should reuse the existing street network to the greatest extent feasible.

MOB-2 Construction of the Highway 12 connector should avoid damage to scenic and open space resources such as trees, rock outcroppings, and historic buildings to the greatest extent feasible.

3.1.3.4 Impacts

Impact 3.1-1 Development under the Proposed Plan would have a substantial adverse effect on a scenic vista. (*Less than Significant*)

Development facilitated in the Planning Area would be in the existing developed area of the 180-acre Core Campus in addition to a potential SR 12 connector that would create a multi-modal connection between the Core Campus to SR 12. The Proposed Plan's

Preserved Open Space land use designation is intended to preserve open spaces outside of the Core Campus for habitat, recreation, and agricultural uses.

The Proposed Plan largely maintains the area where buildings would be located. The overall building area proposed is about the same as existing, but overall building volume is somewhat lower as several existing single-story buildings are relatively tall. The existing streets and open spaces that provide scenic vistas would be retained. Along Arnold Drive, the Proposed Plan seeks to retain cluster of trees along the eastern edge of the road, and along the west, retain the bungalows and the Baseball Fields.

The new development anticipated under the Proposed Plan would be subject to height restrictions. Existing buildings on campus range from approximately 12 to 65 feet in height, with the highest densities in the Historic Core. The proposed maximum building heights in the Specific Plan seek to maintain the prominence of the Main Building as a distinctive landmark, with maximum building heights flanking the Central Green capped at 45 feet, the height of the Chamberlain building. Within the Core Campus Districts, the proposed maximum height for new buildings in the Historic Core is 45 feet, Maker Place is 35 feet, Core North Residential is 30 feet, Utilities is 35 feet, Fire House Commons is 35 feet, Core South is between 30 and 35 feet, Walnut Court is 35 feet, Eldridge North is 20 feet, Creek West Residential is between 20 and 35 feet, and Agrihood is between 20 and 30 feet. Building heights are additionally regulated in the Proposed Plan's development standards for designated maximum heights of 30 feet and under. Development in the Planning Area would need to comply with these heights, as well as other goals and policies included as part of the Proposed Plan Community Design Chapter and accompanying zoning amendments. For example, Goal 5-R requires that new development keeps with the overall scale, volume, and development height variation at the current SDC campus which prevents impacts from increased shadows cast on scenic vistas in the Planning Area. In addition, policies 5-25 and 5-27 ensure that views and view corridors are either maintained or enhanced throughout the Planning Area.

Existing policies and regulations in the County's General Plan and County Code aim to preserve scenic vistas throughout the County. Goals of the County's current General Plan require the County to retain the largely open, scenic character of important scenic landscape units as well as to identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy. General Plan objectives additionally aim to provide guidelines so future land uses, development, and roadway construction are compatible with the preservation of scenic values along designated scenic corridors.

Given that construction will be clustered only in the previously developed Core Campus and that new development will keep with the overall scale and development height variation of the current SDC campus, adverse effects on the scenic vistas of SR 12 on the eastern edge of the Planning Area and the scenic landscape unit on the western edge of the Planning Area would be less than significant. Further, as described under Impact 3.1-2, adherence with existing and proposed policies and standards would ensure that construction of an SR 12 connector under the Proposed Plan would minimize adverse effects on a scenic vista to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.1-2 Development under the Proposed Plan would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (*Less than Significant*)

As discussed above, SR 12, which comprises the eastern edge of the Planning Area, is a Caltrans-designated scenic highway. Within the previously developed Core Campus area, any new development will keep with the overall scale and development height variation at the current SDC campus (Goal 5-R). Therefore, development within the Core Campus under the Proposed Plan would not occur along SR 12 and thus would ensure that damage to scenic resources along SR 12 would be less than significant.

However, the Proposed Plan would also explore the feasibility of providing an additional east-west emergency access connection from the site to SR 12. Since this potential construction of a new road connection would extend beyond the Core Campus to SR 12, it may result in a potentially significant impact that could substantially damage scenic resources within the state-designated scenic highway. However, adherence to the existing policies and regulations as well as Proposed Plan policies would minimize visual intrusion and assist in reducing potential obstructions of the view of scenic vistas associated with scenic corridors in the Planning Area. The General Plan requires any development preserve roadside landscapes that have a high visual quality. Further, Article 64 of Chapter 26 of the Sonoma County Code outlines required construction guidelines to preserve the visual character of scenic corridors, including that structures should be sited below ridgeline. In addition, several proposed policies serve to mitigate the impact further. The Proposed Plan's policies MOB-1 and MOB-2 require that the construction of the SR 12 connector reuse the existing street network and avoid damage to scenic resources such as trees, rock outcroppings, and historic buildings to the greatest extent feasible.

Therefore, consistency with these design standards would support the Proposed Plan's guiding principle of balancing development with historic resource conservation, to maintain the scenic vistas of the Planning Area while also improving emergency access. Therefore, development under the Proposed Plan would be consistent with applicable regulations governing scenic corridors, including the Sonoma County Code and General Plan. With adherence to existing and proposed policies and standards, development of an SR 12 connector under the Proposed Plan would ensure that damage to scenic resources along SR 12 would be less than significant.

Mitigation Measures

None required.

Impact 3.1-3 Development under the Proposed Plan would not substantially degrade the existing visual character or quality of public views of the site and its surroundings in nonurbanized areas, or conflict with applicable zoning and other regulations governing scenic quality in urbanized areas. *(Less than Significant)*

Visual Character and Public Views

The Planning Area is in a nonurbanized rural setting within Sonoma County. The existing visual character of the SDC campus consists primarily of residential buildings, with medical, educational, recreational, and administrative uses interspersed, designed in a relatively compact footprint within the expansive grounds to maximize the benefits of the public views and undeveloped open space. Today, given the closure of SDC in late 2018, most of the buildings on the SDC property are vacant.

As expressed in the Proposed Plan's vision statement, the community envisions the former SDC to be reinvigorated as a vibrant and sustainable community in the heart of Sonoma Valley. A mixed-use, pedestrian-oriented core would provide a diverse array of housing choices, and serve as a magnet of innovation, research, education, and visitation. The surrounding open spaces would flourish as natural habitats and as agricultural and recreational land linked to regional parks and open space systems. The guiding principles of the Proposed Plan are also intended to promote high-quality building and landscape design that reflects the Planning Area's unique contemporary identity, with emphasis on a cohesive sense of place and walkability, integrating development with open space conservation, providing a variety of housing types, and balancing redevelopment with existing land uses and historic resource conservation.

New development allowed by the Proposed Plan would introduce visual changes in some areas, including the addition of residential development and employment uses, an SR 12 connector, parking facilities, landscaping, and roadway improvements, as well as removal of some buildings and adaptive reuse of others. The Proposed Plan would change the nature of some land uses to include more dense and diverse types of land uses on the SDC campus including a vibrant mixed-use, pedestrian-scaled district, with a concentration of cultural, civic, retail, visitor, and other uses around the Central Green. Densities and intensities are organized to promote walkability and an active center, with the highest densities and intensities closest to the Central Green, while in some areas, especially toward the east and northeast, buildings would be removed with larger areas than present not having any development. Infill development or redevelopment could have differing visual characteristics than existing development, and by default, would alter the existing visual character of the site and surroundings. New development will occur primarily within the previously developed Core Campus area, excluding the SR 12 connector which will reuse the existing street network and avoid damage to scenic resources to the greatest extent feasible. Therefore, the proposed development would not differ substantially or detract from the existing visual quality and public views of the site by keeping with the overall scale and development height variation at the current SDC campus and by preserving the site's open space framework outside the Core Campus.

Zoning and Regulations Governing Scenic Quality

Future development and redevelopment projects envisioned by the Proposed Plan are intended to upgrade the appearance of land uses and public amenities to serve the larger county while adhering to applicable zoning and other regulations governing scenic quality in urbanized area. General development standards outlined in Article 82 of Chapter 26 of the Sonoma County Code favor preserving natural topography, landmark sites and trees, views and vistas of the landscape, harmony with site characteristics and nearby buildings, and local architectural motifs.

Similarly, existing and proposed policies and standards preserve the historic scenic qualities of the site. As stated in Article 68 of Chapter 64 of the Sonoma County Code, the Historic Combining District (HD) applies to the Planning Area and requires that alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors. Proposed Plan Goal 4-G would ensure that new development preserves the historic character of the SDC campus through the preservation and reuse of the Sonoma House and the Main Building, key historic landscape elements, and a portion of the contributing buildings to the National-Register-listed Sonoma State Home Historic District, while

balancing conservation with development and contemporary land use and development feasibility objectives. Proposed Goal 4-I would also keep with the Secretary of the Interior Standards for rehabilitation when conservation of an entire building is not feasible. In addition, proposed policies 4-20 through 4-31 require that additional building and landscape elements that contribute to the significance and character of the Historic District continue to be preserved. See Section 3.5: Cultural, Historic, and Tribal Cultural Resources for more information regarding historic perseveration within the SDC site.

Development under the Proposed Plan will contribute to fostering a vibrant, walkable, mixed-use area (policies 4-1, 4-2, 4-3, 4-4, and 4-12) in line with General Plan goals that promote infill and compact development. The Proposed Plan retains the overall land use framework and development densities/intensities of the County's current General Plan 2020. Further, the higher intensity of development in the Historic Core District would need to comply with the policies proposed as part of the Proposed Plan Community Design Chapter and accompanying zoning amendments. For example, Policy 5-57 would require buildings to define street edges, lining up streets with main entrances, and designing buildings to be easily accessed by pedestrians, with parking tucked behind buildings. In accordance with Goal 5-S, new development would support a cohesive community feel and character, while allowing a visually rich palette of diverse architectural styles, materials, and planting.

Consistency with these design standards would support the Proposed Plan's goal of providing unified, high-quality design that creates a sense of place and conserves historic resources, therefore improving the visual character of the Planning Area. Therefore, development under the Proposed Plan would be consistent with applicable regulations governing scenic quality in the urbanized area, including the Sonoma County Code and General Plan. With adherence to existing and proposed policies and standards, development under the Proposed Plan would improve rather than substantially degrade the existing visual character of the site, and this impact would be less than significant.

Mitigation Measures

None required.

Impact 3.1-4 Development under the Proposed Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant*)

New development facilitated under the Proposed Plan would introduce new sources of light within the Planning Area. Potential sources of new nighttime light from new

development include light spillover from the windows of residences and businesses, outdoor security lighting, lighted signs, streetlights, and lighting for new plazas and parks. New development also could produce glare from sunlight reflecting off windows, reflective surfaces, and unshielded equipment. Motor vehicle windows, parked or passing by, or vehicle headlights at night form another potential source of light and glare.

As discussed previously, the Planning Area is in the rural Sonoma Valley and since most of the existing buildings are currently vacant, sources of light and glare are minimal and can be primarily attributed to automobile headlights and pedestrian streetlight fixtures within the Core Campus. Therefore, the additional light and glare created under the Proposed Plan through new development, an SR 12 connector, and increased traffic would illuminate currently dark or unlit areas without reflective or glaring surfaces. However, proposed policies 5-32, 5-39, and 5-43 would maintain a thick buffer of vegetation in order to buffer lights to protect wildlife within the preserved open space areas and implement dark-sky requirements for all public realm lighting and all new buildings on the site.

Existing goals and objectives in the Sonoma County General Plan 2020 aim to preserve and maintain views of the nighttime skies and visual character of urban, rural, and natural areas, while allowing for nighttime lighting levels appropriate to the use and location; specifically that development should maintain nighttime lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve nighttime skies and the nighttime character of urban, rural, and natural areas; and ensure that nighttime lighting levels for new development are designed to minimize light spillage offsite or upward into the sky.

General development standards that pertain to light and glare would need to conform to County-prescribed lighting regulations provided in Section 26-82-030 of the Sonoma County Code. Requirements include that the number, location, size, design, lighting, materials, and use of colors in signs are compatible with the architectural style of the structure they identify and harmonize with their surroundings. The color, size, height, lighting and landscaping of appurtenant signs and structures shall be elevated for compatibility with local architectural motif and the maintenance of view and vistas of natural landscapes, recognized historic landmarks, urban parks, or landscaping. All lighting in parking areas shall be arranged to prevent direct glare or illumination onto adjacent properties. Compliance with California Building Code (CBC) standards would also minimize glare from sunlight reflecting off building windows.

With adherence to existing and proposed policies and standards, development under the Proposed Plan would not substantially increase the amount of nighttime lighting or glare in the already previously developed Core Campus or surrounding open space areas. Impacts associated with light and glare would be less than significant.

Mitigation Measures

None required.

3.2

Agriculture and Forestry Resources

3.2 Agriculture and Forestry Resources

This section assesses potential environmental impacts on agricultural and forestry resources from future development under the Proposed Plan, including those related to farmland as identified by the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency; agricultural zoning and Williamson Act contracts; and the conversion of farmland to non-agricultural uses or forestland to non-forest use. This section describes existing agricultural and forestry resources in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were eight responses to the Notice of Preparation (NOP) regarding topics covered in this section. Several community members requested to study opportunities for agricultural uses such as gardens, row crops, starting farming, orchards and grazing, as well as forest recovery opportunities. Several comments requested the proposed “agrihood” district be better defined and analyzed to ensure agricultural impacts can be fully understood. Other comments advocated for the protection of forest lands and preservation and restoration of historical agricultural lands. These comments are addressed and incorporated into the following Environmental Setting and Impact Analysis sections.

3.2.1 Regulatory Setting

3.2.1.1 Federal Regulations

U.S. Department of Agriculture Natural Resources Conservation Service

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving, and sustaining the nation's limited soil resources. In addition to many other natural resource conservation programs, the NRCS manages the Farmland Protection Program, which provides funds to help purchase development rights to keep productive farmland in agricultural uses. Working through existing programs, USDA joins with state, tribal, or local governments to acquire conservation easements or other interests from landowners.

Federal Farmland Protection Policy Act, 7 U.S. Code Section 4201 and 7 Code of Federal Regulations 658

The NRCS oversees the Farmland Protection Policy Act (FPPA) (7 U.S. Code [USC] Section 4201 et seq.; see also 7 Code of Federal Regulations [CFR] 658). The FPPA (a subtitle of the 1981 Farm Bill) is designed "to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The FPPA applies to projects and programs that are sponsored or financed in whole or in part by the federal government and does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development. The FPPA spells out requirements to ensure federal programs to the extent practical are compatible with state, local, and private programs, and policies to protect farmland and calls for the use of the Land Evaluation and Site Assessment (LESA) system to aid in analysis.

3.2.1.2 State Regulations

Farmland Mapping and Monitoring Program

The California Department of Conservation FMMP classifies farmland into five different categories based on soil type and current land use, as described in Section 3.2.2: Environmental Setting. The minimum mapping unit is 10 acres, unless specified.⁷

CEQA Section 21095 and CEQA Guidelines, Appendix G, together, define Prime, Unique, and Farmland of Statewide Importance as "Farmland," of which conversion to non-agricultural uses may be considered a significant impact.

California Farmland Conservancy Program

The California Farmland Conservancy Program (Public Resources Code Section 10200 et seq.) supports the voluntary granting of agricultural conservation easements from landowners to qualified nonprofit organizations, such as land trusts, as well as local governments. Conservation easements are voluntarily established restrictions that are

⁷ California Department of Conservation. 2019. Important Farmland Categories. Accessed at: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx>.

permanently attached to property deeds, with the general purpose of retaining land in its natural, open-space, agricultural, or other condition while preventing uses that are deemed inconsistent with the specific conservation purposes expressed in the easements. Agricultural conservation easements define conservation purposes that are tied to keeping land available for continued use as farmland. Such farmlands remain in private ownership and the landowner retains all farmland use authority, but the farmland is restricted in its ability to be subdivided or used for non-agricultural purposes, such as urban uses.

California Land Conservation Act (Williamson Act)

Williamson Act Contracts

The California Land Conservation Act (Government Code Section 51200 et seq.) of 1965, commonly known as the Williamson Act, provides a tax incentive for the voluntary enrollment of agricultural and open space lands in contracts between local government and landowners. The contract restricts the land to agricultural and open space uses and compatible uses defined in State law and local ordinances. An agricultural preserve, which is established by local government, defines the boundary of an area within which a city or county will enter into contracts with landowners. Local governments calculate the property tax assessment for lands under contract based on the actual use of the land rather than the potential land value assuming full development.

Williamson Act contracts are effective for periods of 10 years and longer. The contract is automatically renewed each year, maintaining a constant, 10-year contract, unless the landowner or local government files to initiate non-renewal. Should that occur, the Williamson Act would terminate 10 years after the filing of a notice of non-renewal. Only a landowner can petition for a contract cancellation. Tentative contract cancellations can be approved only after a local government makes specific findings and determines the cancellation fee to be paid by the landowner. There are no Williamson Act contracts located within the Planning Area.

The State of California has the following policies regarding public acquisition of and locating public improvements on lands in agricultural preserves and on lands under Williamson Act contracts (Government Code Section 5129051295):

- Avoid locating federal, State, or local public improvements and improvements of public utilities, and the acquisition of land, in agricultural preserves;
- Locate public improvements that are in agricultural preserves on land other than land under Williamson Act contract; and

- Any agency or entity proposing to locate such an improvement, in considering the relative costs of parcels of land and the development of improvements, consider the value to the public of land, particularly prime agricultural land, in an agricultural preserve.

Farmland Security Zone Contracts

Since 1998, another option in the Williamson Act Program has been established with the creation of Farmland Security Zone contracts. A Farmland Security Zone is an area created within an agricultural preserve by a board of supervisors upon the request of a landowner or group of landowners. Farmland Security Zone contracts offer landowners greater property tax reduction and have a minimum initial term of 20 years. Like Williamson Act contracts, Farmland Security Zone contracts renew annually unless a notice of non-renewal is filed. Potential cancellation of Williamson Act and Farmland Security Zone contracts would be addressed in subsequent project-level documents.

Open Space Subvention

Under the Open Space Subvention Act of 1971, the State has provided annual subvention payments to counties for foregone property tax revenue due to Williamson Act contracts. The Budget Act of 2009 virtually eliminated these payments for the 2009-10 fiscal year. While partial funding was restored for the 2010-11 fiscal year, long-term State support to counties for agricultural land conservation is uncertain. Despite the elimination of most payments from the State, the California Department of Conservation has continued to release status reports of lands under Williamson Act contracts, with the most recent release occurring in 2015.

Solar Use Easements

In 2011, California passed Senate Bill (SB) 618 (Chapter 596, Statutes of 2011) authorizing property owners under Williamson Act or Farmland Security Zone contracts to rescind the contract and simultaneously enter into a solar-use easement. Solar-use easements require the land to be used for solar photovoltaic facilities for a term of 20 years.

Forest Practice Rules

The Z'berg-Nejedly Forest Practice Act of 1973 established a set of rules known as the Forest Practice Rules to be applied to forest management related activities (i.e., timber harvests, timberland conversions, fire hazard removal, etc.) on privately owned timberlands in California. They are intended to ensure that timber harvesting is conducted in a manner that will preserve and protect fish, wildlife, forests, and streams. Under the

Forest Practice Act, a Timber Harvesting Plan is submitted to the California Department of Forestry and Fire Protection (CAL FIRE) by the landowner outlining what timber is proposed to be harvested, the harvesting method, and the steps that will be taken to prevent damage to the environment. If the landowner intends to convert timberland to non-timberland uses, such as a winery or vineyard, a Timberland Conversion Permit is required in addition to the Timber Harvesting Plan. It is CAL FIRE's intent that a Timber Harvesting Plan will not be approved if it fails to adopt feasible mitigation measures or alternatives from the range of measures set out or provided for in the Forest Practice Rules, which would substantially lessen or avoid significant adverse environmental impacts resulting from timber harvest activities. Timber Harvesting Plans are required to be prepared by registered professional foresters who are licensed to prepare these plans.

California Forest Taxation Reform Act of 1976

The California Forest Taxation Reform Act of 1976 made significant modifications to the manner in which annual property taxes for timber and timberlands are assessed in California. The act placed values on bare land that are related to its ability to grow trees, and it substituted a percentage tax on the value of timber at the time of harvest ("yield" tax) for the annual property tax on the trees. In exchange for this tax benefit, landowners had to be willing to dedicate their timberland to timber growing and compatible uses for a period of at least 10 years. Unless terminated by the county or landowner, these 10 years renew each year, thus creating a rolling minimum or self-perpetuating 10-year commitment.

Lands zoned in this manner are called Timberland Production Zones. Total acres of Timberland Production Zones ostensibly indicate land that is committed to timber growing and compatible uses, thus forming the long-term productive base of the state's privately owned forestland.

3.2.1.3 Local Regulations

Sonoma County General Plan 2020

The Sonoma County General Plan 2020 contains an Agricultural Resource Element outlining goals, objectives, and policies to insure the stability and productivity of the County's agricultural lands and industries. Such overarching goals and objectives include:

Goal AR-1: Promote a healthy and competitive agricultural industry whose products are recognized as being produced in Sonoma County.

Objective AR-1.1: Create and facilitate opportunities to promote and market all agricultural products grown or processed in Sonoma County.

Objective AR-1.2: Permit marketing of products grown and/or processed in Sonoma County in all areas designated for agricultural use.

Goal AR-2: Maintain for the timeframe of this plan agricultural production on farmlands at the edges but beyond the Urban Service Areas, to minimize the influence of speculative land transactions on the price of farmland and to provide incentives for long term agricultural use.

Objective AR-2.1: Limit intrusion of urban development into agricultural areas.

Objective AR-2.2: Maintain the Urban Service Boundaries to protect agricultural lands at the urban fringe for continued agricultural production.

Objective AR-2.3: Limit extension of urban services such as sewer beyond the Urban Service Boundaries.

Objective AR-2.4: Reduce economic pressure for conversion of agricultural land to non-agricultural use.

Goal AR-3: Maintain the maximum amount of land in parcel sizes that a farmer would be willing to lease or buy for agricultural purposes.

Objective AR-3.1: Avoid the conversion of agricultural lands to residential or nonagricultural commercial uses.

Objective AR-3.2: Maintain, in those agricultural land use categories where small parcels may be permitted, the largest land area for agricultural use. Limit the number of clustered lots in any one area to avoid the potential conflicts associated with residential intrusion.

Goal AR-4: Allow farmers to manage their operations in an efficient, economic manner with minimal conflict with nonagricultural uses.

Objective AR-4.1: Apply agricultural land use categories only to areas or parcels capable of the commercial production of food, fiber and plant material, or the raising and maintaining of farm animals including horses, donkeys, mules, and similar livestock. Establish agricultural production as the highest priority use in

these areas or parcels. The following policies are intended to apply primarily to lands designated within agricultural land use categories.

Goal AR-5: Facilitate agricultural production by allowing agriculture related support uses, such as processing, storage, bottling, canning and packaging, and agricultural support services, to be conveniently and accessibly located in agricultural production areas when related to the primary agricultural production in the area.

Objective AR-5.1: Facilitate County agricultural production by allowing agricultural processing facilities and uses in all agricultural land use categories.

Objective AR-5.3: Ensure that agriculture-related support uses allowed on agricultural lands are only allowed when demonstrated to be necessary for and proportional to agricultural production on site or in the local area.

Objective AR-5.3: Ensure that agriculture-related support uses allowed on agricultural lands are only allowed when demonstrated to be necessary for and proportional to agricultural production on site or in the local area.

Goal AR-6: Allow new visitor serving uses and facilities in some agricultural areas but limit them in scale and location. These uses must be beneficial to the agricultural industry and farm operators and compatible with long term agricultural use of the land.

Objective AR-6.1: Give the highest priority in all agricultural land use categories to agricultural production activities. Visitor serving uses shall promote agriculture and enhance marketing of Sonoma County agricultural products, but shall be secondary and incidental to agricultural production.

Objective AR-6.2: Permit visitor serving uses in all agricultural land use categories if they support and do not adversely affect the agricultural production activities of the area. Bed and breakfast inns of five or fewer rooms, and campgrounds of up to 30 sites, are permissible recreational uses only in the "Land Extensive Agriculture" and "Diverse Agriculture" categories, if they do not adversely affect the agricultural production activities of the area.

Objective AR-6.3: Develop a pilot event coordination program for the Sonoma Valley Planning Area that provides for monitoring and scheduling of special events on agricultural lands and for agriculture related events on other lands so as to minimize the adverse cumulative impacts of such uses, particularly in areas where agriculture related support uses and/or visitor serving uses are concentrated.

Goal AR-7: Support efficient management of local agricultural production activities by the development of adequate amounts of farm worker and farm family housing in agricultural areas.

Objective AR-7.1: Encourage farm operators to provide sufficient housing in addition to housing permitted by applicable density for permanent and seasonal agricultural employees and for family members to maintain agricultural production activities.

Objective AR-7.2: Locate agricultural employee housing where it promotes efficiency of the farming operation and has minimal impact on productive farmland.

Objective AR-7.3: Assist nonprofit organizations or agencies in their efforts to establish a program to provide safe and adequate housing for farm workers.

Objective AR-7.4: Permit a limited number of farm family housing units in addition to the number of dwellings allowed by the density.

Goal AR-8: Assist in formulating programs that could provide alternative sources of capital for agricultural production without selling or encumbering the farmland as collateral. These measures include, but are not limited to, voluntary programs for purchase and transfer of development rights.

Objective AR-8.1: Continue participation in the Williamson Act and Farmland Security Zone programs.

Objective AR-8.2: Participate with wastewater generators to establish programs for agricultural reuse of recycled water in a manner which would be economically beneficial to agriculture and which would assure that the quantity and quality of the recycled water is appropriate for the intended use.

Objective AR-8.3: Encourage formulation of programs and evaluate alternative funding sources which offer financial incentives to the farm owner to reduce reliance on subdivision and sale of land to raise operating capital.

Goal AR-9: Provide agricultural permit processing procedures that are rapid and efficient.

Objective AR-9.1: Establish permit processing procedures that will simplify and shorten the decision-making process for permits on agricultural lands.

Objective AR-9.2: Provide and expedite permitting assistance to the agricultural industry.

Objective AR-9.3: Promote rural character in the design of agriculture related support uses on agricultural lands.

Goal AR-10: Provide for the raising, harvesting and production of fish in the same manner as the harvesting and production of agricultural products.

Objective AR-10.1: Allow aquaculture and its related facilities and activities in all agricultural areas.

Objective AR-10.2: Provide opportunities for development of support facilities for the fishing industry on appropriate lands.

Objective AR-10.3: Promote products of the fishing industry in the same manner as agricultural products.

Goal AR-11: Provide for the raising of horses in the same manner as the production of other agricultural products.

Objective AR-11.1: Allow the raising of horses and related facilities and activities in all agricultural areas.

Objective AR-11.2: Provide opportunities for the development of support uses for the horse industry on appropriate lands, consistent with best management practices.

In addition, the following goals, objectives, and policies in the Open Spaces and Resource Conservation Element pertain to forestry resources:

Goal OSRC-12: Preserve, sustain and restore forestry resources for their economic, conservation, recreation, and open space values.

Objective OSRC-12.1: Identify and preserve areas with timber soils and commercial timber stands for timber production. Reduce incompatible uses and the conversion of timberlands to agriculture and other uses that effectively prevent future timber production in these areas.

Objective OSRC-12.2: Minimize the potential adverse impacts of timber harvesting on economic, conservation, recreation and open space values and restore harvested areas to production for a future yield.

Policy OSRC-12b: Review all timber harvest plans for compatibility with General Plan policies and economic viability of the industry.

Policy OSRC-12c: Where applicable, comment on timber harvest plans in support of increased protection of Class III streams.

Policy OSRC-12d: Review timber harvest plans adjacent to designated Riparian Corridors and request that clear cutting not occur within streamside conservation areas. Where clear cutting is approved by the applicable State or Federal agency along designated Riparian Corridors, ensure that at least 50 percent of the overstory canopy and at least 50 percent of the understory vegetation be retained.

Policy OSRC-12e: Revise the districts of the Zoning Code that implement the Resources and Rural Development land use category to reduce the potential for conversion of timberland to non-timber uses.

Sonoma County Code

Chapter 30, Agriculture, of the Sonoma County Code establishes the Sonoma County Right to Farm Ordinance, which is the declared policy of the County to conserve, protect, enhance, and encourage agricultural operations on agricultural land within the unincorporated area of the county. It is the purpose and intent of this article to reduce the loss to the county of its agricultural resources by limiting the circumstances under which properly conducted agricultural operations on agricultural land may be considered a nuisance. It is the further purpose and intent of this article to carry out and advance the goals, objectives, policies, and implementation programs of the Agricultural Resources Element of the General plan.

Article 67 of Chapter 26, Sonoma County Zoning Regulations, establishes the Valley Oak Habitat Combining District (VOH). The purpose of this district is to protect and enhance valley oaks and valley oak woodlands and to implement the provisions of Section 5.1 of the General Plan Resource Conservation Element. This overlay district applies to the Planning Area and requires protection of valley oak trees and replacement of any large trees removed.

In addition, Article 06 of Chapter 26, Sonoma County Zoning Regulations, establishes Agricultural and Resources Zones with allowed land uses and development standards. These zones protect agricultural land and natural resource and open space areas, support the county's agricultural and natural resource economic base in a sustainable manner, and manage and conserve natural resources to avoid depletion and promote replenishment of these resources. Such zones include:

1. **Land intensive agriculture (LIA).** The LIA zone enhances and protects lands best suited for permanent agricultural use and capable of relatively high production per acre of land.
2. **Land extensive agriculture (LEA).** The LEA zone enhances and protects lands best suited for permanent agricultural use and capable of relatively low production per acre of land.
3. **Diverse agriculture (DA).** The DA zone enhances and protects land where soil, climate, and water conditions support farming but where small acreage intensive farming and part-time farming activities are predominant, and where farming may not be the principal occupation of the farmer.
4. **Resources and rural development (RRD).** The RRD zone protects lands needed for commercial timber production, geothermal production, and aggregate resources production; watershed, fish and wildlife habitat, and biotic resources; and agricultural production activities. It allows very low-density residential development and recreational and visitor-serving uses where compatible with resource use and available public services.
5. **Timberland Production District (TP).** The TP zone conserves and protects of land capable of producing timber and forest products and establishes timberland zoning and taxation consistent with the Forest Taxation Reform Act of 1976.

3.2.2 Environmental Setting

3.2.2.1 Farmland Classification

The California Department of Conservation's FMMP classifies farmland into the following categories based on soil type and current land use:

- **Prime Farmland.** Land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and

moisture supply needed to produce sustained high yields of crops when managed (including water management) according to current farming methods. Prime Farmland must have been used for the production of crops within the last three years.

- **Farmland of Statewide Importance.** Land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production. Similar to Prime Farmland, Farmland of Statewide Importance must have been used for crop production within the last three years.
- **Unique Farmland.** Land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but which is currently used for the production of specific high economic value crops (as listed in the last three years by the California Department of Food and Agriculture). It has the special combination of location, soil quality, growing season, and moisture supply to produce sustained high quality or high yields of a specific crop (e.g., oranges, olives, avocados, rice, grapes, and cut flowers) when treated and managed according to current farming practices.
- **Farmland of Local Importance.** Land that is either currently producing crops or has the capability to do so. It is land other than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, but it may be important to the local economy due to its productivity.
- **Grazing Land.** Land on which the existing vegetation, whether grown naturally or through management, is suitable for livestock grazing.

However, for the purpose of environmental review, CEQA defines Farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.⁸

⁸ Public Resources Code Section 21060.1

3.2.2.2 Agricultural Context

California is the country's leading agricultural producer and exporter.⁹ The Planning Area is located in Sonoma County, which ranked 15th out of 58 California counties for gross value of agricultural production at \$1,106,663,000.¹⁰ The county's top four commodities by gross value in 2018 were grapes, wine; livestock, unspecified; nursery, woody ornamentals; and nursery products, miscellaneous. There are 567,284 acres of farmland in Sonoma County.¹¹ Approximately 43 percent of this farmland is used as pastureland.

In the State of California, productive farmland acreage has been gradually declining, due primarily to the conversion of farmland to non-agricultural uses. Between 1984 and 2010, the area of farm and grazing lands in the state declined by more than 1.4 million acres, including a loss of 662,000 acres of Prime Farmland, the farmland type with the best soils for agricultural production.¹² Similar to the average annual acreage decrease within the state since 1984, Sonoma County has seen a decrease in the total area of farmland between 2012 and 2017, losing approximately four percent, or 22,487 acres of land.¹³

⁹ U.S. Department of Agriculture Economic Research Service, U.S. agricultural exports, commodity detail by State: calendar years 2000-2020, October 26, 2021, https://www.ers.usda.gov/webdocs/DataFiles/100812/commodity_detail_by_state_cy.xlsx?v=4631.3, accessed June 3, 2022.

¹⁰ California Department of Food & Agriculture. 2020. California Agricultural Statistics Review 2019-2020. Available: https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf. Accessed: May 13, 2022.

¹¹ United States Department of Agriculture. 2017. Census of Agriculture County Profile, Sonoma County California. Available: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/California/cp06097.pdf. Accessed: May 13, 2022.

¹² California Department of Conservation Division of Land Resource Protection (DLRP). 2015. California Farmland Conversion Report 2015. Available: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf. Accessed: May 14, 2022.

¹³ United States Department of Agriculture. 2017. Census of Agriculture County Profile, Sonoma County California. Available: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/California/cp06097.pdf. Accessed: May 13, 2022.

3.2.2.3 Forestry Context

California is one of the country's leading lumber producing states. The Planning Area is located in Sonoma County, which ranked 12th out of 58 California counties for net board-feet of lumber produced in 2021. In 2021, a total of 34,470,000 board-feet of lumber, valued at roughly 11.3 million dollars, was harvested in Sonoma County. This amount was slightly greater than two percent of the total timber harvested in the California during that year.¹⁴ Approximately 513,000 acres (about 50% of the County land area) in Sonoma County are devoted to forest and woodlands. Timber is harvested within the County's Timberland Production District (TP). In Sonoma County, these TP lands are predominantly in the northwest part of the County. There are approximately 232,000 acres of timberland in the County. Sonoma County is unique among many counties in California because 94 percent of the timberlands are privately owned.¹⁵

3.2.2.4 Planning Area Overview

Agricultural Resources

The Planning Area is located in a rural setting within the vastly agricultural area of unincorporated Sonoma County. Parcels immediately to the south of the Planning Area in the eastern portions are currently being used as vineyards. In this rural context, there is some land within SDC that was historically used for agriculture within the Planning Area. Specifically, there is Farmland of Local Importance on the eastern portion of the site. This area contained historic agriculture uses, including animal husbandry and grazing, orchards, vineyards, crop production and the former Sunrise Industries farm. Several support buildings for agriculture uses also are present in this area, many of which were burned in the 2017 Sonoma Complex fires. The presence of rich soils and the mandate to

¹⁴ California Department of Tax and Fee Administration. 2021. Timber Production Figures. Available: <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=PropTaxTimberProductionStats>. Accessed: May 31, 2022.

¹⁵ Sonoma County. September 2008. Sonoma County General Plan 2020 Open Space and Resource Conservation Element. Available: <https://permitsonoma.org/longrangeplans/adoptedlong-rangeplans/generalplan/organizationandoverview/openspaceandresourceconservation>. Accessed: June 5, 2022.

preserve open space on the SDC site suggests that agricultural uses could again become an important land use on the SDC site.

Figure 3.2-1 illustrates the locations of lands within the Planning Area classified as farmland by the FMMP. As shown, the Core Campus of the Planning Area is classified as Urban and Built-Up Land, while a majority of the open space in the Planning Area is classified as Grazing Land. However, there are no current grazing activities occurring within the Planning Area. There are no areas of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland within the Planning Area. Approximately 610 acres within the Planning Area is designated as Grazing Land and 98 acres is designated as Farmland of Local Importance.

No land within the Planning Area is currently zoned as Agricultural in the Sonoma County General Plan; the entire Planning Area is currently zoned as Public Facilities. The only agricultural and resource-based land use permitted in this zone is beekeeping, and agricultural processing is conditionally permitted.

Forestry Resources

Forestland is defined in California Public Resources Code Section 12220(g) as land that can support 10 percent native tree cover of any species under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

The following forest lands exist within the Planning Area:

Riparian Forests

The SDC site has about 25 acres presently mapped riparian forest, primarily along Sonoma Creek. Unmapped riparian forest likely exists along Asbury and Hill Creeks. Riparian forests consist of alder, willow, ash, big leaf maple and cottonwood. Riparian forests are considered sensitive communities by California Department of Fish and Wildlife (CDFW).

Mixed Evergreen Forests

Mixed evergreen forests are mapped mostly on the western edge of the property (22 acres of redwood forest, 42 acres of California bay forest, two acres of Douglas fir forest, and one acre of madrone forest). Redwood and madrone forest associations are sensitive communities as well as many Douglas fir and California bay forests.

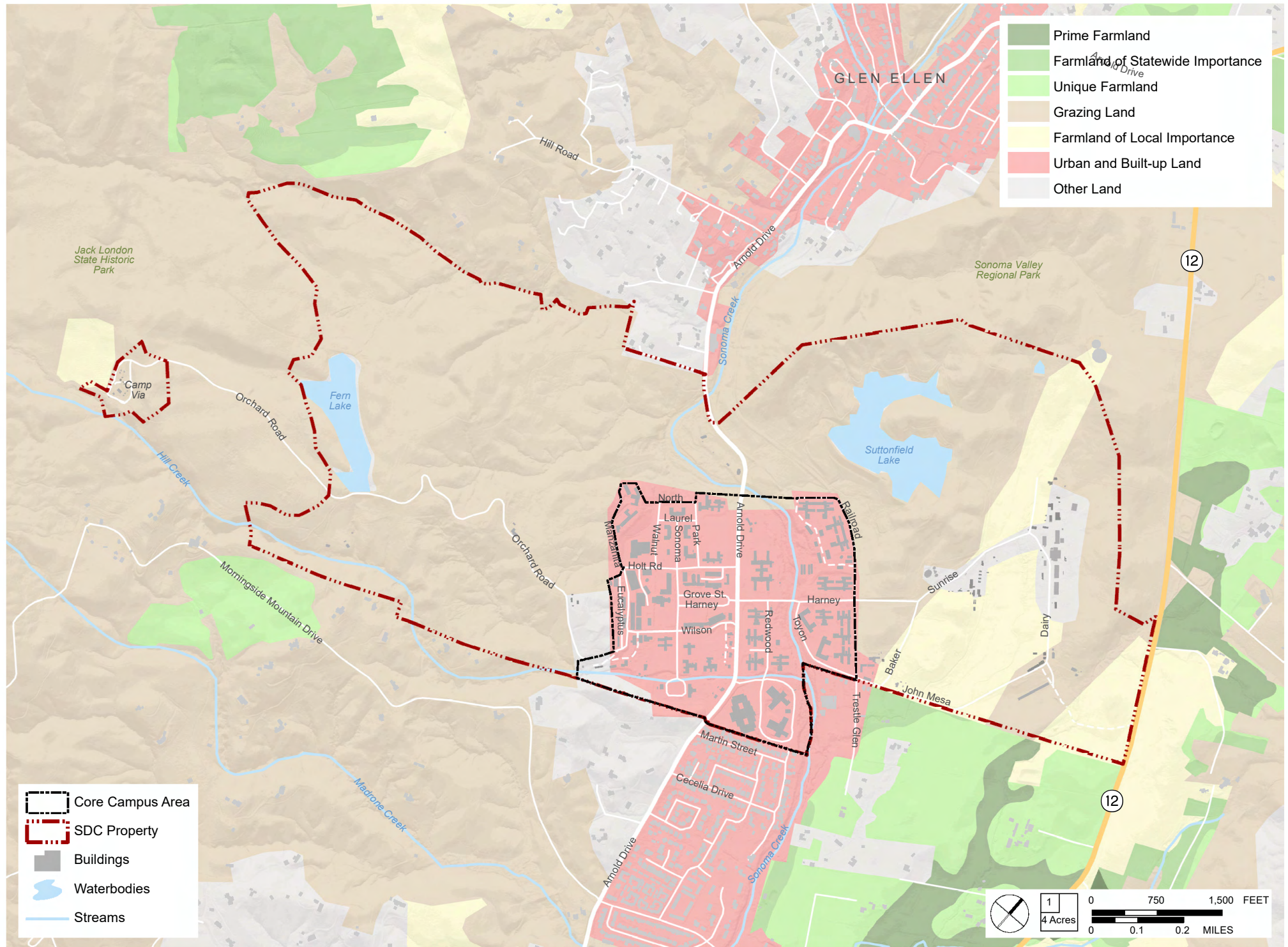
Oak Woodlands

Oak woodlands are the most common forest type mapped on the SDC property: 251 acres of mixed oak woodland, 69 acres of blue oak woodland, 33 acres of Valley oak woodland and 26 acres of Oregon oak woodland. According to CDFW, Valley oak woodland and Oregon oak woodland associations are sensitive natural communities; some mixed oak and blue oak associations are also considered sensitive. **Figure 3.2-2, Figure 3.2-3, and Figure 3.2-4** illustrate the different forestlands that occur within the Planning Area.

Timberland is defined in California Public Resources Code Section 4526 as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.

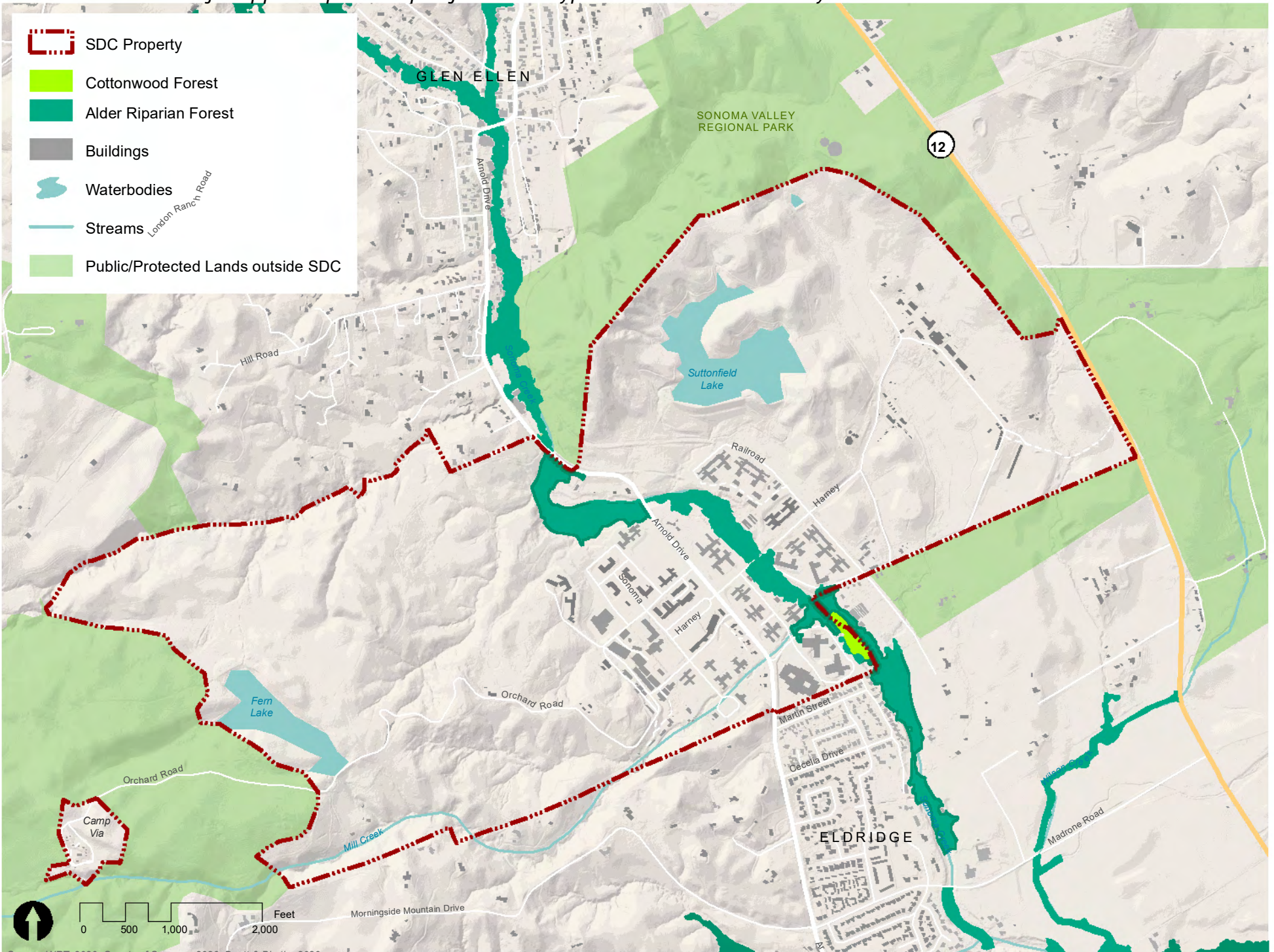
Although a significant amount of timber is harvested within Sonoma County annually, the Planning Area is not on one of these lands. The Planning Area is not currently designated or zoned as a Timberland Production District or for other forestry related uses. Therefore, the site does not meet the definition for timberland provided in Public Resources Code Section 4526, as described above.

3.2-1: Farmland



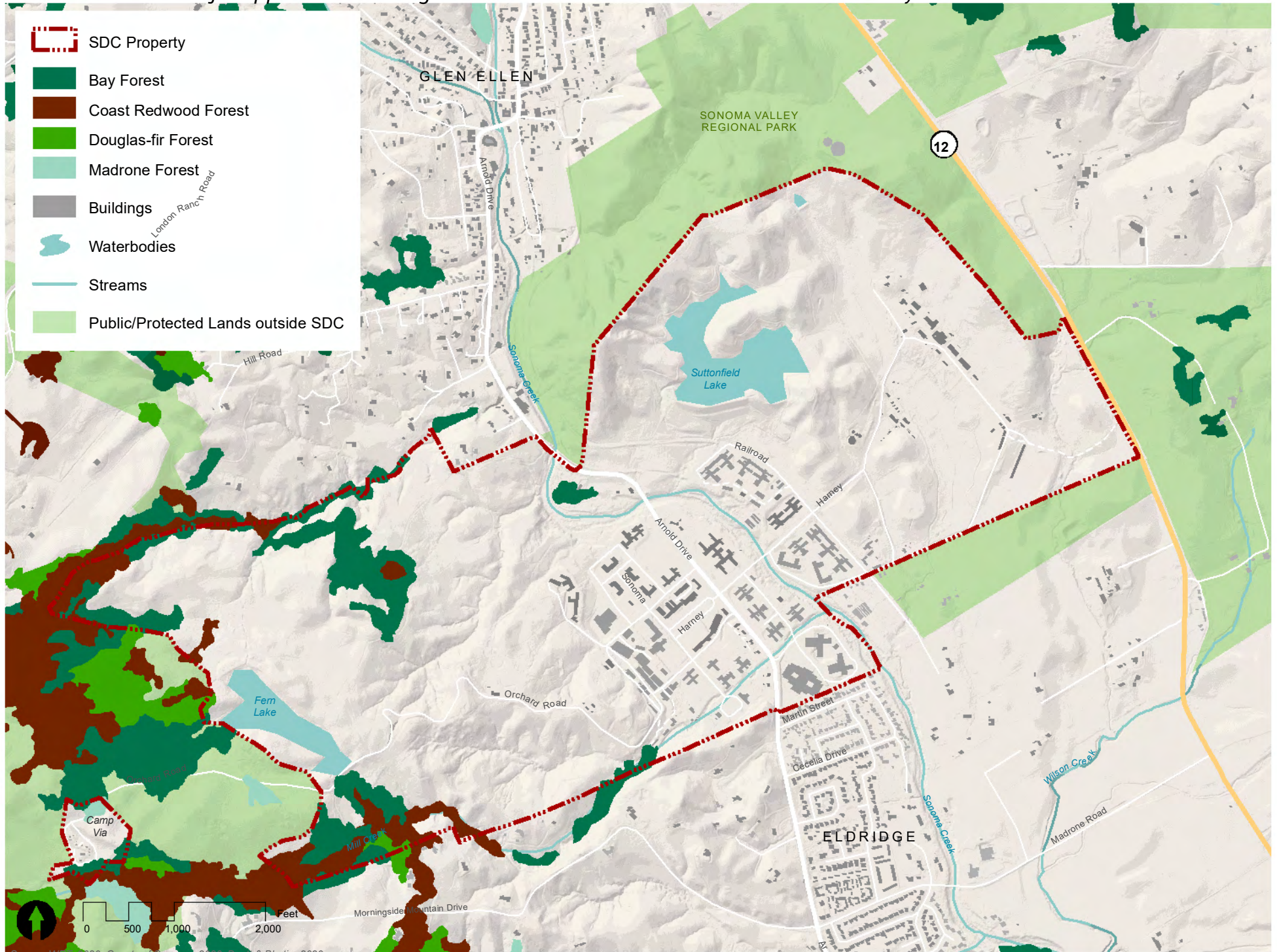
Source: FMMP, Department of Conservation, 2018; WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

3.2-2: Distribution of Mapped Riparian-Specific Forest Types at SDC and in Vicinity

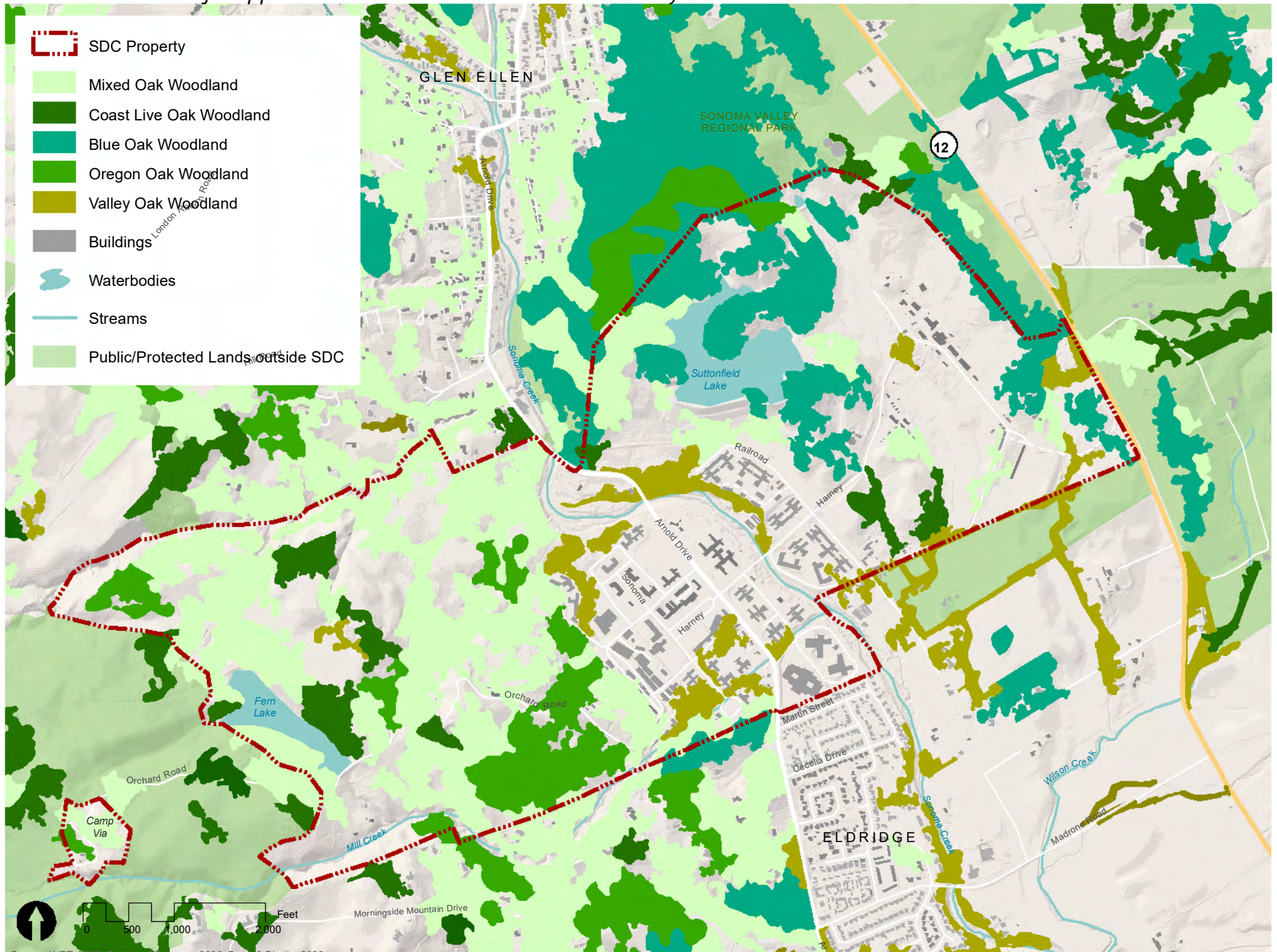


Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2020

3.2-3: Distribution of Mapped Mixed Evergreen and Redwood Forests at SDC and in Vicinity



3.2-4 Distribution of Mapped Oak Woodlands at SDC and in Vicinity



3.2.3 Impact Analysis

3.2.3.1 Significance Criteria

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

- Criterion 1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;**
- Criterion 2: Conflict with existing zoning for agricultural use, or a Williamson Act contract;**
- Criterion 3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));**
- Criterion 4: Result in the loss of forest land or conversion of forest land to non-forest use; or**
- Criterion 5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use.**

3.2.3.2 Methodology and Assumptions

Farmland resources within the Planning Area were assessed based on the California Department of Conservation FMMP, a biennial report and mapping resource on the conversion of farmland and grazing land. Williamson Act contract lands were identified by geographic information systems (GIS) data from Sonoma County. Using these sources, the Proposed Plan was analyzed for potential conversion of Farmland, conversion of Williamson Act contract lands, and other changes resulting from the Proposed Plan that may result in the conversion of farmland to urban uses. Forestry resources were evaluated using the definitions provided by the California Public Resources Code Sections 12220(g) and 4526.

3.2.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address agriculture and forestry resources:

Open Space and Resources and Hazards

Goals

2-A Open Space: Preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations.

2-B Balance: Promote a balance of habitat conservation, agriculture, and recreational open space, reflecting the recent historic use of the surrounding open space.

2-C Recreational Resources: Support the continued use of the preserved open space at the site as a recreation resource for the community by establishing access points to the system of trails and recreation spaces.

2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.

Policies

- 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.
- 2-2 Work with agricultural community partners and local farmers to reintroduce agricultural uses in the agrihood and within the managed landscape buffer to promote local production and regenerative farming practices, honoring the site's history and enhancing the site's connection to the land.

- 2-18 Collaborate with local groups to remove invasive species and re-establish native species throughout the site, particularly along the riparian corridors.
- 2-19 Select a planting palette of native and/or low-water plant species that are climate appropriate, drought-resistant, support local insects and animals, and that require minimal irrigation and maintenance.
- 2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public realm improvements around existing landscaping features.
- 2-21 Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.
- 2-22 Leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or recreational users, except within the managed landscape buffer.
- 2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.

Community Design and Sustainability

Goals

5-M Agrihood: The Agrihood District is envisioned as a new neighborhood that is a nod to historic agricultural lands, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east .

Policies

- 5-47 Lay out new streets and buildings in such a way as to maximize views of the preserved open space at the east side of the Core Campus.

- 5-48 Use low-water, low-maintenance agricultural landscape plantings in the streetscapes and public spaces of the Agrihood, such as artichokes; native strawberry and grape varieties; boysenberries; passionfruit and kiwi vines; and fruiting fig, persimmon, olive, and citrus trees.
- 5-49 Design Agrihood buildings using a more rustic materials palette than other areas at the site, such as by incorporating a higher percentage of reclaimed materials in facades, using unfinished or natural accent materials such as Corten steel or corrugated metal, or opting for straw-bale construction, which can also aid in the fire-resistance of structures.

3.2.3.4 Impacts

Impact 3.2-1 Development under the Proposed Plan would not Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. *(No Impact)*

As noted above, the Planning Area is located in a rural setting within the vastly agricultural area of unincorporated Sonoma County. According to the California Department of Conservation FMMP, there are no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Planning Area. Therefore, implementation of the Proposed Plan would have no impact on the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use.

Mitigation Measures

None required.

Impact 3.2-2 Development under the Proposed Plan would not conflict with existing zoning for agricultural use, or a Williamson Act contract. *(Less than Significant)*

As discussed in the regulatory and environmental setting sections, the entirety of the Planning Area is zoned as Public Facilities, and there are no areas currently zoned as Agricultural and Resources Zones and no Williamson Act contracts within the Planning Area. Furthermore, none of the agricultural activities permitted by existing zoning under the Sonoma County code, including beekeeping and agricultural processing, currently occur within the Planning Area.

The proposed Agrihood District (Goal 5-M) would support new agricultural uses, with physical and visual connections to the historic agricultural areas, low-impact development at a lower intensity, and a smooth visual transition between higher intensities to the west and the agricultural open space at the east. It is also noted that the County's Zoning Code would be concurrently amended to incorporate the Proposed Plan's new and modified land use districts and overlays, use and development standards, and density and intensity limits, if the Proposed Plan is adopted.

Given that the Proposed Plan supports agricultural uses as permitted by existing zoning and that the Planning Area does not include any Williamson Act contract lands, this impact would be less than significant.

Mitigation Measures

None required.

Impact 3.2-3 Development under the Proposed Plan would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). *(No Impact)*

No areas within the Planning Area are currently zoned under forest land, timberland, or Timberland Production Districts. Therefore, implementation of the Proposed Plan would have no impact with respect to conflicts with existing zoning for forest land, timberland, or Timberland Production Districts in the Planning Area. Further, the proposed plan does not contemplate allowing any timber harvesting activities in the area.

Mitigation Measures

None required.

Impact 3.2-4 Development under the Proposed Plan would not result in the loss of forest land or conversion of forest land to non-forest use. (*Less than Significant*)

As stated above, the Proposed Plan will only develop in the previously developed Core Campus; all open space that surrounds the main campus will be preserved as such. The State of California enacted Government Code Section 14670.10.5 that outlines the State's goals and objectives for the SDC Specific Plan. The legislation acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources. Therefore, proposed Goal 2-A will preserve the open space surrounding the core campus in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations. Further, proposed policies 2-20 and 2-22 require that new development preserve existing trees to the fullest extent feasible and leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or recreational users. Therefore, implementation of the Proposed Plan would preserve forest lands to the greatest extent feasible with respect to the loss of forest land or conversion of forest land to non-forest use in the Planning Area, resulting in a less than significant impact.

Mitigation Measures

None required.

Impact 3.2-5 Development under the Proposed Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use. (*Less than Significant*)

As noted above, the Planning Area includes forest land, Farmland of Local Importance, and Grazing Land all within the preserved open space outside of the Core Campus. While the Farmland of Local Importance on the eastern portion of the site no longer contains active agricultural land, several support buildings still remain, many of which were burned in the 2017 Sonoma Complex fires. Further, while Grazing Land does exist within the Planning Area, it has been a historical activity that no longer occurs in the Planning Area and will not be permitted under the Proposed Plan. Therefore, implementation of the Proposed Plan would have no impact on Grazing Land activities compared to existing conditions.

The Proposed Plan would introduce new and modified land use districts and overlays that will accommodate proposed land use classifications including residential, employment center, flex zone, institutional, utilities, parks and recreation, buffer open space, preserved open space, and a hotel overlay zone. However, these new uses allowed by the Proposed Plan would be limited to construction on only previously urban and built-up land on the Core Campus (proposed Goal 2-A) and would therefore not result in construction on the forest land, Farmland of Local Importance, and Grazing Land within the Planning Area.

In addition, the proposed Agrihood District (Goal 5-M) is planned on the eastern side of the Core Campus and would support new agricultural uses in recognition of the Farmland of Local Importance, which historically supported agricultural uses on the eastern portion of the site. While construction of the SR 12 connector may potentially go through the Agrihood District, policies MOB-1 and MOB-2 within the Proposed Plan's Standard Conditions of Approval require that the construction of the SR 12 connector reuse the existing street network and avoid damage to scenic and open space resources to the greatest extent feasible. This would help mitigate potential impacts to agricultural uses within the Agrihood District.

Further, CEQA defines Farmland as Prime, Unique, and Farmland of Statewide Importance, none of which occur within the Planning Area. As such, the conversion of Farmland of Local Importance and Grazing Land to a non-agricultural use would not constitute conversion of Farmland. As a result, there would be less than significant impacts related to conversion of farmland to non-agricultural use, or conversion of forest land to non-forest use resulting from implementation of the Proposed Plan.

Mitigation Measures

None required.

3.3

Air Quality

3.3 Air Quality

This section assesses potential environmental impacts on air quality from future development under the Proposed Plan. This section describes the existing environmental setting for air quality in the Planning Area, as well as relevant federal, State, and local regulations and programs. This section has been prepared using methods and assumptions recommended in the air quality impact assessment guidelines of the Bay Area Air Quality Management District (BAAQMD). Greenhouse gas emissions and impacts are discussed in Chapter 3.6: Energy and Greenhouse Gas Emissions.

There were five comments on the Notice of Preparation (NOP) regarding topics covered in this section:

- The North Sonoma Valley Municipal Advisory Council, the Sonoma Land Trust, and two community members were concerned about the impacts of increased densities and intensities on air quality as well as exposure of sensitive receptors. The Proposed Plan's potential impact on air quality is analyzed in Impact 3.3-2. Exposure of sensitive receptors is discussed in Impact 3.3-3.
- One community member was concerned about the release of toxic emissions due to demolition of existing buildings during construction as a result of implementation of the Proposed Plan. Impact 3.3-1 discusses air quality impacts resulting from the Proposed Plan specifically pertaining to toxic air contaminants. Hazardous materials are also discussed in Section 3.8: Hazards and Hazardous Materials.

3.3.1 Regulatory Setting

3.3.1.1 Federal Regulations

Clean Air Act and National Ambient Air Quality Standards

Air quality regulations in the United States are administered by the U.S. Environmental Protection Agency (EPA) and governed by the federal Clean Air Act (CAA), which was first enacted in 1963 and amended most recently in 1990. The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), for six common air pollutants found all over the U.S., referred to as criteria air pollutants (discussed in Section 3.3.2: Environmental Setting).

The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The SIPs must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the CAA identify specific emission-reduction goals for areas that do not meet the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones.

Table 3.3-1 shows the NAAQS currently in effect for each criteria air pollutant. The California Ambient Air Quality Standards (CAAQS) (discussed below) are included for reference.

Table 3.3-1: Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards ^a	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None ^b	None ^b
	8-hour	0.070 ppm	0.070 ppm	0.070 ppm
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual mean	20 µg/m ³	None	None
Fine Particulate Matter (PM _{2.5})	24-hour	None	35 µg/m ³	35 µg/m ³
	Annual mean	12 µg/m ³	12.0 µg/m ³	15 µg/m ³
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm	None
	8-hour	9.0 ppm	9 ppm	None
Nitrogen dioxide (NO ₂)	1-hour	0.18 ppm	0.100 ppm	None
	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
Sulfur dioxide ^c (SO ₂)	1-hour	0.25 ppm	0.075 ppm	None
	3-hour	None	None	0.5 ppm
	24-hour	0.04 ppm	0.014 ppm	None
	Annual mean	None	0.030 ppm	None
Lead	30-day average	1.5 µg/m ³	None	None
	Calendar quarter	None	1.5 µg/m ³	1.5 µg/m ³
	3-month average	None	0.15 µg/m ³	0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	None	None
Visibility-reducing particles	8-hour	— ^d	None	None
Hydrogen sulfide	1-hour	0.03 ppm	None	None
Vinyl chloride	24-hour	0.01 ppm	None	None

µg/m³ = micrograms per cubic meter

ppm = parts per million

a. National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

b. The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

c. The annual and 24-hour NAAQS for SO₂ only apply for one year after designation of the new 1-hour standard to those areas that were previously in nonattainment for 24-hour and annual NAAQS.

d. CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer (visibility of 10 miles or more due to particles when relative humidity is less than 70 percent).

Source: Bay Area Air Quality Management District, 2017.

3.3.1.2 State Regulations

California Clean Air Act and California Ambient Air Quality Standards

In addition to being subject to requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act of 1988 (CCAA). The CCAA established a statewide air pollution control program that requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The CAAQS and NAAQS are listed together in **Table 3.3-1**.

California Air Resources Board (CARB) and regional air districts bear responsibility for achieving California's air quality standards through district-level air quality management plans that would be incorporated into the SIP. CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The act gives local air pollution control districts explicit authority to regulate indirect and area-wide sources of air pollution and to establish airborne toxic control measures (ATCMs). BAAQMD is the local air district for the Planning Area, as discussed under Regional Regulations below.

CARB Mobile-Source Regulation

Rather than mandating the use of specific technology or fuel, CARB focuses on the reduction of emissions from motor vehicles in California. CARB established a series of increasingly strict emission standards (i.e., allowable grams of pollution per mile driven), including the Truck and Bus Regulation of 2008, for new off-road diesel equipment, on-road diesel trucks, and harbor craft. New construction equipment used for future projects under the Proposed Plan, including heavy duty trucks and off-road construction equipment, will be required to comply with the standards. Light duty motor vehicles, including passenger and light-duty vehicles, are also regulated by the State so that auto manufacturers are required to phase in less-polluting vehicles.

Vehicle Miles Traveled

The State of California passed Senate Bill 743 (Chapter 386, 2013), directing changes to the California Environmental Quality Act (CEQA) guidelines that established Vehicle Miles Traveled (VMT) as the transportation metric analyzed under CEQA, effective July 1, 2020. VMT measures (in miles) how much automobile travel on roadways is associated with a proposed land use by multiplying the number of automobile trips by the total distance a vehicle travels between trip origin and destination. Utilization of VMT as the transportation CEQA metric is intended to balance the needs of congestion management with statewide goals related to infill development, transit investments, promotion of public health through active transportation, and reduction of greenhouse gas (GHG) emissions.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code, Title 24 (2019)

The Green Building Standards Code (CALGreen) applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. The 2019 CALGreen Code took effect January 1, 2020 and also requires newly constructed buildings to develop a waste management plan and divert at least 65 percent of the construction materials generated during project construction.

Administrative regulations for CALGreen Part 11 and the California Building Energy Efficiency Standards also apply to newly constructed buildings and additions and alterations to existing buildings. The 2019 energy standards are generally more stringent than previous standards as the final step toward meeting the State's zero net energy (ZNE) goal for newly constructed residential buildings by 2020. Later standards are expected to require ZNE for newly constructed commercial buildings. Part 11 also established voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency, water conservation, material conservation, and internal air contaminants. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

The next triennial edition of Title 24 is forthcoming and will constitute the 2022 Building Energy Efficiency Standards that will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC adopted the 2022 standards in August 2021, and the California Building

Standards Commission approved the standards in December 2021. The 2022 standards will go into effect on January 1, 2023.

CARB Air Quality and Land Use Handbook: A Community Health Perspective

In 2005, CARB released the final version of the Air Quality and Land Use Handbook¹⁶, which is intended to encourage local land use agencies to consider the risks from air pollution before making decisions that approve the siting of new sensitive receptors, such as homes or day care centers, near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits but could result in adverse air quality issues. The primary purpose of the handbook is to highlight the potential health impacts associated with close proximity to common air pollution sources and to have those issues considered in the planning process. CARB makes recommendations regarding the distance of new sensitive land uses near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing stations.

CARB acknowledges that land use agencies have to balance other siting considerations, such as housing and transportation needs, economic development priorities, and other quality-of-life issues. In addition, siting some sensitive receptors, such as residences, near transportation facilities, employment centers, and services would reduce overall emissions from a community.

These “advisory” siting recommendations (or buffer distances), summarized in **Table 3.3-2**, are based primarily on modeling information and may not be entirely reflective of conditions in the Planning Area. The recommendations were established based on data showing that air pollution exposures (localized) can be reduced as much as 80 percent with the recommended separation. The siting of new sensitive land uses within the identified buffer distances may be possible, but only after site-specific studies are conducted to identify the potential health risks.

Table 3.3-2: CARB Recommendations on Siting New Sensitive Land Uses

Source Category ¹	Advisory Recommendations ²
------------------------------	---------------------------------------

¹⁶ California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, <https://www.arb.ca.gov/ch/handbook.pdf>, accessed December 2021.

Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Dry Cleaners using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

1. Additional Source Categories can be found on Table 101 of the Handbook.

2. Per CARB: These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality-of-life issues.

Source: California Air Resources Board, 2005.

Toxic Air Contaminant Regulations

The California Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health. TACs are less pervasive in the urban atmosphere than criteria air pollutants but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects.

California regulates TACs (equivalent to hazardous air pollutants at the federal level) primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act, AB 1807) and the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (Hot Spots Act, AB 2588). The Tanner Act created California’s program to reduce exposure to air toxics and is supplemented by the Hot Spots Act, which requires a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce air toxics exposure risks. The California Office of Environmental Health Hazard Assessment (OEHHA) is required to develop guidelines for health risk assessments under the Air Toxics Hot Spots Program. These guidelines provide the scientific basis for the values used to assess the risk of emissions exposure from facilities and new sources.

The Tanner Act also identified diesel particulate matter (diesel PM) from diesel-fueled engines as TACs. The Diesel Risk Reduction Plan, approved in September 2000,

implements statewide ATCMs designed to reduce emissions from both new and existing diesel-fueled engines and vehicles. Future projects under the Proposed Plan would be required to comply with applicable diesel control measures.

3.3.1.3 Regional Regulations

Bay Area Air Quality Management District

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

The Proposed Plan falls under the jurisdiction of BAAQMD. BAAQMD has local air quality jurisdiction over projects in the San Francisco Bay Area Air Basin (SFBAAB), which includes the southern portion of Sonoma County from approximately Windsor to the southern County border. BAAQMD developed advisory emission thresholds that are outlined in its California Environmental Quality Act, Air Quality Guidelines (CEQA Guidelines) to assist CEQA lead agencies in determining the level of significance of a project's emissions, including ozone, CO, particulate matter, TACs, and odors.¹⁷ These CEQA Guidelines were last updated in 2017. An update to these guidelines is currently under development following adoption of BAAQMD's new CEQA Thresholds of Significance for Climate Impacts on April 20, 2022. The updated significance thresholds are intended to be applied to CEQA projects for which a NOP was issued and environmental analysis has begun after the date of adoption (April 20, 2022), but because the NOP for this EIR predates adoption, the updated thresholds are included for informational purposes only. Further, the new thresholds are intended to support the most current statewide targets for GHG emissions reductions; this means that they pertain to GHGs and therefore do not affect air quality analysis for the purposes of this Draft EIR. For discussion of GHG impacts, see Section 3.6: Energy and GHG Emissions.

¹⁷ Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, May 9, 2017, https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed October 2021.

2017 Clean Air Plan

BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 Clean Air Plan), which updates the prior 2010 Bay Area ozone plan and outlines feasible measures to reduce ozone; provides a control strategy to reduce particulate matter, air toxics, and GHGs in a single, integrated plan; and establishes emission control measures to be adopted or implemented.¹⁸ The 2017 Clean Air Plan contains the following primary goals.

- **Protect Air Quality and Health at the Regional and Local Scale:** Attain all state and national air quality standards and eliminate disparities among Bay Area communities in cancer health risk from TACs.
- **Protect the Climate:** Reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050; the 2017 Clean Air Plan is the most current applicable air quality plan for the air basin and consistency with this plan is the basis for determining whether the Proposed Plan would conflict with or obstruct implementation of an air quality plan.

The 2017 Clean Air Plan includes a control strategy comprised of 85 control measures that are aimed at reducing air pollution in the SFBAAB. The control measures are classified for the following nine general sectors: Stationary Sources, Transportation, Energy, Buildings, Agriculture, Natural and Working Lands, Waste Management, Water; and Super-GHG Pollutants. While all of these sectors are relevant to the Proposed Plan, 51 control measures are most applicable to the Proposed Plan and are discussed under Impact 3.3-1.

District Rules and Regulations

In addition to air quality plans, the BAAQMD also adopts regulations and rules to improve existing and future air quality. The Proposed Plan may be subject to the following district rules.

¹⁸ Bay Area Air Quality Management District, 2017 Clean Air Plan: Spare the Air, Cool the Climate, April 19, 2017, https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed October 2021.

- **Regulation 2, Rule 2 (New Source Review).** This regulation contains requirements for Best Available Control Technology (BACT) and emission offsets.
- **Regulation 2, Rule 5 (New Source Review of Toxic Air Contaminants).** This regulation outlines guidance for evaluating TAC emissions and their potential health risks.
- **Regulation 6, Rule 1 (Particulate Matter).** This regulation restricts emissions of PM darker than No. 1 on the Ringlemann Chart to less than 3 minutes in any 1 hour.
- **Regulation 6, Rule 3 (Wood Burning Devices).** This regulation restricts wood burning devices in all new development constructed after November 1, 2016.
- **Regulation 7 (Odorous Substances).** This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- **Regulation 8, Rule 3 (Architectural Coatings).** This regulation limits the quantity of reactive organic gases (ROG) in architectural coatings.
- **Regulation 9, Rule 6 (Nitrogen Oxides Emission from Natural Gas–Fired Boilers and Water Heaters).** This regulation limits emissions of nitrogen oxides (NO_x) generated by natural gas– fired boilers.
- **Regulation 9, Rule 8 (Stationary Internal Combustion Engines).** This regulation limits emissions of NO_x and CO from stationary internal combustion engines of more than 50 horsepower (hp).
- **Regulation 11, Rule 1 (Lead).** This rule controls the emission of lead or lead compounds into the atmosphere by establishing a daily limit (not-to-exceed) of 15 pounds of per day and a ground-level concentration limit of 1.0 µg/m³ averaged over 24 hours without background concentrations or 1.0 µg/m³ above background concentrations averaged over 30 days.
- **Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing).** This rule controls emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establishes appropriate waste disposal procedures.

Best Management Practices

Table 3.3-3 includes current BMPs identified by BAAQMD for construction equipment and address both dust generated by construction activity (fugitive dust) as well as exhaust

from construction equipment. The list is updated as new technologies or strategies become available to further reduce the air quality and health impacts associated with construction activity. All of the best practices applicable to a project should be required at the time grading permits are issued.¹⁹

¹⁹ Bay Area Air Quality Management District, Planning for Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning, May 20, 2016, https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf, accessed December 2021.

Table 3.3-3: BAAQMD Construction Best Practices

Target	Best Management Practice/Construction Mitigation Measure
Dust - Required	<ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.¹ • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping should be done in conjunction with thorough watering of the subject roads. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadway, driveway and sidewalk paving shall be completed as soon as possible. • Building pads shall be paved as soon as possible after grading. • All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. The Air District's Complaint Line shall also be included on posted signs to ensure compliance with applicable regulations.
Dust - Additional	<ul style="list-style-type: none"> • All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.¹ • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have maximum 50 percent air porosity. • Vegetative ground cover (e.g., fast germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time). • All trucks and equipment, including their tires, shall be washed off prior to leaving the site.¹

Target	Best Management Practice/Construction Mitigation Measure
Dust - Additional	<ul style="list-style-type: none"> Site accesses to a distance of 100 feet from the paved road shall be treated with a six- to 12-inch compacted layer of wood chips, mulch, or gravel. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
Exhaust - Required	<ul style="list-style-type: none"> Idling time of diesel-powered construction equipment, trucks and generators shall be limited to no more than 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.
Exhaust – Additional	<ul style="list-style-type: none"> The applicant/general contractor for the project shall demonstrate to the local jurisdiction that all off-road equipment greater than 25 hp that will be operating for more than 20 hours over the entire duration of the construction activities at the site, including equipment from subcontractors meets the following requirement: <ul style="list-style-type: none"> Be Zero Emissions OR have engines that meet or exceed either EPA or CARB Tier 2 off-road emission standards; and Have engines are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used (equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required). Idling time of diesel-powered construction equipment, trucks and generators shall be limited to no more than 2 minutes. Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emissions reductions of NO_x and PM.
1. Requirements for practices that necessitate water usage may be revised in times of drought, as needed.	

Source: Bay Area Air Quality Management District, 2017.

Metropolitan Transportation Commission/Association of Bay Area Governments

In October 2021, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), jointly adopted Plan Bay Area 2050, the long-range regional transportation plan (RTP) that identifies 35 transportation, land use (i.e., housing and environmental), and economic strategies to guide growth in the nine-county San Francisco Bay Area through 2050. These strategies, which are public policies or investments that can be implemented in the Bay Area at the city, county, regional, or state level over the next 30 years, link the four interrelated elements of the plan and support statewide objectives for GHG emissions reductions and improved air quality.

3.3.1.4 Local Regulations

Sonoma County General Plan

Although the Planning Area is State-owned land, it is located within Sonoma County. The Sonoma County General Plan, last updated in 2008 for the horizon year 2020, is the guiding document for land use, zoning, and other planning decisions for unincorporated communities in Sonoma County, including those adjacent to the Planning Area. Air quality is addressed by the Open Space and Resource Conservation Element, which includes objectives to minimize air pollution and GHGs as well as encourage reduced motor vehicle use as a means of reducing resultant air pollution. Similarly, the Circulation and Transit Element aims to provide transportation options that reduce demand for automobile travel by providing transit, bicycle, and pedestrian networks and thereby reduce air pollutant and GHG emissions.

Sonoma County is currently preparing an update to its general plan, which will be based on a framework of five central concepts from the Strategic Plan 2021 approved by the County's Board of Supervisors: Healthy and Safe Communities, Organizational Excellence, Racial Equity and Social Justice, Climate Action and Resiliency, and Resilient Infrastructure. In parallel with this general plan update process and following adoption of the Proposed Plan, the Sonoma County General Plan would be concurrently amended to maintain consistency with the Proposed Plan. See Section 3.11: Land Use and Planning for more information about the Proposed Plan's relationship with the Sonoma County General Plan.

Sonoma County Transportation Authority and Regional Climate Protection Authority

The Sonoma County Transportation Authority (SCTA) was formed in November 1990 as the designated Congestion Management Agency (CMA) for Sonoma County. In 1997, the SCTA relinquished its position as the CMA under new State legislation that made the congestion management planning portion of SCTA's function optional; however, SCTA continues to carry out the general functions of a CMA. SCTA is partnered with the Regional Climate Protection Authority (RCPA), which shares the same Board of Directors and same goal to reduce GHGs. Together, the SCTA and RCPA have produced the Sonoma County Comprehensive Transportation Plan²⁰, most recently updated in September 2021 and entitled *Moving Forward 2050*, which seeks to connect people and places while transitioning the county's transportation network to zero-emissions by 2050. This vision supports statewide GHG emissions reduction objectives.

3.3.2 Environmental Setting

3.3.2.1 Physical Setting

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. Unique geographic features throughout the state define fifteen air basins with distinctive regional climates.

The Planning Area is located within the SFBAAB. The following discussion describes relevant characteristics of the SFBAAB, describes key pollutants of concern, summarizes existing ambient pollutant concentrations, and identifies sensitive receptors.

Regional Climate and Meteorology

The SFBAAB is approximately 5,583 square miles and is generally coterminous with the air district's constituent county boundaries, except for Solano and Sonoma counties, which

²⁰ Sonoma County Transportation Authority, *Moving Forward 2050: Sonoma County Comprehensive Transportation Plan*, September 2021, https://scta.ca.gov/wp-content/uploads/2021/09/SCTA-CTP21_v8.pdf, accessed June 2, 2022.

include only portions generally between Napa and Contra Costa counties and Marin and Napa counties, respectively. The air basin is a coastal plain with connecting broad valleys and low hills and includes all of Alameda, Contra Costa, Napa, Marin, and San Francisco counties, the southwestern portion of Solano County, and the southern portion of Sonoma County.

The Bay Area's climate is dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean. During the summer, dry and subsiding air associated with high pressure off the coast acts as a cap over the cooler marine air near the surface. During the winter, when the high-pressure system has retreated southward, subsidence inversions are less common; however, radiant inversions caused by warmer air radiating back from the land trapped under colder air masses above are frequent. These inversions typically develop overnight and, though they can restrict the vertical dispersion of pollutants emitted at ground level, generally dissipate by afternoon.

The Planning Area is State-owned land located in southern Sonoma Valley between the Sonoma Mountains to the west and the Mayacamas Range to the east. Surrounded primarily by natural open space and parks including Jack London State Historic Park to the west and Sonoma Valley Regional Park to the east, the Planning Area is characterized by varying terrain that is generally hilly, particularly in the western portions that include the foothills of the Sonoma Mountains. Elevation decreases eastward toward Sonoma Creek, which bisects the Planning Area in the north-south direction roughly parallel to Arnold Drive. Elevations rise again along the northeastern borders of the Planning Area adjacent to Sonoma Valley Regional Park. In addition to Sonoma Creek and its tributaries, the Planning Area contains two large waterbodies: Fern Lake and Suttonfield Lake. (See Chapter 3.10: Hydrology and Water Quality for more information about these waterbodies.) The San Pablo Bay is to the south of the Planning Area, and Sonoma Valley continues to the north.

Southern Sonoma Valley has a Mediterranean climate typical for the region with cool, wet winters and warm, dry summers. Temperatures range from an annual average high of 70 degrees Fahrenheit (°F) in August to an annual average low of 42°F in January. Annual precipitation is about 35 inches, with most rainfall happening during the winter months

between December and March. Summer temperatures can include extreme high temperatures of over 100°F.²¹

In general, prevailing winds are light in strength, with consistent northwesterly winds that are stronger during the summer months. The average annual wind speed in the Planning Area is approximately 4.5 to 5.0 miles per hour (mph).²²

Atmospheric Pollution Potential

The potential for high pollutant concentrations developing at a given location depends on the combination of topographic and climatological conditions described above that determine the ability of the atmosphere to disperse air pollutants, in addition to the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind.

Low wind speed during times of low sun, such as the fall and winter seasons as well as nighttime and early morning hours, often coincide with peak periods of air pollutant emissions such as commute traffic (early morning) and wood-burning appliances (nighttime and colder seasons). The resulting buildup of pollutants during these times can be compounded in valleys (like Sonoma Valley), where weak wind flows carry pollutants up-valley during the day and cold air drainage flows down-valley at night; such limited air movement and opportunity for ventilation can lead to potentially unhealthy levels of pollution.

An inversion is a layer of warmer air over cooler air that can trap pollutants near the ground. The highest air pollutant concentrations in the SFBAAB generally occur during inversions, which are most common during the winter (radiation inversions that result from radiating surface heat after sunset) as well as the summer and fall (elevated inversions that result from varying pressure zones between coastal and valley areas of the SFBAAB).

Higher temperatures during summer months increases the reaction of organic gases and oxides of nitrogen to form secondary photochemical pollutants including ozone (described

²¹ Cal-Adapt, "Local Climate Change Snapshot for Sonoma Creek-Frontal San Pablo Bay Estuaries Watershed," <https://cal-adapt.org/tools/local-climate-change-snapshot>, accessed April 28, 2022.

²² U.S. Department of Energy Office of Wind Technologies, "WindExchange: California 30-Meter Residential-Scale Wind Resource Map," October 6, 2010, https://windexchange.energy.gov/files/u/visualization/pdf/ca_30m.pdf, accessed April 28, 2022.

further in the following section). Because inland valleys in the SFBAAB tend to be warmer than the coast, these areas are especially prone to photochemical air pollution. On the other hand, ozone concentrations do not reach significant levels in the SFBAAB during the late fall and winter because of insufficient ultraviolet light and atmospheric warming.

The hills and mountains in the SFBAAB, including those surrounding the Planning Area, contribute to high pollution potential in some areas. Elevated terrain can block winds that dilute pollutant buildup as well as create a recirculation pattern that restricts inflow of fresh air. Places that experience the highest temperatures in the summer and lowest temperatures in the winter have the highest air pollution potential, which is typical of the Bay Area's inland valleys (including the Planning Area). These conditions can be exacerbated by upwind air pollutant sources such as places with high population densities, high vehicle traffic, and/or industrial activities; contaminants formed by photochemical processes in the atmosphere, such as ozone, may result in high concentrations many miles downwind from the sources of their precursor chemicals.

Pollutants of Concern

Criteria Air Pollutants

As noted in Section 3.3.1: Regulatory Setting, the federal and State governments have established ambient air quality standards for six criteria air pollutants, including ozone, CO, nitrogen dioxide (NO₂), particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and sulfur dioxide (SO₂). These are described below. Ozone is considered a regional pollutant because its precursors affect air quality on a regional scale. Pollutants such as CO, NO₂, SO₂, and lead are considered local pollutants that tend to accumulate in the air locally. Particulate matter is both a regional and local pollutant.

- **Ozone**, or smog, is photochemical oxidant that is formed when ROG and NO_x—both byproducts of internal combustion engines—react with sunlight. Ozone poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Additionally, ozone has been tied to crop damage, typically in the form of stunted growth and premature death. Ozone can also act as a corrosive, resulting in property damage, such as the degradation of rubber products.
- **Reactive organic gases** are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicles is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health

are not caused directly by ROG but rather by reactions of ROG to form secondary pollutants such as ozone. ROG is synonymous with volatile organic compounds (VOC), which is commonly used to describe compound limits for architectural coatings such as paint.

- **Nitrogen oxides** serve as integral participants in the process of photochemical smog production. The two major forms of NO_x are nitric oxide (NO) and NO_2 . NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature or high pressure. NO_2 is a reddish-brown, irritating gas formed by the combination of NO and oxygen. NO_x acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.
- **Carbon monoxide** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation and, in extreme cases, death.
- **Particulate matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized – inhalable coarse particles, or PM_{10} , and inhalable fine particles, or $\text{PM}_{2.5}$. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. Both PM_{10} and $\text{PM}_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems.

Toxic Air Contaminants

Although ambient air quality standards have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by OEHHA.

Asbestos is the name given to several naturally occurring fibrous silicate minerals. Before the adverse health effects of asbestos were identified, asbestos was widely used as insulation and fireproofing in buildings, and it can still be found in some older buildings. It

is also found in its natural state in rock or soil. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (e.g., asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (e.g., lung cancer and mesothelioma, which is cancer of the linings of the lungs and abdomen).

Diesel PM is generated by diesel-fueled equipment and vehicles. Within the Bay Area, BAAQMD has found that of all controlled TACs, emissions of diesel are responsible for about 82 percent of the total ambient cancer risk.²³ Short-term exposure to diesel PM can cause acute irritation (e.g., eye, throat, and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), and respiratory symptoms (e.g., cough and phlegm). The EPA has determined that diesel exhaust is “likely to be carcinogenic to humans by inhalation.”²⁴

CARB has also identified inorganic lead (lead compounds that do not contain carbon) as a TAC that can cause adverse health effects when inhaled. Lead is a naturally-occurring metal found in the earth’s crust, but for hundreds of years, it has been used in a wide variety of products because it is easily shaped, molded, and resistant to chemical corrosion. Major identified sources of outdoor air emissions in California include aircraft fuel combustion, autobody refinishing, battery manufacturing, cement manufacturing, cogeneration plants, incineration, paint and coatings, sand and gravel, and stationary point and area source fuel combustion. Since lead concentrations in non-workplace indoor air environments vary with outdoor concentrations, the primary source of indoor air lead is expected to be outdoor mobile source and industrial emissions. Other sources of lead exposure include food, water, soil, dust, and paint.²⁵ Although residential use of lead-based paints have been banned since 1978, buildings constructed before these regulations have a high likelihood of containing lead-based paint.

²³ Bay Area Air Quality Management District, 2017 Clean Air Plan.

²⁴ U.S. Environmental Protection Agency, Diesel Engine Exhaust; CASRN N.A., February 28, 2003, https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_summary.pdf#namedest=woe, accessed July 1, 2021.

²⁵ California Air Resources Board, Proposed Identification of Inorganic Lead as a Toxic Air Contaminant: Part A Exposure Assessment, March 1997, https://ww2.arb.ca.gov/sites/default/files/classic/toxics/id/summary/pb_parta.pdf, accessed July 27, 2022.

Odors

BAAQMD's thresholds for odors are qualitative and based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever quantities of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause, or have a natural tendency to cause, injury or damage to businesses or property. Under this rule, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.

Existing Air Quality Conditions

Ambient Criteria Pollutant Concentrations

Existing air quality concerns within the Planning Area are related to increases of regional criteria air pollutants like ozone and PM, exposure to TACs, odors, and increases in GHG emissions. Motor vehicles are the primary source of ozone pollution, accounting for approximately 70 percent of ozone in the region. PM pollution is primarily attributed to dust from construction and grading activities, in addition to smoke from fireplaces, wood-burning stoves, and agricultural burning.

Over 30 ambient air quality monitoring stations located throughout SFBAAB monitor the district's progress toward air quality standards attainment of NAAQS and CAAQS. Only one BAAQMD monitoring station is currently in operation in Sonoma County: the Sebastopol-103 Morris Street Station, which monitors ozone, PM_{2.5}, CO, and NO_x (including NO and NO₂). This station is located approximately 17 miles northwest of the Planning Area, on the other side of the Sonoma Mountain range. Until June 2021, BAAQMD also operated a monitoring station in Napa at Napa Valley College, which is approximately 14 miles southeast of the Planning Area on the other side of the Mayacamas Mountains. The Napa Valley College station replaced the Napa-Jefferson station in March 2018 and was terminated by June 2021 due to scheduled construction of the college's student housing project. Relocation of the site, pursuant to 40 CFR 58.14 (c)(6), is still being coordinating by the air district and U.S. EPA. As such, the Sebastopol

station is used to approximate ambient air quality for the Planning Area, except for PM₁₀ (not measured at Sebastopol), for which data is supplemented by the Napa Valley College station.²⁶

Table 3.3-4 summarizes the criteria air pollutant levels for the most recent three-year period for which data is available (2018–2020). Air quality concentrations are expressed in terms of parts per million (ppm) or micrograms per cubic meter (µg/m³). As shown in **Table 3.3-4**, ambient air quality is generally very good for the Sebastopol station, which has experienced occasional violations of only the PM_{2.5} NAAQS. No violations of the ozone, CO, or NO₂ NAAQS and CAAQS were reported during the monitoring period. Likewise, the Napa Valley College station values for PM₁₀ exceeded CAAQS only once in 2018 and have no violations of NAAQS.

Existing TAC Sources and Health Risks

The health effects associated with TACs are evaluated by their carcinogenic and non-carcinogenic potential and generally are assessed locally rather than regionally. BAAQMD maintains an inventory of stationary sources that emit TACs, which are regulated by BAAQMD's Regulation 2, Rule 5 (See Section 3.3.1: Regulatory Setting). BAAQMD CEQA Guidelines provide significance thresholds for both carcinogens and non-carcinogens (see Section 3.3.3.1: Significance Criteria).

BAAQMD's inventory of permitted stationary sources was last updated in 2020 (modeled on a 2018 baseline) and is publicly available online. **Figure 3.3-1** maps these facilities and their associated cancer risks, hazard indices, and PM_{2.5} concentrations where data is available. In 2018, there were four stationary sources in total: two automobile service shops, one gasoline dispensing facility, and the SDC facility itself. Only SDC and the gasoline dispensing facility (Pic N Pay Market) are within 1,000 feet of the Planning Area.

BAAQMD measures PM_{2.5} concentrations of permitted stationary sources as part of its inventory. As seen in **Figure 3.3-1**, the SDC facility (which closed in 2018) is the only stationary source with a non-zero PM_{2.5} concentration available, measuring 2.24 µg/m³.

²⁶ *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692 upholds that "CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document." Given the lack of data specific to the Planning Area, the most relevant and appropriate data was used to perform environmental analysis of the Proposed Plan.

This value greatly exceeds both the individual project-level threshold ($0.3 \mu\text{g}/\text{m}^3$) and the cumulative threshold ($0.8 \mu\text{g}/\text{m}^3$) recommended by BAAQMD. It is noted that this concentration may no longer be representative of existing conditions due to the facility's closure in 2018, but it is included for informational purposes as the most recent data available.

Figure 3.3-1 also shows the cancer risk and hazard index levels of stationary sources for which there is data available. Neither SDC nor the gasoline dispensing facility exceeds the BAAQMD threshold for non-carcinogenic hazards (1.0). Based on this data source, the SDC facility has greatly exceeded the cancer risk threshold of 10.0 cases in one million in the recent past; however, data representing conditions after the SDC's closure in 2018 from CARB's 2019 facility database of health risk assessment (OEHH Air Toxics "Hot Spots" Program) shows that the SDC facility has a cancer risk score of 9.0 and therefore is currently less than the threshold.

Aside from stationary sources, emissions of TACs in and around the Planning Area are also generated from mobile sources. BAAQMD considers roadways with greater than 10,000 average daily traffic (ADT) as "high-volume roadways" and recommends they be included in the analysis of health risks. Based on 2020 traffic volume data from Caltrans, State Route 12 (Highway 12) is the only roadway located in the immediate proximity of the Planning Area (within 1,000 feet) that has ADT greater than 10,000 vehicles. Traffic counts for County-maintained roads are taken by the Sonoma County Department of Transportation and Public Works. Based on this source, the busiest road within the vicinity of the Planning Area is Arnold Drive, which has an ADT of 5,677 vehicles just north of the Planning Area and 7,551 just south of the Planning Area; therefore, it is not classified a high-volume roadway.

Highway 12 represents the greatest mobile source of TACs (primarily diesel PM from diesel-powered vehicles) due to the high volume of vehicles that travel on this highway on a daily basis. The segment of Highway 12 nearest to the Planning Area (south of the Arnold Drive intersection and north of Madrone Road) has an annual ADT volume as high as 14,700. Caltrans estimates that trucks account for about four percent of daily traffic on Highway 12 near the Planning Area, with an annual ADT of 499 vehicles for Highway 12 at Arnold Drive.

Off-road mobile sources such as agricultural or construction equipment are also potential sources of TACs. BAAQMD recommends evaluating cumulative community risk and hazard impacts of these sources.

Building on the 2016 Phase I Environmental Site Assessment of the SDC property that identified various recognized environmental conditions, a Phase II investigation evaluated constituents of potential concern, including lead from lead-based paint. Lead was detected in all soil samples collected from historic building locations, and some of the historic buildings contained detections at or above the residential Department of Toxic Substances Control (DTSC) modified-screening level. Based on the recommendations of Phase II, a 2021 regulated building materials survey confirmed the presence of lead in paint samples as well as the potable drinking water at levels exceeding reporting limits. In addition to lead, presence of asbestos in many of the historic buildings in the Planning Area was confirmed in the same survey.

Table 3.3-4: Ambient Air Quality Monitoring Data of Stations Nearest to the Planning Area (2018-2020)

Pollutant	2018	2019	2020
Ozone			
Max. 1-hour concentration (ppm)	0.071	0.070	0.068
Max. 8-hour concentration (ppm)	0.053	0.054	0.055
Number of days standard exceeded ^a			
CAAQS 1-hour (>0.09 ppm)	0	0	0
CAAQS 8-hour (>0.070 ppm)	0	0	0
NAAQS 8-hour (>0.070 ppm)	0	0	0
Carbon monoxide (CO)			
Max. 1-hour concentration (ppm)	1.4	1.4	1.8
Max. 8-hour concentration (ppm)	1.3	0.9	1.6
Number of days standard exceeded ^a			
CAAQS 1-hour (\geq 20 ppm)	0	0	0
NAAQS 1-hour (\geq 35 ppm)	0	0	0
CAAQS 8-hour (\geq 9.0 ppm)	0	0	0
NAAQS 8-hour (\geq 9 ppm)	0	0	0
Nitrogen Dioxide (NO₂)			
State max. 1-hour concentration (ppm)	0.065	0.031	0.036
Annual average concentration (ppm)	0.004	0.003	0.003
Number of days standard exceeded ^a			
CAAQS 1-hour (0.18 ppm)	0	0	0
NAAQS 1-hour (0.10 ppm)	0	0	0

Table 3.3-4: Ambient Air Quality Monitoring Data of Stations Nearest to the Planning Area (2018-2020)

Particulate Matter (PM₁₀) ^{b,c}			
State ^f max. 24-hour concentration ($\mu\text{g}/\text{m}^3$)	125.0	39.0	26.0
Annual average concentration ($\mu\text{g}/\text{m}^3$)	19.0	NA	NA
Number of days standard exceeded ^{a,d}			
CAAQS 24-hour ($>50 \mu\text{g}/\text{m}^3$) ^g	1	0	0
NAAQS 24-hour ($>150 \mu\text{g}/\text{m}^3$) ^g	0	0	0
Particulate Matter (PM_{2.5})			
State ^e max. 24-hour concentration ($\mu\text{g}/\text{m}^3$)	158.2	28.0	124.3
Annual average concentration ($\mu\text{g}/\text{m}^3$) ^h	8.0	NA	8.3
Number of days standard exceeded ^{a,d}			
NAAQS 24-hour ($>135 \mu\text{g}/\text{m}^3$) ^g	13.1	0.0	7.2

ppm = parts per million
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
 > = greater than

≥ = greater than or equal to
NA = not applicable due to insufficient data.

- a. An exceedance is not necessarily a violation.
 - b. National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.
 - c. Measurements from the Napa Valley College station due to lack of data for the Sebastopol station.
 - d. Number of exceedance days only include measured days.
 - e. State statistics are based on local conditions data (except for the South Coast Air Basin). In addition, State statistics are based on California-approved samplers.
 - f. Measurements usually are collected every 6 days.
 - g. Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.
 - h. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than national criteria.
-

Source: California Air Resources Board, 2020; Bay Area Air Quality Management District, 2022.

Stationary Sources

- Permitted Sources (2018)
- 1,000-foot radius

Mobile Sources

- Highway 12
- 500-foot radius

Base Map

- Core Campus Area
- SDC Property
- SDC 1,000-foot radius
- Existing Buildings
- Waterbodies
- Streams

Proposed Land Use

- Low/Medium Density Residential
- Medium/Flex Density Residential
- Employment Center
- Flex Zone
- Hotel
- Institutional
- Park
- Buffer

Map Labels:

- GLEN ELLEN
- Marshall's Body Shop
Information not available
- Triangle Body Shop
Information not available
- Sonoma Developmental Center
Cancer Risk: 210.48 per-million
Hazard Index: 0.35
PM 2.5: 2.24 micrograms/m3
- Pic N' Pay Market
Cancer Risk: 7.01 per-million
Hazard Index: 0.03
PM 2.5: not available
- Arnold Drive
- Hill Road
- Sonoma Creek
- Orchard Road
- Fern Lake
- Suttonfield Lake
- Harney
- Wilson
- Redwood
- Yolton
- Baker
- John Mesa
- Dairy
- Sunrise
- Morningside Mountain Drive
- Jack London State Historic Park
- Camp Via
- Arnold Drive
- Hill Creek
- Martinez Creek
- Martin Street
- Cecelia Drive
- Highway 12

Scale:

- 0 740 1,480 FEET
- 0 0.1 0.2 MILES

DYETT & BHATIA
Urban and Regional Planners

Regional Attainment Status

Local monitoring data (**Table 3.3-4**) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS, as defined below. **Table 3.3-5** summarizes the attainment status of the Sonoma County portion of the SFBAAB for ozone, CO, and PM.

- **Nonattainment** is assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- **Maintenance** is assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- **Attainment** is assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- **Unclassified** is assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Sonoma County has a national designation of nonattainment for ozone and PM_{2.5} and a state designation of nonattainment for ozone, PM₁₀, and PM_{2.5}. The County has an attainment or unclassified status for all other criteria pollutants.

Table 3.3-5: San Francisco Bay Area Air Basin Attainment Status

<i>Pollutant</i>	<i>Federal</i>	<i>State</i>
Ozone (8-hour)	Nonattainment, Marginal ¹	Nonattainment
CO	Maintenance, Moderate ²	Attainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Attainment	Nonattainment

1. Marginal nonattainment status for the 8-hour ozone (2015) standard means the area has a design value of 0.071 up to but not including 0.081 ppm. (A design value is a statistic that describes the air quality status of a given location relative to the level of the NAAQS.) The current status is based on measurements from 2014-2016, which was 0.074; however, design value as of May 2021 (for measurements over 2018-2020) was 0.069, which would be considered attainment.
2. Moderate less than or equal to 12.7 ppm.

Source: California Air Resources Board, 2019; U.S. Environmental Protection Agency, 2022.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

As a programmatic planning document, the Proposed Plan does not include details on the exact locations, sizes, and land uses of individual projects that will occur under the Specific Plan, though the Proposed Plan would allow development of new housing units and community uses with services for sensitive receptors such as seniors and people with developmental disabilities. It is also noted that residential development (i.e., existing sensitive receptors) directly south of the Planning Area will likely be continuing uses in the future and may be impacted by development as a result of implementation of the Proposed Plan.

CARB has published advisory recommendations on siting new sensitive land uses that are consistent with State law restrictions on the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles per day, or rural roadways with 50,000 vehicles with some exceptions; however, none of these apply to the Planning Area.

3.3.3 Impact Analysis

3.3.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Conflict with or obstruct implementation of the applicable air quality plan;**
- Criterion 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;**
- Criterion 3: Expose sensitive receptors to substantial pollutant concentrations; or**
- Criterion 4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

3.3.3.2 Methodology and Assumptions

Impacts of the Proposed Plan on air quality and criteria pollutant emissions from operations were quantified (where applicable) and assessed using standard and accepted software tools, techniques, and emission factors. Construction emissions as well as impacts related to a new connector road to Highway 12 were assessed qualitatively based on the availability of data for this plan-level document. The primary assumptions and key methods used to quantify emissions and estimate potential impacts are described below. Model inputs and calculation files are provided in Appendix B: Air Quality and GHG Data.

Construction

As discussed in Chapter 2: Project Description, the Proposed Plan would facilitate development of a mix of uses, including a range of housing options, employment and institutional uses, commercial/retail uses, and community and recreational spaces. Implementation of the Proposed Plan could ultimately result in a net new development of up to 1,000 residential units, 190,000 square feet (s.f.) of office use, 40,000 s.f. of

commercial/retail use, and 90,000 s.f. of hotel, 70,000 s.f. of public/institutional uses, and 20,000 of utility/infrastructure uses.

The new Highway 12 connector road and land uses that could be developed under the Proposed Plan would generate construction-related emissions from mobile and stationary construction equipment exhaust, employee and haul truck vehicle exhaust and fugitive dust, fugitive dust from land clearing and material movement, and off-gassing emissions from paving and application of architectural coatings. Buildout of the Proposed Plan would take place incrementally over a period of approximately 20 years as individual development projects are proposed and would depend on factors such as local economic conditions, market demand, and other financing considerations. The specific size and location of each future individual development project, including alignment of the proposed Highway 12 connection, occurring within the Planning Area from implementation of the Proposed Plan as well as the construction techniques and scheduling that would be utilized cannot be known at this time. Without specific project-level details, it is not possible to develop a refined construction inventory, so the determination of construction-related air quality impacts for each individual development project (or a combination of projects) would be speculative. Thus, in the absence of the necessary construction information required to provide an informative and meaningful analysis and given that BAAQMD has not established construction-related significance thresholds for air quality for plan-level impacts, the evaluation of potential construction-related impacts resulting from implementation of the Proposed Plan is conducted qualitatively in this Draft EIR.

Operations

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors, including mobile-, area-, and energy-source emissions, were quantified for the Proposed Plan using California Emissions Estimator Model (CalEEMod) version 2020.4.0.²⁷ Mass mobile-source emissions were modeled based on the daily vehicle trips and vehicle miles traveled (VMT) data provided by W-Trans, the Proposed Plan's traffic engineers, for the existing and Proposed Plan buildout year conditions. As described in Chapter 2: Project Description, the Proposed Plan includes a new roadway connection to Highway 12, which is included in the traffic model inputs and therefore reflected in the quantified operational emissions. For the purposes of this analysis, existing conditions are modeled for 2019,

²⁷ Although a "soft release" update of CalEEMod was made available in May 2022, this web-based tool is still under development and is not capable of producing reliable results at the time of this analysis.

and buildout conditions are for year 2040, which coincides with the Proposed Plan's planning horizon. The 2019 baseline year reflects the modeled transportation data (e.g., VMT and daily trips for the closed SDC facility), consistent with the sub-regional Sonoma County Transportation Model (SCTM), and reflects the most recent data available. Furthermore, because the SDC facility has been closed since 2018, there has been no change in the amount of development or types of land uses in the Planning Area between 2019 and 2022 – meaning that the 2019 baseline year conditions are comparable with existing conditions as of the release of the NOP for this EIR.

Area and energy (natural gas) emissions were modeled according to the amount (i.e., commercial/industrial square footage or number of dwelling units) and type of land uses proposed. Area sources account for direct sources of air emissions, and includes those generated from hearth (e.g., natural gas fireplaces) usage, consumer product use, landscape maintenance equipment, and architectural coatings used for the repainting of buildings. Energy sources account for emissions associated with the combustion of natural gas for building heating and hot water. Emissions were quantified for existing and Proposed Plan buildout conditions based on current and anticipated land uses. Because operational details for each individual development project proposed under the Proposed Plan are currently unknown, CalEEMod defaults were assumed based on the anticipated land uses. Land use assumptions and CalEEMod output files are in Appendix B: Air Quality and GHG Data. Stationary sources such as emergency generators and boilers that would be developed for each individual development project, or a combination of these projects, would be subject to the permitting requirements by BAAQMD. Stationary sources are discussed qualitatively, because details of future projects and their stationary sources cannot be known at this time.

To evaluate the Proposed Plan's potential operational air quality impacts, the increase in criteria pollutant emissions resulting from its implementation over existing conditions is assessed against BAAQMD's project-level thresholds (see discussion below).

Local Air District Thresholds

This analysis evaluates the impacts of regional emissions generated by the Proposed Plan using a two-tiered approach that considers both project- and plan-level guidance recommended by BAAQMD in its CEQA Guidelines.

First, this analysis considers whether the Proposed Plan would conflict with the most recent air quality plan (2017 Clean Air Plan), consistent with BAAQMD's guidance for programmatic analyses. The impact analysis evaluates whether the Proposed Plan

supports the primary goals for the 2017 Clean Air Plan, including applicable control measures, and whether it would disrupt or hinder implementation of any such control measures.

Second, regional criteria pollutant emissions from Proposed Plan operations are quantified and compared to BAAQMD's project-level thresholds, which are summarized in **Table 3.3-6**. BAAQMD recommends using these thresholds to evaluate the significance level of a project's regional criteria pollutant emissions, where exceedance of these thresholds has the potential to lead to a significant cumulative impact on regional air quality by contributing to CAAQS and NAAQS violations. As noted above, construction-related emissions have not been quantified due to lack of specific project information and are not evaluated with respect to the project-level thresholds shown in **Table 3.3-6**; there are no plan-level thresholds for construction-related impacts for air quality.

Table 3.3-6: BAAQMD Project-Level Air Quality Thresholds of Significance for Regional Criteria Pollutants and Precursors

<i>Analysis Scenario/Pollutant</i>	<i>Threshold (pounds per day)</i>	
	<i>Construction</i>	<i>Operational</i>
ROG	54	54
NO _x	54	54
PM ₁₀	82 (exhaust only)	82 (fugitive + exhaust)
PM _{2.5}	54 (exhaust only)	82 (fugitive + exhaust)

Source: Bay Area Air Quality Management District, 2017.

It should be noted that BAAQMD's project-level thresholds were developed to analyze emissions generated by a single project and do not necessarily translate into an evaluation of emissions from a programmatic land use plan. By nature, large-scale land use plans that consist of numerous individual projects will produce more criteria pollutants than single projects, even if the plans include efficiency measures to reduce future emissions. Use of the project-level thresholds to evaluate land use plans may therefore unfairly penalize the plans, yielding a significant and unavoidable conclusion simply due to scale. Project-level thresholds are included in this Draft EIR for informational purposes as a comparison of the Proposed Plan's impacts to air quality.

Although BAAQMD's CEQA Guidelines are intended to help lead agencies navigate through the CEQA process, BAAQMD indicates that the guidelines for implementation of its significance thresholds are advisory only and should be followed by local governments at their own discretion. Nevertheless, BAAQMD's proposed thresholds are supported by substantial evidence and are well-grounded in air quality regulations, scientific evidence, and scientific reasoning concerning air quality and GHG emissions. BAAQMD's 2010 Justification Report, found in Appendix D of BAAQMD's May 2017 CEQA Guidelines, explains the agency's reasoning and provides substantial evidence for developing and adopting their thresholds. The 2017 CEQA Guidelines also reflect updated receptor thresholds that acknowledge that CEQA does not require analysis of impacts of existing sources of toxic pollution and odors on future users or residents unless the project would exacerbate existing environmental hazards.²⁸

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The California Supreme Court has upheld that environmental documents must attempt to connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.²⁹ To satisfy this standard, this section discusses thresholds and analysis considerations for regional and local project-generated criteria pollutants with respect to their human health implications.

All criteria pollutants generated by the Proposed Plan would be associated with some form of health risk (e.g., asthma, lower respiratory problems). Criteria pollutants can be classified as either regional pollutants or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO₂, SO₂, and lead are localized pollutants. Particulate matter can be both a local and a regional pollutant, depending on its composition. The primary pollutants of concern generated by the Proposed Plan would

²⁸ *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369.

²⁹ Based on the 2018 decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502), which ruled that the project's EIR air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time."

be ozone precursors (ROG and NO_x), CO, particulate matter, and TACs, including diesel PM and asbestos.

Regional Project-Generated Criteria Pollutants

Adverse health effects from regional criteria pollutant emissions, such as ozone precursors and particulate matter, generated by the Proposed Plan are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Therefore, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NO_x generated in an area may not correlate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional particulate matter concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project. Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect. Moreover, there are large individual differences in the intensity of symptomatic responses to air pollutants. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known. Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. For example, BAAQMD developed a Multi-Pollutant Evaluation Method (MPEM) to estimate health outcomes and the corresponding social and financial value of health benefits resulting from emissions reductions.³⁰ However, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment is not possible with any degree of accuracy. As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations as well as attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates that

³⁰ Bay Area Air Quality Management District, Multi-Pollutant Evaluation Method Technical Document (2016 Update), November 2016, https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/mpem_nov_dec_2016-pdf.pdf?la=en, accessed October 2021.

there are known safe concentrations of criteria pollutants. Although recognizing that air quality is a cumulative problem, air districts typically consider individual projects that generate criteria pollutant and ozone precursor emissions that are below the thresholds to be minor in nature. Such projects would not cumulatively contribute to adverse air impacts that would exceed the NAAQS or CAAQS. Emissions generated by the Proposed Plan could increase photochemical reactions and the formation of tropospheric ozone and secondary particulate matter (as opposed to direct emissions of pollutants), which could lead to increased incidences of specific health consequences at certain concentrations. These health effects are associated with ozone and particulate pollution and are of particular concern from a cumulative and regional perspective. As a 20-year programmatic plan, the Proposed Plan's incremental contribution to specific health outcomes is difficult to quantify on a regional scale, especially given the magnitude of the Proposed Plan's emissions in relation to overall regional emissions. As such, a quantitative correlation of Proposed Plan-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis. However, it is foreseeable that unmitigated construction-related and operational emissions of ozone precursors and particulate matter could contribute to cumulative and regional health impacts. Therefore, exceedance of BAAQMD significance thresholds would be considered a significant cumulative contribution to regional violation of health protective ambient air quality standards.

Localized Project-Generated Criteria Pollutants

Localized pollutants generated by a project can affect populations near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects have the most direct and material health impacts on adjacent sensitive receptors. In this Draft EIR, the analysis of impacts on human health focuses only on those localized pollutants with the greatest potential to result in a significant, material impact on human health: localized CO and TACs. This approach is consistent with the current state-of-practice and published guidance by BAAQMD, California Air Pollution Control Officers Association (CAPCOA), OEHHA, and CARB. BAAQMD guidance and thresholds for each pollutant are identified below. Localized particulate matter is also included in the discussion because particulate matter is considered both a regional and local pollutant.

Carbon Monoxide

BAAQMD considers localized CO emissions to result in significant impacts if concentrations exceed CAAQS (**Table 3.3-1**). The air district has adopted screening criteria that provides a conservative indication of whether project-generated traffic would cause a potential CO hot spot. Screening criteria adopted by BAAQMD are based on the number of additional vehicles added to affected intersections. These quantitative metrics

were established based on local modeling and provide a conservative estimate for the maximum number of vehicles that can be added to an intersection without an exceedance of the CO CAAQS. If the following screening criteria are met, a quantitative analysis through site-specific dispersion modeling of Proposed Plan-related CO concentrations would not be necessary, and the Proposed Plan would not cause localized violations of the CAAQS for CO.

- The Proposed Plan traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The Proposed Plan traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).
- The Proposed Plan is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

Localized Particulate Matter

At a regional level, PM₁₀ and PM_{2.5} are regulated under the criteria pollutant thresholds listed in **Table 3.3-6**. However, fugitive dust released during construction activities can also have local impacts. Compliance with BAAQMD's required BMPs, as described in **Table 3.3-3**, would be considered a less-than-significant impact concerning fugitive dust. Localized PM_{2.5}, including diesel and gasoline exhaust, is also assessed using risk and hazards thresholds for TACs, discussed below.

Toxic Air Contaminants

Potential health risks from development supported by the Proposed Plan are assessed based on BAAQMD's plan-level guidance. BAAQMD requires that overlay zones be established around all existing and planned sources of TACs, including stationary sources, high-traffic roadways, and railways. The overlay zones must identify goals, policies, and objectives to minimize potential TAC impacts to existing and future receptors. A significant impact would result from implementation of the Proposed Plan if new sensitive receptors would be located within proximity to mobile or stationary sources of TAC emissions, exceeding BAAQMD project and cumulative receptor thresholds for cancer and non-cancer health hazards.

The project-level health risk thresholds defined by BAAQMD define the probability of contracting cancer for the maximally exposed individual (MEI) exceeding 10.0 in one million, the ground-level concentrations of non-carcinogenic TACs resulting in a hazard index (HI) greater than 1.0 for the MEI, and the MEI's exposure to PM_{2.5} exhaust (diesel and gasoline) concentrations exceeding 0.3 µg/m³. If an individual project exceeds the identified project-level significance thresholds, its emissions in concert with contributions from all nearby sources (cumulative emissions) may result in a significant adverse air quality impact. Cumulative health risk thresholds, as defined by BAAQMD, assess the probability of contracting cancer for the MEI exceeding 100.0 in one million, the ground-level concentrations of non-carcinogenic TACs resulting in a HI greater than 1.0 for the MEI, and PM_{2.5} exhaust concentrations exceeding 0.8 µg/m³. Given that the Proposed Plan does not include project-specific information necessary to quantitatively determine TAC exposure levels in comparison with these project-level thresholds, these thresholds are not used to analyze the Proposed Plan's impacts.

Although asbestos is a TAC, there are no quantitative thresholds related to receptor exposure to asbestos. Rather, BAAQMD considers a project to have a significant impact if it does not comply with the applicable regulatory requirements outlined in Regulation 11, Rule 2, which requires the demolition or renovation of asbestos-containing building materials to comply with the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations. Similarly, lead is regulated by Regulation 11, Rule 1, which establishes a daily limitation and ground-level concentration limits (with and without background concentrations).

Odors

BAAQMD and CARB have identified several types of land uses as being commonly associated with odors, such as landfills, wastewater treatment facilities, and animal processing centers. BAAQMD's CEQA Guidelines recommend that plan-level analyses identify the location of existing and planned odor sources and include policies to reduce potential odors impacts in the plan area.

3.3.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address air quality:

Open Space and Resources and Hazards

Goals

2-G Natural and Human-Caused Hazards: Minimize the potential impacts of hazards at the site and to the surrounding community, such as excessive noise, poor air quality, seismic activity, and flooding.

Policies

- 2-21 Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.
- 2-23 Ensure that development does not contribute to or result in net loss of wetland area or wetland functional and habitat value.
- 2-43 Maintain and enhance the existing tree canopy by preserving existing trees wherever possible and planting new trees throughout the site to cool the site and improve air quality.
- 2-45 Require that development projects incorporate all applicable Bay Area Air Quality Management District (BAAQMD) Construction Mitigation Measures to reduce construction and operational emissions for criteria air pollutants, toxic air contaminants, and greenhouse gases.

Mobility and Access

Goals

- 3-A Street network: Enhance the existing street network to create a walkable and pedestrian-friendly environment that provides connections both within the core campus and to surrounding communities and regional trail systems.
- 3-B Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.
- 3-C Complete Streets: Ensure the street network balances the needs of pedestrians, bicyclists, transit users, and drivers, prioritizing safety, comfort, and car-free transportation connections.

3-D Bicycle Connections: Improve bicycle connectivity within and beyond the SDC site and foster an accessible and safe street environment for bicyclists.

3-E Pedestrian Connections: Develop a network of sidewalks and pedestrian paths that promote greater and more direct connections within the campus, and opportunities for recreation and connections to nature.

3-F Transit Connections: Connect the site to the greater region through existing and future transit networks, with reliable, comfortable and safe public transit service that is responsive to the diverse needs of the residents, employees and visitors of the SDC area.

3-I Transportation Demand Management: Reduce reliance on single-occupant vehicles (SOV) and limit the number of SOV trips made by residents and visitors by supporting alternative modes of transportation, ridesharing, and on-site services.

Policies

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network.³¹ Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destination on the site such as the main lawn, baseball fields, community centers, and recreational amenities.
- 3-4 Establish new pedestrian and bicycle corridors within the SDC to facilitate connectivity throughout the site and link to neighboring communities.
- 3-5 Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.

³¹ Proposed Plan Figure 3.2-1 is recreated as Figure 3.15-4 in this Draft EIR.

- 3-17 Provide bicycle parking as a street amenity throughout the SDC in appropriate locations such as the Historic Core and Central Green that is secure and, where possible, sheltered from inclement weather. A bikeshare service can also be considered to fulfill bicycling needs.
- 3-18 Ensure tree coverage along pedestrian routes for shade and comfort. Preserve existing mature trees wherever possible.
- 3-27 Provide no free parking within campus.
- 3-29 Provide lower minimum parking requirements when parking facilities that are shared with other users or made publicly-accessible to maximize the efficiency and use of spaces.
- 3-39 Apply new technologies as appropriate to better manage the parking supply such as real-time parking availability notifications or signs.
- 3-41 Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. Potential strategies may include subsidies for not driving alone, transit passes, parking cash-out, rideshare matching, telecommute or alternative work scheduling, upgraded bicycle facilities, and other measures proven to reduce vehicle trips and VMT.
- 3-42 Establish a Transportation Management Association (TMA) for the entire SDC to create a cost-effective and coordinated approach to reducing single-occupancy vehicle travel. The TMA can implement a variety of programs to assist individual developments in meeting their vehicle trip reduction goals. Potential TMA programs could include the overseeing of a subsidized transit pass program, carpool or vanpool ride-matching services, marketing and education to residents and businesses, and other measures.

Land Use

Goals

4-A Diverse Mix of Land Uses: Promote a diverse and integrated mix of residential development and employment uses, including research, creative services, education, office, retail, and small businesses, to create a vibrant, walkable community hub that provides economic and cultural opportunities for Sonoma Valley communities.

4-C Balanced Development: Prioritize residential uses as both an economic engine and catalyst for activity on the site, while balancing non-residential uses supportive of the County's workforce and economic development needs, community and institutional uses, and neighborhood-commercial uses to promote walkable lifestyles.

Policies

4-4 Promote a mix of commercial uses that provides neighborhood services for residents, such as a market, bakery, coffee shop, to reduce the need for driving for everyday needs.

4-12 Prohibit auto-oriented establishments such as service and repair uses and drive-through establishments in the Planning Area.

Community Design and Sustainability

Goals

5-C Pedestrian Oriented Development: Design development to enhance access and walkability, and pedestrian comfort, safety, and delight.

5-D Public Realm Network: Create a public realm of interconnected streets, ways, and other public spaces that promote walking and is a signature element of the SDC in its own right.

5-O Arnold Drive Overlay: Along Arnold Drive, development should maintain the feel and scale of the buildings and landscape along Arnold Drive, including with a variety of building types and scales, a continuous landscape setback, activity, and views into the SDC site.

5-P Sonoma Avenue Overlay: Along Sonoma Avenue, development should maintain the visual integrity of the north-south axis along Sonoma Avenue, terminating at historic buildings and being lined with large leafy trees.

Policies

- 5-1 Provide consistent canopy shade tree plantings at approximately 36' on center along all street frontages to establish tree-lined avenues as a key SDC identity element that complements the surrounding hills and open space landscape.
- 5-7 Ensure connectivity and pedestrian permeability across all districts by creating multi-modal slow-speed streets, pedestrian walkways, and a fully connected sidewalk network.
- 5-8 Require a mix of high-quality, long-lasting materials such as pavers, brick, stone, or concrete for new paving and landscape improvements.
- 5-43 Use thickly-planted deciduous and evergreen trees and shrubs, in tandem with dark-sky compliant lighting, to buffer the Sonoma Creek habitat corridor from lights and human activity, particularly along Redwood, interspersed with small clearings for visual access to the creeks.
- 5-45 Maintain at least a 30-foot setback from the edge of the planning area to new buildings in order to reduce impacts on existing homes directly south of the campus. The setback should be planted with a mix of retained existing mature trees, including the line of redwood trees along the property line, and new canopy trees with expected mature heights of 30 feet and above.
- 5-46 Use large canopy trees, including California sycamore and oak, intermixed with redwood trees throughout the Eldridge North neighborhood, especially clustering redwood trees near Sonoma Creek.
- 5-48 Use low-water, low-maintenance agricultural landscape plantings in the streetscapes and public spaces of the Agrihood, such as artichokes; native strawberry and grape variety; boysenberries;

passionfruit and kiwi vines; and fruiting fig, persimmon, olive, and citrus trees.

- 5-51 Design utilities buildings to shield adjacent districts from visual clutter, noise, and odors by using screening, enclosed buildings, and landscaped buffers.
- 5-59 Require a mix of high-quality, long-lasting materials for all new buildings, and use reclaimed and salvaged materials from demolished SDC buildings wherever feasible.
- 5-60 Ensure that development meets Title 24 and CALGreen Tier 2 requirements and incorporates green building measures such as sustainably designed sites, greywater systems or stub-outs, rooftop rainwater catchment systems, passive heating and cooling, sustainable materials, indoor environmental air quality, and use of innovative sustainability techniques.

Public Facilities, Services, and Infrastructure

Goals

- 6-C Transformative Climate-Forward Community: Promote a climate-resilient community that models the future of the Sonoma Valley by generating its own energy and designing for resiliency in a changing climate.

Policies

- 6-9 Work with Sonoma Valley County Sanitation District (SVCSD) to explore the feasibility of establishing a recycled water facility on-site to offset the use of potable water on the site and to provide recycled water for non-potable uses such as landscape irrigation and firefighting.
- 6-16 Minimize impervious surfaces and use pervious pavements where possible, retaining and providing new pervious surfaces such as landscape areas, crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt. At least 50 percent of new private parking spaces and non-primary access paving are required to be surfaced with permeable paving to encourage stormwater

infiltration and disperse runoff from roofs, rainwater catchment system overflow, or pavement to vegetated areas where possible.

- 6-18 Incorporate site design measures and Low Impact Development (LID) features such as bioretention facilities in accordance with the Bay Area Stormwater Management Agencies Association (BASMAA) Manual or otherwise required by the Grading and Stormwater Division of Permit Sonoma. The bioretention facilities should have a surface area of at least 4 percent of the tributary impervious area.
- 6-19 Connect each building within the Core Campus to a microgrid:
 - a. Work with local distributed energy resources (DERs) installation groups and advocates to build enough on-site energy generation, such as solar, wind, geothermal, and methane gas cogeneration, to power the Planning Area in case of emergency;
 - b. Connect to PG&E's grid through the Community Microgrid Enablement Program or an equivalent, with isolation devices that allow SDC to fully connect or disconnect from PG&E's system.
- 6-20 Prohibit new natural gas lines to all new buildings and require new and adaptively reused buildings to be fully powered by electricity.
- 6-22 Work with local farming groups to start an on-site composting program for food, landscape trimmings, and farm waste to provide on-site jobs, sequester carbon, and provide valuable compost for SDC properties, or for agricultural production.
- 6-23 Explore opportunities and partnerships to collect off-gassing methane from on-site solid, farm, and food waste to be utilized as an energy resource, using technologies such as anaerobic digestion, aerobic digestion, and combined heat and power (CHP) cogeneration.
- 6-28 Use water from SVCSD's Recycled Water Trucking Program for construction site activities, including dust control, cement mixing, soil compaction, to the greatest extent feasible.

Standard Conditions of Approval

Policies

- AQ-1 Air Quality Thresholds. Require that development projects comply with all applicable BAAQMD regulations and do not exceed BAAQMD's project-level CEQA significance thresholds for criteria air pollutants, including ROG, NO_x, PM_{2.5}, and PM₁₀, or toxic air contaminants.

3.3.3.4 Impacts

Impact 3.3-1 Implementation of the Proposed Plan would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant*)

As discussed in the Regulatory Setting section, BAAQMD's 2017 Clean Air Plan is the current air quality control plan for the SFBAAB. According to BAAQMD's 2017 CEQA Guidelines, determination of consistency with the 2017 Clean Air Plan should consider the following for plan-level analyses. Each of these questions is addressed for the Proposed Plan below.

- Is the increase in projected VMT or vehicle trips (either measure may be used) less than or equal to projected population increase?
- Does the plan support the primary goals of the 2017 Clean Air Plan?
- Does the plan include applicable control measures for the 2017 Clean Air Plan?
- Does the plan disrupt/hinder implementation of any 2017 Clean Air Plan control measure?

Projected VMT and Population

BAAQMD's CEQA Guidelines require that proposed plans (except regional plans) must show that the plan's projected VMT or vehicle trips (either one) increase is less than or equal to its projected population increase over the planning period of the plan to result in a less than significant impact.

Based on traffic data provided by the Proposed Plan's transportation engineers (W-Trans), the existing VMT is 59,654, and the Proposed Plan would result in a VMT of 60,285 in 2040, representing a 1.1 percent increase. Buildout of 1,000 new residential units under the Proposed Plan would result in a population increase of 2,500 from the closed SDC

facility's current population of zero. This means that the increase in VMT is significantly less than the projected population increase over the Proposed Plan's planning period.

Support of 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to:

- Reduce emissions and decrease concentrations of harmful pollutants,
- Safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and
- Reduce GHG emissions and protect the climate.

The Proposed Plan includes principles, as discussed in Chapter 2: Project Description, that will support regional attainment of the CAAQS and NAAQS. For example, promoting sustainable development practices in building and landscape design as well as efficient and sustainable infrastructure and water usage would decrease area, energy, and water sources of GHG emissions and criteria air pollutants. In addition, mixed-use development and emphasis on walkability and multi-modal mobility would reduce reliance on automobiles, which would decrease mobile sources of GHGs and air pollution. These principles are supported by the goals and policies listed above.

Together, these land use, transportation, and sustainability policies will lessen the severity of growth-oriented criteria pollutants by minimizing growth in VMT (Goal 3-J and Policy 3-41), reducing dependency on fossil fuels by maximizing clean energy sources (Goal 6-C and policies 6-8, 6-9, and 6-11), maintaining or expanding the tree canopy and other green infrastructure (Goal 5-P and policies 2-41, 5-1, and 3-19), and supporting sustainable land use patterns through mixed-use design (Goal 4-A). Additionally, Proposed Plan policies that encourage use salvaged/sustainable materials and paving (policies 5-53, 5-54, 5-8, and 6-12) as well as sustainable landscaping practices (policies 5-13, 5-14, 5-42) would help reduce emissions and concentrations of harmful pollutants and reducing exposure to air pollutants, in addition to reducing GHG emissions and protecting the climate. Moreover, findings discussed in Impact 3.3-2 show how the Proposed Plan would result in a decrease in regional criteria air pollutants, well below BAAQMD thresholds. As such, the Proposed Plan would not conflict with the primary goals of the 2017 Clean Air Plan.

Support Applicable Control Measures

As noted in the Regulatory Setting section, 51 of the 85 measures of BAAQMD's current control strategy apply to the Proposed Plan. The table below summarizes how the Proposed Plan complies with each of these control measures.

Table 3.3-7: Proposed Policies that Support 2017 Clean Air Plan Control Measures

Control Measure		Relevant Proposed Plan Goals and Policies
Stationary Sources		
SS15	Natural Gas Processing and Distribution	<ul style="list-style-type: none">• Policies 6-8 and 6-9 would use clean energy, and policies 6-17 and 6-18 would reduce methane emissions (SS15, SS16, SS30).• Policies 6-9 and 5-54 would reduce facility-level GHG emissions (SS17).• Goals 2-G, 5-O, 5-P and Policy 5-54 would help prevent TAC exposure (SS20 and SS32) and support BAAQMD permitting (SS21).• Policies 5-53 and 5-54 would reduce need for coatings that produce ROGs (SS25 and SS26).• Maker-oriented uses are permitted in the Flex Zone only, subject to performance standards. (SS27, SS40)• Policy policies 3-5 and 6-12 would limit need for asphaltic paving (SS29 and SS37) and therefore generation of fugitive dust (SS38).• Policy 6-9 would limit/prohibit wood burning (SS34) and PM generation (SS31, SS33).• Walkable and bike-friendly mixed-use design would also limit PM, CO, TAC, and GHG emissions. (Goals 3-A, 3-D, 3-E, 4-A)• Policy 6-14 reduces trackout from construction. (SS36)• Policy 5-54 and 4-10 help limit odor-generating uses (SS40).
SS16	Basin-Wide Methane Strategy	
SS17	GHG BACT Threshold	
SS20	Air Toxics Risk Cap and Reduction from Existing Facilities	
SS21	New Source Review for Toxics	
SS25	Coatings, Solvents, Lubricants, Sealants and Adhesives	
SS26	Surface Prep and Cleaning Solvent	
SS27	Digital Printing	
SS29	Asphaltic Concrete	
SS30	Residential Fan Type Furnaces	
SS31	General Particulate Matter Emission Limitation	
SS32	Emergency Backup Generators	
SS33	Commercial Cooking Equipment	
SS34	Wood Smoke	
SS36	PM from Trackout	
SS37	PM from Asphalt Operations	
SS38	Fugitive Dust	
SS40	Odors	
Transportation		
TR1	Clean Air Teleworking Initiative	<ul style="list-style-type: none">• Policy 3-41 would require implementation of an array of transportation demand strategies to reduce vehicle trips, which may include subsidies for telecommuting and ridesharing (TR1, TR2, TR8, TR11, TR12).
TR2	Trip Reduction Programs	
TR3	Local and Regional Bus Service	
TR5	Transit Efficiency and Use	
TR6	Freeway and Arterial Operations	
TR7	Safe Routes to Schools and Safe Routes to Transit	
TR8	Ridesharing, Last-Mile Connection	

Table 3.3-7: Proposed Policies that Support 2017 Clean Air Plan Control Measures

<i>Control Measure</i>		<i>Relevant Proposed Plan Goals and Policies</i>
TR9	Bicycle and Pedestrian Access and Facilities	<ul style="list-style-type: none"> • Policy 3-42 would require establishment of a Transportation Management Association (TMA) to create a cost-effective and coordinated approach to reducing single-occupancy vehicle travel (TR2). • Goals 3-F and 3-G aim to improve future transit networks and provide reliable, comfortable and safe public transit service (TR3, TR5). • Policies 3-4, 3-18, and 3-19 ensure pedestrian and bicycle access and accommodating facilities (TR9). • Policies 4-4, 4-10, and goal 3-A provide mixed use development, prohibit auto-oriented establishments, and create a walkable street network (TR10). • Policies 3-27, 3-29, 3-38, and 3-40 provide parking strategies that include no free parking on campus, lower minimum parking requirements, parking cash-out, and new technologies to better manage the parking supply (TR13). • Goals 3-A and policies 3-1 and 3-5 help facilitate connectivity throughout the Planning Area and beyond to support regional mobility (TR6). • Goals 3-C through 3-G support pedestrian, bicycle, and transit safety and mobility. (TR7) • Goal 3-J and policies 3-41 and 3-42 focus on SOV trip reduction and encourage innovative strategies like EV infrastructure as well as public education. (TR14, TR15) • Goals 2-G, 3-A, and 3-C protect air quality by linking land use and transportation to reduce VMT and subsequent pollutant emissions. (TR16) • Policy 2-45 would require BAAQMD's construction mitigation measures, including standards on exhaust from construction equipment. (TR22)
TR10	Land Use Strategies	
TR11	Value Pricing	
TR12	Smart Driving	
TR13	Parking Policies	
TR14	Cars and Light Trucks	
TR15	Public Outreach and Education	
TR16	Indirect Source Review	
TR22	Construction, Freight, and Farming Equipment	
TR23	Lawn and Garden Equipment	

Table 3.3-7: Proposed Policies that Support 2017 Clean Air Plan Control Measures

Control Measure		Relevant Proposed Plan Goals and Policies
		<ul style="list-style-type: none"> Policies 5-42, 5-54, 6-12, 6-13, and 6-15 support sustainable landscape practices and strategies so that need for landscaping activities will be minimized. (TR23)
Energy		
EN1 EN2	Decarbonize Electricity Production Decrease Electricity Demand	<ul style="list-style-type: none"> Goal 6-C and policies 6-8, 6-9, 6-11 would electrify buildings by prohibiting natural gas in new construction and supporting infrastructure for renewable/clean energy use. Additionally, Policy 6-18 would provide alternate, on-site energy through methane gas recapture for CHP generation. Policy 5-54 would use green building and sustainability techniques to reduce electricity demand. (EN1, EN2)
Buildings		
BL1 BL2 BL3 BL4	Green Buildings Decarbonize Buildings Market-Based Solutions Urban Heat Island Mitigation	<ul style="list-style-type: none"> Policy 5-54 would prioritize green building design, including electrification of new buildings and connection to microgrid for renewable/clean energy supply and other infrastructure supported by streamlined permitting (Goal 6-C and policies 6-8, 6-9, and 6-11).(BL1, BL2, BL3) Goal 5-P and policies 2-1, 3-19, 5-1, 5-37, 5-39, and 5-40 support existing and expanded urban tree canopy for shading to mitigate urban heat. It is noted the Planning Area is located in a rural setting. (BL4)
Agriculture		
AG1	Agricultural Guidance and Leadership	<ul style="list-style-type: none"> Policy 5-42 would encourage sustainable agricultural landscapes and crops, and policies 6-17 and 6-18 would leverage agricultural activities to

Table 3.3-7: Proposed Policies that Support 2017 Clean Air Plan Control Measures

Control Measure		Relevant Proposed Plan Goals and Policies
		support capacity for waste reduction and on-site energy generation.
Natural and Working Lands		
NW2 NW3	Urban Tree Planting Carbon Sequestration in Wetlands	<ul style="list-style-type: none"> • Goal 5-P and policies 2-1, 3-19, 5-1, 5-37, 5-39, and 5-40 focus on urban tree planting and retention (NW2). • These policies, as also specifically noted in policy 6-17, would help the Planning Area's capacity for carbon sequestration. Wetlands are preserved as open space under the Proposed Plan (policies 2-21, 2-23). (NW3)
Waste Management		
WA2 WA3 WA4	Composting and Anaerobic Digesters Green Waste Diversion Recycling and Waste Reduction	<ul style="list-style-type: none"> • Policies 6-17 and 6-18 would establish on-site composting and anaerobic digesters to reduce waste/green waste. (WA2, WA3) • Green building and sustainability practices as outlined by policy 5-54 would encourage recycling and waste reduction. (WA4)
Water		
WR2	Support Water Conservation	<ul style="list-style-type: none"> • Goal 6-C and policies 5-60, 6-16, and 6-18 would help limit water use through low-impact design and requirements for permeable surfaces, in addition to CALGreen Tier 2 building design standards.
Super GHGs		
SL1 SL2 SL3	Short-Lived Climate Pollutants Guidance for Local Planners GHG Monitoring and Emissions Measurement Network	<ul style="list-style-type: none"> • Goal 6-C and policies 6-8, 6-9, 6-11, 6-17, and 6-18 would reduce GHGs, including methane, as would sustainable practices and pedestrian/bike-oriented mixed-use development (policies 4-4 and 5-54 and goals 4-A, 4-C).(SL1, SL2, SL3)

Source: Bay Area Air Quality Management District, 2017.; Dyett & Bhatia, 2022.

Based on the above analysis, the Proposed Plan would support the applicable control measures identified in the 2017 Clean Air Plan to meet the plan's primary goals.

Disrupt or Hinder Implementation of 2017 Clean Air Plan Control Measures

As discussed above, the Proposed Plan includes Policies that would foster sustainable development practices and would not cause the disruption, delay, or otherwise hinder implementation of any applicable control measure from the 2017 Clean Air Plan; rather, the Proposed Plan would support and facilitate their implementation. For example, the Proposed Plan encourages sustainability measures such as use of promotion of sustainable building design and landscaped design as well as building electrification and use of renewable energy sources. Additionally, the Proposed Plan would help reduce VMT by providing community-serving uses within the Planning Area within a walkable distance of residences to reduce the number and length of vehicle trips throughout the Planning Area.

Summary

In conclusion, the Proposed Plan would incorporate applicable control measures of the 2017 Clean Air Plan and would not disrupt or hinder implementation of any of these control measures. Also, the rate of increase in VMT is lower than the rate of increase in population projected for the Proposed Plan's planning period. Moreover, the Proposed Plan would result in a decrease in criteria pollutant emissions and would therefore support the primary goals of the 2017 Clean Air Plan. Given that the Proposed Plan includes policies that would help reduce impacts to the maximum extent feasible, the Proposed Plan would have a less than significant impact.

Mitigation Measures

None required.

Impact 3.3-2 Implementation of the Proposed Plan would not result in a cumulatively considerable net increase of any criteria pollutant for

which the project region is non-attainment under an applicable federal or state ambient air quality standard. (*Less than Significant*)

As discussed in the Environmental Setting section, the criteria pollutants for which the SFBAAB has a federal or State nonattainment status are ozone, PM₁₀, and PM_{2.5}. Additionally, the basin has a federal maintenance (moderate) status for CO.

Construction Emissions

As described above, there is no plan-level mass emission threshold for construction. However, construction associated with projects pursuant to the Proposed Plan, including a new road connection to Highway 12, would result in temporary generation of ozone precursors (ROG and NO_x), CO, and particulate matter exhaust emissions that could result in short-term impacts on ambient air quality in the Planning Area. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and ROG from architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

The Proposed Plan is programmatic and does not include any specific development projects. Rather, construction of development would occur incrementally throughout a 20-year time period. As the exact location, timing, and intensity of future development projects is not known at this time, the precise effects of construction activities associated with buildout of the Planning Area cannot be accurately quantified. That is, project-specific details of future development within the Planning Area are currently unknown, and such development would be driven by market conditions, site constraints, land availability, and property owner interest. However, as described in the Methodology and Assumptions section above, it is anticipated that in any given year, multiple land use development projects would be constructed within the Planning Area.

As noted previously, BAAQMD's project-level thresholds were developed to analyze emissions generated by a single project. Although the construction emission impacts associated with each new individual development would be short-term in nature (relative to the buildout year) and limited to the period of time when construction activity is taking place for that particular development, the concurrent construction of a multitude of individual development projects that could occur at any one time in the Planning Area under the Proposed Plan could generate combined criteria pollutant emissions on a daily

basis that would exceed the BAAQMD's project-level thresholds. In addition, depending on the size and scale of an individual development project, along with its construction schedule and other parameters, there may also be instances where the daily construction emissions generated by a single development project within the Planning Area could also exceed the BAAQMD's criteria pollutant thresholds. These emissions could contribute to ozone formation and other air pollution in the SFBAAB, which at certain concentrations, can contribute to short-and long-term human health effects. Proposed policies 6-15 and 2-45 would help reduce construction-related emissions of future development projects within the Planning Area by requiring development projects to incorporate the BAAQMD Basic Construction Mitigation Measures, described in **Table 3.3-3**.

During construction of a development project, the activity that typically generates the highest NO_x and particulate matter exhaust emissions is the operation of off-road equipment, whereas the activity that typically generates the highest ROG emissions is the application of architectural coatings. Future construction would comply with existing regulations including the California Green Building Code and BAAQMD Regulation 8, Rule 3, which contain ROG content limits for architectural coatings, sealants, and adhesives and is one of the additional construction mitigation measures recommended by BAAQMD for projects with construction emissions above the significance threshold (**Table 3.3-3**). Construction equipment would also be subject to EPA and CARB emission requirements that specify all construction equipment must be maintained and tuned to meet appropriate including use of Tier 4 engines in off-road equipment and cleaner heavy-duty trucks to reduce NO_x and particulate matter exhaust emission levels (also a BAAQMD-recommended mitigation measure). Proposed policy 2-45 reinforces these regulations by requiring contractors to use all applicable best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities, including use of low ROG coatings beyond local requirements (i.e., Regulation 8, Rule 3) and BACT for all construction equipment, diesel trucks, and generators to reduce emissions of NO_x and particulate matter. BAAQMD considers implementation of these BMPs adequate to reduce fugitive particulate matter emissions to less-than-significant levels. In addition, Sonoma County General Plan Open Space and Resource Element policies require development projects to utilize construction techniques that minimize air emissions and refer projects to BAAQMD for review. Projects that exceed BAAQMD thresholds would be subject to all additional mitigation measures recommended by the district, listed in **Table 3.3-3**. Given the combination of existing regulations and proposed policies that reduce construction-generated emissions and the limited scale of development anticipated by the Proposed Plan (as described in Chapter 2: Project Description) relative to the region, the Proposed

Plan would not result in a cumulatively considerable net increase of ozone (and its precursors) or particulate matter, and this impact would be less than significant.

Operational Emissions

Buildout of the Proposed Plan has the potential to result in air quality impacts from mobile, area, and energy sources. Mobile sources would include vehicle trips generated by land uses proposed within the Planning Area, including those due to the new connector road to Highway 12. Area sources would include fireplace and oven usage, landscaping equipment, off-gassing during the reapplication of architectural coatings, and consumer products like solvents, cleaning supplies, cosmetics, and toiletries. Energy sources would include on-site natural gas combustion for space and water heating. Each of these sources was taken into account when calculating the Proposed Plan's long-term operational emissions, which were quantified using CalEEMod. Land use data used in the modeling and the CalEEMod model outputs are provided in Appendix B: Air Quality and GHG Data.

Table 3.3-8 summarizes daily mobile, area, and energy source emissions generated under existing baseline and 2040 conditions with implementation of the Proposed Plan. As noted in the Methodology and Assumptions section, the emissions under the Proposed Plan at buildout in 2040 are compared to the existing emissions, and the resulting net change in emissions is compared to BAAQMD's project-level thresholds to evaluate the magnitude of change in the air quality environment due to implementation of the Proposed Plan. BAAQMD's project-level thresholds are used as a conservative estimate of the impact of Proposed Plan-generated emissions. This methodology is not required under BAAQMD CEQA Guidelines.

As indicated in **Table 3.3-8**, operational sources under the Proposed Plan would result in reduced emissions for all criteria pollutants. Emissions for all of these criteria pollutants would be below BAAQMD's project-level thresholds and therefore would not cumulatively contribute to impact on regional air quality. Modeled emissions reflect Goal 6-C and policies 6-8, 6-9, 6-11, and 6-18 that would decrease energy-source emissions; transportation goals and 3-J and 3-C through 3-G and policies 3-1, 3-4, and 3-41 as well as land use and design goals 2-G, 4-A, and 4-C and policy 4-4 that would reduce VMT and therefore mobile-source emissions; and policies 5-54, 5-53, 6-12, 6-17, and 6-18 that would limit area-source emissions by using salvaged/recycled and/or sustainable materials, permeable paving, sustainable landscapes, and green building design. In addition to these quantified policies, Goal 5-P and policies 2-41, 3-19, 5-1, 5-37, 5-39, and 5-40 would enhance the sequestration capacity of trees and other natural lands in the Planning Area, thereby helping to further reduce the net emissions associated with the

Proposed Plan beyond the levels shown in **Table 3.3-8**. Collectively, these policies would ensure that operation of the Proposed Plan would not cause the SFBAAB to violate any of the NAAQS or CAAQS, and the impact would be less than significant.

Table 3.3-8: Estimated Maximum Daily Operational Emissions with Proposed Plan (pounds per day)

Analysis Condition/Source	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Existing (2019)					
Area	<1	<1	<1	<1	<1
Energy	-	-	-	-	-
Mobile	90	168	925	131	37
Total	90	168	925	131	37
Future with Proposed Plan (2040)					
Area	39	1	82	<1	<1
Energy	1	8	5	1	1
Mobile	13	16	137	44	12
Total	53	25	224	45	13
Net Change with Proposed Plan	-37	-143	-700	-86	-24
Threshold ¹	54	54	-	82	54
Exceed Threshold?	No	No	-	No	No

Notes:

1. BAAQMD's project-level thresholds were developed to analyze emissions generated by a single project and so offer an extremely conservative evaluation of emissions from an entire specific plan such as the proposed Project.

2. Emission outputs from CalEEMod are generated for both the summer and winter seasons, with emission levels differing slightly for the pollutants in each season. Emission levels of ROG and NO_x tend to be generally higher during the winter while emissions of CO tend to be generally higher in the summer. Emissions of PM₁₀ and PM_{2.5} remain the same during both seasons. The maximum emissions for each pollutant over the course of the summer and winter seasons are shown in this table.

Source: Dyett & Bhatia, 2022

Mitigation Measures

None required.

Impact 3.3-3 Implementation of the Proposed Plan would not expose sensitive receptors to substantial pollutant concentrations. (*Less than Significant*)

The California Supreme Court has held that lead agencies are not required to analyze the impacts of the environment on a project's future users or residents, unless the project exacerbates existing environmental hazards (see *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369) or when the legislature has indicated by specific Public Resources Code (21096, 21151.8, 21155.1, 21159.21, 21159.22, 21159.23, and 21159.24) that specifically-defined environmental hazards associated with airport noise and safety, school projects, certain kinds of infill housing, and transit priority projects must be addressed.

Because the SDC facility has been closed since 2018, there are no existing sensitive receptors within the Planning Area; however, as seen in **Figure 3.3-1**, there are residential uses just north and just south of SDC that are within 1,000 feet of the Planning Area. **Figure 3.3-1** also shows the location of existing sources of pollutants in the vicinity of the Planning Area, including stationary sources and high-volume roadways such as Highway 12. In some instances, these sources are within 1,000 feet of existing sensitive receptors (residential uses).

The Proposed Plan, which would guide future development in the Planning Area, is intended to support regional goals of integrating transportation and land use policies to create opportunities for reducing VMT. As discussed in Chapter 2: Project Description and Section 3.10: Land Use and Planning, future development would be limited to within the 180-acre Core Campus. The only high-volume roadway considered a major source of TAC emissions within 1,000 feet of the Planning Area is Highway 12. As mapped in **Figure 3.3-1**, Highway 12 is located along the eastern border of the Planning Area—well beyond the Core Campus (and 1,000 feet thereof)—where future residential uses or other sensitive receptors could be substantially exposed to TACs. However, the Proposed Plan allows mixed uses, which could potentially locate sensitive receptors on the same site or in close proximity to commercial and retail activities (e.g., loading docks, idling trucks, diesel generators) that could result in excessive air quality emissions and affect a project's on-site or nearby residents. Therefore, the Proposed Plan has potential to exacerbate existing impacts on sensitive receptors and new receptors associated with development under the Proposed Plan.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

Under existing and future vehicle emission rates, a plan would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where a vertical and/or horizontal dispersion is substantially limited by bridges or tunnels—to generate a significant CO impact.

Buildout of the Proposed Plan would increase traffic volume, and therefore potential congestion, on Arnold Drive; however, traffic volumes would not reach significant levels. For example, Arnold Drive from Harney to Madrone Road has the highest volume within the Planning Area, with at most 730 vehicles per hour. With the Proposed Plan, this amount would increase to 970 vehicles (or 930 vehicles without the Highway 12 connector). In addition, buildout of the Proposed Plan (through goals 3-A, 3-C through 3-G, and 3-J and policies 3-1, 3-4, 3-41, 3-27, 3-29, 3-38, and 3-41) and existing regulatory mechanisms such as CARB's Mobile Source Program—which supports replacement of older, higher-emitting vehicles with newer vehicles, and increasingly stringent inspection and maintenance programs in addition to other regulatory requirements such as AB 1493 (Pavley) of 2002 that mandates regulations to improve fuel economy and reduce tailpipe GHG emissions—would significantly decrease daily operational emissions of CO from mobile sources, further reducing the substantial decrease in CO from area sources in 2040 (**Table 3.3-8**). Therefore, the Proposed Plan would not have the potential to substantially increase CO hotspots at intersections in the Planning Area.

BAAQMD considers consistency with the relevant congestion management plans to determine the potential for CO hotspots because congested intersections generate unhealthy concentrations of CO. Although SCTA relinquished its designation as a CMA, the Sonoma County Comprehensive Transportation Plan (Moving Forward 2050) serves many of the same functions of a congestion management plan. Proposed Goal 3.6-J and policies 3-41 and 3-42 support this plan by ensuring transportation demand management through transportation demand management strategies and establishment of a

transportation management agency. These strategies and regular oversight would help ensure that the Proposed Plan would be consistent with Moving Forward 2050 and would not result in CO hotspots.

Regional Criteria Pollutants

As discussed under Impact 3.3-2, operational emissions under the Proposed Plan would result in reduced emissions of all regional criteria air pollutants compared to existing conditions. Existing regulations and Sonoma County General Plan policies would also help reduce the potential for air quality impacts due to regional criteria pollutants, as noted in Impact 3.3-1, including discretionary project review when sensitive receptors are involved.

Localized Particulate Matter

In addition to regional criteria pollutant thresholds, localized particulate matter is assessed by risk and hazards thresholds. Local $\text{PM}_{2.5}$ emissions above $0.3 \mu\text{g}/\text{m}^3$ for an individual project or cumulatively greater than $0.8 \mu\text{g}/\text{m}^3$ would constitute a significant impact. As described in the Environmental Setting, the SDC facility had a $\text{PM}_{2.5}$ concentration of $2.24 \mu\text{g}/\text{m}^3$ according to BAAQMD's 2018 permitted sources database. Per BAAQMD guidance, where ambient risks already exceed BAAQMD's cumulative thresholds and the cumulative context is already significant, any Proposed Plan contribution would be cumulatively considerable and potentially significant. However, this value is outdated, and because the facility is no longer operational since its closure in 2018, the concentration of localized particulate matter is likely significantly less (as was demonstrated by the substantial reduction in cancer risk score in CARB's 2019 facilities database, as discussed in the Environmental Setting section). Further, **Table 3.3-8** shows how implementation of the Proposed Plan would result in less particulate matter emissions compared to existing conditions. It is noted that quantified operational emissions do not include potential agricultural uses that would be allowed in the Agrihood district and Buffer Open Space and Permanent Open Space designations of the Proposed Plan. However, as discussed in the Methodology and Assumptions section above, these uses would be located away from future sensitive uses including residential areas (i.e., outside the Core Campus), and permitted agricultural activities are unlikely to occur on a scale that would result in daily operational emissions of the Proposed Plan (**Table 3.3-8**) exceeding BAAQMD's thresholds for particulate matter.

The Proposed Plan does not include specific project details for new sensitive receptors, but existing sensitive uses such as residential areas may be affected by the increased volume of traffic associated with the Proposed Plan. Such traffic could increase vehicle

activity near these receptors and increase exposure to PM_{2.5} dust and exhaust. Likewise, construction of future development allowed by the Proposed Plan may temporarily expose sensitive receptors to localized particulate matter. Construction emissions, discussed in further detail below, are regulated by BAAQMD as well as by Sonoma County General Plan and Proposed Plan policies that seek to protect sensitive receptors from substantial pollutant concentrations.

Toxic Air Contaminants

Construction

The greatest risks from TAC emissions during construction would be diesel PM emissions from heavy equipment operations and heavy-duty trucks and the associated health impacts to sensitive receptors. As identified in the Environmental Setting section, there are no existing sensitive receptors within the Planning Area, but there are residential areas within 1,000 feet of the Planning Area boundary just north as well as south of SDC. The Proposed Plan would allow new residential and mixed uses in the Core Campus, and the level of new development or redevelopment within this area has the potential to expose both existing and future sensitive receptors to TAC emissions generated by future construction.

Off-road diesel construction equipment and heavy-duty diesel trucks (e.g., concrete trucks, building materials delivery trucks), which are sources of diesel PM, are regulated under three ATCMs adopted by CARB. The ATCM for diesel construction equipment specifies particulate matter emission standards for equipment fleets, which become increasingly stringent over time. Furthermore, most newly purchased construction equipment introduced into construction fleets after 2013-2014 (depending on the engine horsepower rating) are equipped with high-efficiency diesel PM filters. One of the ATCMs for heavy-duty diesel trucks specifies that commercial trucks with a gross vehicle weight rating over 10,000 pounds are prohibited from idling for more than five minutes, unless the engines are idling while queueing or involved in operational activities. Additionally, heavy-duty truck models from 2008 must be equipped with an automatic shutoff device to prevent excessive idling or meet stringent NO_x requirements. Lastly, fleets of diesel trucks with a gross vehicle weight rating of greater than 14,000 pounds are subject to requirements to replace older vehicles and/or equip them with diesel PM filters.

Construction activities under the Proposed Plan would be dispersed intermittently over a 20-year period and would not expose an individual to a continuous source of pollution. However, without specific details on the locations of building footprints or their construction

schedules, a quantitative evaluation of potential health risk impacts is not possible. Sonoma County General Plan policies OSRC-16l, OSRC-16h, and OSRC-16i protect sensitive receptors from exposure to substantial concentrations of TACs and associated health risks through land use considerations (i.e., siting) and design requirements (e.g., setbacks) during the planning process, consistent with BAAQMD requirements. Additionally, discretionary project review may be referred to BAAQMD for additional construction control measures and BMPs as needed (policy 2-45), which would further reduce potential impacts of TACs generated by equipment. With implementation of these existing policies and regulations, diesel PM emissions from off-road construction equipment and trucks will be controlled substantially over the life of the Proposed Plan. Future projects would also be subject to individual review and CEQA analysis, and additional project-specific requirements and mitigations would be determined at that time.

Operation

As described in the Methodology and Assumptions section, the Proposed Plan would result in a significant impact if new sensitive receptors would be located in proximity to mobile or stationary sources of TAC emissions that exceed BAAQMD project and cumulative receptor thresholds for cancer and non-cancer health hazards.

As noted above, Highway 12 is the only existing mobile source of TACs within 1,000 feet of the Planning Area. CARB recommends avoiding siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. **Figure 3.3-1** shows the extent of a 500-foot buffer from Highway 12, which only intersects the southeastern corner of the Planning Area and is far outside the Core Campus where up to 1,000 residential dwelling units would be developed. Moreover, the Sonoma County General Plan includes policies that would reduce the exposure of new sensitive receptors to existing mobile sources of TAC emissions as well as reduce the potential for new TAC emissions from mobile sources to exacerbate existing exposure in the Planning Area for existing and potential new receptors (policies OSRC-16i, OSRC-16k, and OSRC16-l). Existing policies, in addition to State and regional regulations, would therefore substantially reduce community risk due to mobile source emissions.

As discussed in the Environmental Setting, stationary sources of TACs are located in and nearby the Planning Area (**Figure 3.3-1**), and existing cancer risks and HIs do not exceed BAAQMD's thresholds. The Proposed Plan does not include any planned stationary sources; however, new stationary sources could be developed under the Proposed Plan and newly expose or exacerbate existing exposure of sensitive receptors to TACs.

At a plan-level, BAAQMD CEQA Guidelines recommend that land use diagrams identify special overlay zones around existing and planned sources of TACs and particulate matter and special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways. **Figure 3.3-1** shows the 1,000-foot buffer of existing permitted stationary sources as well as the 500-foot buffer from existing mobile sources. Future development under the Proposed Plan will not be within 500 feet of Highway 12. However, the 1,000-foot buffer from the gasoline dispensing station south of the Planning Area intersects with a small portion of the Core Campus, which represents a potential for future sensitive receptors to be exposed to an existing TAC source that may be exacerbated by increased future traffic. The SDC facility itself is also a TAC source with a 1,000-foot buffer that intersects with the Core Campus; however, it is noted that this location does not seem to be spatially associated with a particular source, but rather, intended to represent the entire campus itself. As such, creating an overlay zone representing the recommended buffers would be speculative. Moreover, the SDC facility would no longer be operative as a permitted source (i.e., as a developmental center), and the Proposed Plan would not exacerbate these conditions. For example, auto-oriented services, which can be a source of TACs, are prohibited in the Planning Area (Policy 4-12). Instead, proposed Goal 2-G and policies 4-10 and 5-18 in addition to existing General Plan policies like OSRC-16j and OSRC-16l and BAAQMD regulations (e.g., Regulation 2, Rule 5) would ensure sensitive receptors would be protected from operational TAC exposure.

Asbestos

Demolition of existing structures predating the U.S. Consumer Product Safety Commission's ban on use of asbestos in fireproofing and insulating agents in 1977 may result in the dispersion of particulates containing asbestos to adjacent sensitive receptor locations. As described in the Environmental Setting, many of the buildings in the Planning Area contain asbestos. However, all demolition activities in the Planning Area would be subject to BAAQMD Regulation 11, Rule 2 and EPA's asbestos NESHAP regulations that would minimize release of asbestos fibers. Consequently, regulatory mechanisms exist that would ensure that receptors would not be exposed to substantial concentrations of asbestos. There would be no operational impacts related to asbestos.

Inorganic Lead

As noted in the Environmental Setting, lead was found in nearly all of the samples from historic buildings in the Planning Area, many of which were constructed before the ban on lead-based paints. Activities such as demolition of existing structures that could result in the release of lead or lead compounds is regulated by BAAQMD Regulation 11, Rule 1, which establishes daily and ground-level concentration limitations, as described in the

Regulatory Setting. Proposed policy 2-45 would also help mitigate potential release or dispersion of lead particulate matter by construction activities. Existing regulations would therefore help ensure receptors would not be exposed to substantial concentrations of lead, and there would be no operational impacts related to lead.

Summary

The Proposed Plan would allow growth of residential land uses that would be new sensitive receptors and non-residential land uses that are a potential for new emissions sources. Existing State, regional, and local regulations and policies establish buffers between potential air pollution sources and sensitive receptors, limit pollution during construction, and require air filtration (under Title 24/CALGreen) in the event land use compatibility considerations cannot feasibly site sensitive receptors away from pollution sources. These protective measures are supported by Proposed Plan policies that protect air quality and exposure to pollution within the Planning Area. Other exposure reduction strategies, including expansion of urban forestry, speed reduction, and traffic management, would minimize the Proposed Plan's contribution to existing sources as well as protect future sensitive receptors. Future development would be subject to individual review; new sources would be evaluated through the BAAQMD permit process and/or the CEQA process to identify and mitigate any significant exposures. The Proposed Plan's potential impact on sensitive receptors from exposure to substantial pollutant concentrations would thus be minimized to the maximum extent feasible and would be less than significant overall.

Mitigation Measures

None required.

Impact 3.3-4 Implementation of the Proposed Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant*)

Although offensive odors rarely cause physical harm, they can be unpleasant, leading to distress among the public and often generating citizen complaints to local governments and air districts. According to BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, and schools, warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, work

sites, and commercial areas. While some of these uses—such as the waste treatment plant that was abandoned in 1954, the former Sunrise Industries, and the SDC facility that closed in 2018—have historically occurred within the Planning Area, none are currently operational or present.

Potential odor emitters during construction include diesel exhaust and evaporative emissions generated by asphalt paving and the application of architectural coatings. Construction-related activities would be temporary in nature and would not result in nuisance odors.

As discussed in Chapter 2: Project Description, the proposed land use designations include residential, commercial/retail, institutional, and office/employment. These land uses are not associated with the odor-generating land uses discussed above. Limited agricultural uses would be allowed in the Agrihood district as well as the Buffer Open Space and Preserved Open Space areas outside of the Core Campus. Proposed plan policies support these uses and would promote related activities such as on-site composting, which is considered a potential odor source by BAAQMD. However, these uses would only occur in open space designations and Agrihood district that are generally located in areas away from future residential uses and other sensitive receptors, which are centrally focused within the Core Campus. Therefore, the impacts would be minimal. Other potential odor emitters during operations would include exhaust from vehicles and fumes from the reapplication of architectural coatings as part of ongoing building maintenance. However, odor impacts would be limited to circulation routes, parking areas, and areas immediately adjacent to recently painted structures. Although such brief exhaust-and paint-related odors may be considered adverse, they would not be atypical of developed/urban areas and would not affect a substantial number of people or rise to the level of a significant impact under CEQA. In addition, policies OSRC-16i, OSRC-16j, and OSRC-16k of the Sonoma County General Plan and proposed Policy 5-51 require buffers and other land use compatibility considerations or other mitigation measures to reduce odor impacts.

Because the Proposed Plan would not result in a new, substantial, or long-term source of odors adversely affecting a substantial number of people, this impact would be less than significant, and no mitigation measures are required.

Mitigation Measures

None required.

3.4

Biological Resources

3.4 Biological Resources

This section assesses potential environmental impacts on existing biological resources from future development under the Proposed Plan, including those related to sensitive species and/or habitats, riparian or streamside resources under the jurisdiction of federal or State agencies, and adopted regulations or policies. The section describes biological resources in the Planning Area (which includes the project area for the SDC), including habitats, wetlands, critical habitat, and special-status species, as well as relevant federal, State, and local regulations and programs.

There were 78 comments on the Notice of Preparation related to biological resources. There were 65 comments submitted by community members, one from the California Department of Fish and Wildlife (CDFW), one from the North Sonoma Valley Municipal Advisory Council, and 11 from nongovernmental organizations. The comments are mostly related to the preservation of wildfire corridor and impacts on wildlife from habitat loss, lighting, noise, traffic, new fencing, new roads, and new residents. These comments are addressed in Impacts 3.4-1 through 3.14-6.

3.4.1 Regulatory Setting

3.4.1.1 Federal Regulations

On the federal level, the U.S. Fish and Wildlife Service (USFWS) is responsible for protection of inland non-anadromous fish and terrestrial wildlife through implementation of the federal Endangered Species Act (FESA)³² and the Migratory Bird Treaty Act (MBTA). The National Marine Fisheries Service (NOAA Fisheries) is responsible for protection of anadromous fish and marine wildlife. The U.S. Army Corps of Engineers (USACE) has primary responsibility for protecting wetlands under Section 404 of the Clean Water Act.

³² FESA declares that all federal departments and agencies shall use their authority to protect endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of the ESA and pertains to California species.

Federal Endangered Species Act

The FESA (16 USC Chapter 35) was enacted to protect any species of plant or animal that is endangered or threatened with extinction. Section 9 of the FESA prohibits “take” of federally threatened or endangered wildlife. Take, as defined under the FESA, means to harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct (16 USC Section 1532[19]). Section 9 also prohibits the removal and reduction of endangered plants from lands under federal jurisdiction, and the removal, cutting, digging, damage, or destruction of endangered plants on any other area in “knowing violation of State law or regulation.” Section 9 of the FESA (16 USC Section 1538) prohibits take of a federally listed endangered species of fish or wildlife except pursuant to a permit and habitat conservation plan (HCP) approved under Section 10(a) of the FESA (16 USC Section 1539). The FESA prohibitions and requirements are different, however, for endangered species of plants. Section 9 prohibits the take of endangered plants only from areas under federal jurisdiction, or if such take would violate state law. For listed plants located on private land, formal consultation with the USFWS is required when a project has a federal “nexus” (i.e., a federal permit is required or federal funding is involved). In the absence of a federal nexus, a project does not require a permit under the FESA for impacts on listed plants on private lands.

Migratory Bird Treaty Act (MBTA)

The MBTA (16 USC Section 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive, and is listed at 50 Code of Federal Regulations (CFR) Section 10.13. The regulatory definition of “migratory bird” is broad and includes any mutation or hybrid of a listed species and any part, egg, or nest of such birds (50 CFR Section 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the FESA. The MBTA, which is enforced by the USFWS, makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR Section 21.11).

Clean Water Act (CWA)

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE

regulatory jurisdiction pursuant to Section 404 of the CWA (33 USC Section 1344) is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a nexus identified in the USACE regulations). The USACE typically regulates as non-wetland waters of the United States any body of water displaying an ordinary high water mark (OHWM). In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met.

In 2006, the United States Supreme Court addressed CWA jurisdiction over wetlands adjacent to or abutting navigable, non-navigable, and ephemeral tributaries, and over permanent and relatively permanent non-navigable tributaries. According to the United States Supreme Court, the CWA does not assert jurisdiction over upland erosional features, gullies, or roadside ditches that have infrequent, low volume, and short duration of water flow; instead, the USACE uses a “significant nexus” analysis. A water body is considered to have a “significant nexus” with a traditional navigable water (TNW) if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream TNW. Additional information is provided in two joint documents prepared by the U.S. Environmental Protection Agency (EPA) and the USACE: (1) a memorandum titled “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Caravell v. United States*,” dated June 5, 2007; and (2) “Jurisdictional Determination Form Instructional Guidebook.”

3.4.1.2 State Regulations

California Endangered Species Act (CESA)

Under the CESA (Fish and Game Code Sections 2050 to 2116), the CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code Section 2070). The CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains lists of “species of special concern,” which serve as “watch lists.” Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species could be present on the

project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

California Fish and Game Code

Section 1602

Under Section 1602 of the California Fish and Game Code, public agencies are required to notify the CDFW before undertaking any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review occur generally during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a streambed-alteration agreement that becomes part of the plans, specifications, and bid documents for the project.

Sections 3503 and 3503.5

Section 3503 of the California Fish and Game Code prohibits the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests.

Section 3511 (Fully Protected Birds)

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 3511 lists fully protected birds and prohibits take of these species. The California Fish and Game Code defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Except for take related to scientific research, all take of fully protected species is prohibited.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA (33 USC Section 1341) at the State level, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the U.S. The RWQCB may also regulate discharges to “waters of the State,” including wetlands, under the California Porter-Cologne Water Quality Control Act (see Chapter 3.9: Hydrology and Water Quality).

3.4.1.3 Local Regulations

Sonoma County General Plan 2020

The Sonoma County General Plan contains the following goals, objectives, and policies that are relevant to biological resources.

Land Use Element

Goal LU-10: The uses and intensities of any land development shall be consistent with preservation of important biotic resource areas and scenic features.

Objective LU-10.1: Accomplish development on lands with important biotic resources and scenic features in a manner which preserves or enhances these features.

Policy LU-10a: Establish maximum densities and/or siting standards for development in designated Community Separators, Scenic Landscape Units, Scenic Corridors, Biotic Habitat Areas, Habitat Connectivity Corridors, and Riparian Corridors.

Open Space and Resource Conservation Element

Goal OSRC-7: Protect and enhance the County’s natural habitats and diverse plant and animal communities.

Objective OSRC-7.1: Identify and protect native vegetation and wildlife, particularly occurrences of special-status species, wetlands, sensitive natural communities, woodlands, and areas of essential habitat connectivity.

Objective OSRC-7.2: Designate important Biotic Habitat Areas and update designations periodically using credible data sources.

Objective OSRC-7.3: Establish development guidelines to protect designated Biotic Habitat Areas and assure that the quality of these natural resources is maintained.

Objective OSRC-7.4: Where appropriate, support regulatory efforts by other agencies to protect biotic habitat.

Objective OSRC-7.5: Maintain connectivity between natural habitat areas.

Objective OSRC-7.6: Establish standards and programs to protect native trees and plant communities.

Objective OSRC-7.7: Support use of native plant species and removal of invasive exotic species.

Objective OSRC-7.8: Encourage voluntary efforts to restore and enhance biotic habitat.

Objective OSRC-7.9: Preserve and restore the Laguna de Santa Rosa, San Pablo Bay and Petaluma marshes and other major marshes and wetlands.

Policy OSRC-7c: Notify discretionary and ministerial permit applicants of possible requirements of Federal and State regulatory agencies related to jurisdictional wetlands or special-status species.

Policy OSRC-7k: Require the identification, preservation and protection of native trees and woodlands in the design of discretionary projects, and, to the maximum extent practicable, minimize the removal of native trees and fragmentation of woodlands, require any trees removed to be replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation.

Policy OSRC-7o: Encourage the use of native plant species in landscaping. For discretionary projects, require the use of native or compatible non-native species for landscaping where consistent with fire safety. Prohibit the use of invasive exotic species.

Goal OSRC-8: Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.

Objective OSRC-8.1: Designate all streams shown on USGS 7.5 minute quadrangle topographic maps as of March 18, 2003, as Riparian Corridors and establish streamside conservation areas along these designated corridors.

Objective OSRC-8.2: Provide standards for land use and development in streamside conservation areas that protect riparian vegetation, water resources and habitat values while considering the needs of residents, agriculture, businesses and other land users.

Objective OSRC-8.3: Recognize and protect riparian functions and values of undesignated streams during review of discretionary projects.

Policy OSRC-8f: Develop and/or adopt, where appropriate, revised streamside specific standards, guidelines, and/or best management practices that provide for protection of Riparian Corridors by watershed, stream, or other geographic areas. Once adopted, the revised standards would replace the standards that are in effect at the time.

Policy OSRC-8i: As part of the environmental review process, refer discretionary permit applications near streams to CDFG and other agencies responsible for natural resource protection.

Policy OSRC-8m: Apply the SCWA Flood Control Design Criteria creek setback to development along stream where necessary to protect against streambank erosion.

Sonoma County Code

Riparian and Creek Standards

Section 7-14.5 of the Sonoma County Code establishes stream setback for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half (2.5) times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) a distance established in the general plan, local coastal program, and/or zoning code.

Article 65 of the Sonoma County Code establishes the Riparian Corridor Combining Zone to protect biotic resources communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural

production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability, groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values. The Riparian Corridor Combining Zone generally prohibits grading, vegetation removal, agricultural cultivation, structures, roads utility lines, and parking lots, with certain exceptions.

Tree Protection Ordinance

The Tree Protection Ordinance is outlined in Section 26-88-010(m) of the Sonoma County Code. Projects shall be designed to minimize the destruction of protected trees. With development permits, a site plan shall be submitted that depicts the location of all protected trees greater than nine inches (9") diameter at breast height (DBH), which is 4.5 feet about grade, and their protected perimeters in areas that will be impacted by the proposed development, such as the building envelopes, access roads, leach fields, etc. Projects are subject to construction standard established to prevent harm or removal of protected trees, including prohibitions on dumping harmful substances in proximity of protected trees, marking the location of roots prior to construction and other measures.

Heritage or Landmark Tree Ordinance

The County's Heritage or Landmark Tree Ordinance is outlined in Chapter 26D of the Sonoma County Code. A "Heritage tree" means a tree or grove of trees so designated by the Sonoma County board of supervisors of historical interest or significance. A "Landmark tree" means a tree or grove of trees so designated by the Sonoma County board of supervisors because of its outstanding characteristics in terms of size, age, rarity, shape or location. No person shall remove a heritage or landmark tree without obtaining a tree permit as outlined in Section 26D-5 and as exempted under Section 26D-6.

Valley Oak Habitat Combining District

Article 67 of the Sonoma County Code establishes the Valley Oak Habitat (VOH) Combining District to protect and enhance valley oaks and valley oak woodlands. Table 26-67-030 of the Article outlines the mitigation requirements for cutting down or removing valley oaks within the VOH district. In addition, where any development project within the VOH district is subject to design review pursuant to another provision of this chapter, the design review approval shall include measures to protect and enhance valley oaks on the project site in accordance with guidelines adopted by resolution or ordinance of the board of supervisors. Such measures shall include, but not be limited to, a requirement that

valley oaks shall comprise a minimum of fifty percent (50%) of the required landscape trees for the development project.

3.4.2 Environmental Setting

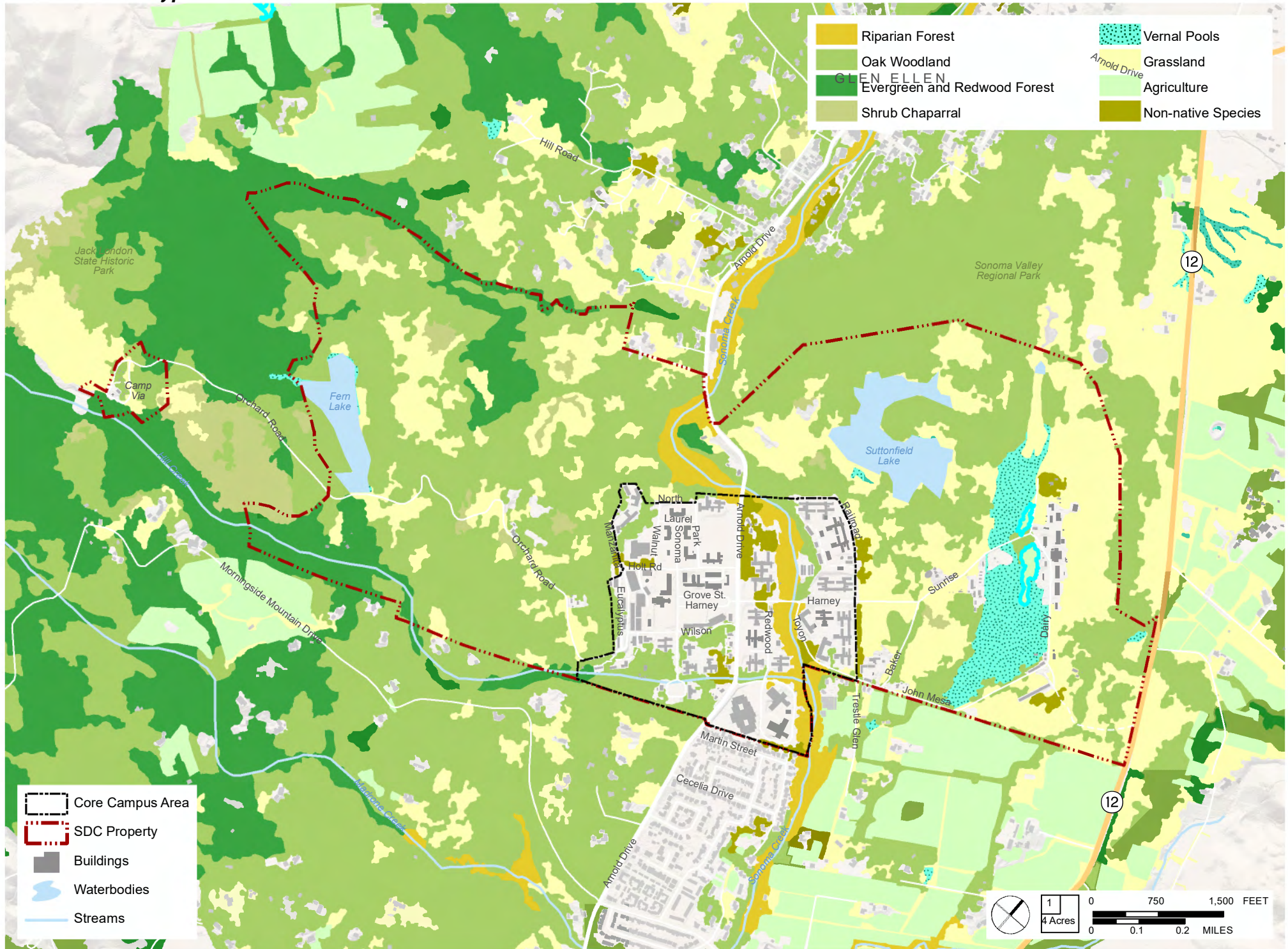
3.4.2.1 Physical Setting

Habitat Types

The Sonoma Developmental Center (SDC) supports several biological communities but can be generally described as mostly forested except in the eastern portion, where grasslands are dominant. Oak woodland is the most abundant forest type, though the site contains several other forest communities, along with shrub and grassland, two freshwater lakes, wetlands, and a block of urban development intersected by Sonoma creek and its accompanying riparian corridor. Extensive vineyards, other agriculture, open space and similar vegetation covers surround the SDC property.

The value of an area to wildlife depends on a number of physical and biological factors, including the quality of the remaining habitat and extent of protective cover, location relative to other land uses, and the uniqueness of the habitat within a regional context. The habitat types described in this section have been mapped within the SDC and are described in Chapter 5 of the *Sonoma Developmental Center Existing Conditions Report* (PCI, 2015). These classifications and descriptions are taken from the California Wildlife Habitat Relationships System (CWHRS System) and identify vegetative communities. While each classification may not be completely accurate in identifying exact species or conditions on the ground, they do provide useful information on what is likely to be found, as well as a starting point for further site-specific studies for individual projects, if applicable. Habitat types are shown in **Figure 3.4-1: Habitat Types**.

3.4-1: Habitat Types



Source: WRI, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

Evergreen and Redwood Forests

Evergreen forests dominate the western part of SDC, covering approximately 70 acres. These forests are relatively intact and undisturbed, and continue beyond the property boundary to the north, south, and west. Specific land cover types that make up the evergreen forests within the SDC property include the following.

Bay Forest

California bay forests are known from the inner and outer Coast Ranges, Transverse Ranges, and Sierra Nevada Foothills from Del Norte County south to San Diego County. This vegetation community is typically located on terraces, canyon bottoms, north-facing slopes, and rock outcrops underlain by shallow to deep sand to loam substrates (Sawyer et al. 2009). Within the Planning Area, California bay forests integrate with coast live oak woodlands and arroyo willow thickets. These forests are located on all aspects in deep canyons, with only scattered individuals or small stands of California bay on ridgelines and open slopes. Near seasonal and perennial drainages, these forests comprise a riparian canopy as individuals have become rooted on the banks of streams. California bay is a noted alternate host for sudden oak death (SOD) caused by the water mold, *Phytophthora ramorum*, which is known to occur within Jack London State Park to the west of SDC.

Bay forests are found scattered in the western half of the property, largely hugging the property boundary. The northwest quarter features a large stand, and a smaller one sits along the eastern edge of the Sonoma Creek. In the majority of locations, the bay tree canopy is extremely dense reducing the shrub and herbaceous layers within these forests. The shrubs and herbaceous layers in bay forests are typically depauperate, and dominated by shade tolerant species such as poison oak (*Toxicodendron diversilobum*), snowberries (*Symphoricarpos* spp.), and California hazelnut (*Corylus cornuta* var. *californica*); miner's lettuce (*Claytonia perfoliata*), common lady fern (*Athyrium filix-femina*), sword fern (*Polystichum munitum*), and California maiden hair (*Adiantum jordanii*).

Coast Redwood Forest

This vegetation community is characteristic of upland redwood forest described in Holland (1986), and redwood forest (*Sequoia sempervirens* Forest Alliance) described in Sawyer et al. (2009). Coast redwood forests are located on stream terraces, marine terraces, coastal benches, slopes on all aspects, and ridges in coastal California from Del Norte County south to San Luis Obispo County (Sawyer et al. 2009). This community is not

asterisked (*) e.g., not considered sensitive) in Holland (1986), (and is ranked G3 S3 (Sawyer et al. 2009, CDFG 2010).

Coast redwood forests fringe the western SDC property boundary, tightly mixed with bay forests. The redwood groves create a dense tree canopy and reduce the shrub and herbaceous layers within these forests. However, the overstory is not even-aged and there are several stands of second or tertiary-growth redwoods, up to four feet in diameter at breast height. The understory in coast redwood forests is relatively sparse with scattered shrubs and herbs, and typically includes evergreen huckleberry (*Vaccinium ovatum*), salal (*Gaultheria shallon*), California blackberry (*Rubus ursinus*), sword fern (*Polystichum munitum*), and bracken fern (*Pteridium aquilinum*).

Douglas-fir Forest

Douglas fir forests occur in a broad range of topographic positions and aspects and on a variety of substrates extending from the Pacific Northwest south to southern California (Sawyer et al. 2009). The community typically occurs from 2,250 to 5,000 feet in elevation (CNPS 2016a). Due to the wide distribution of this community, co-dominant and non-dominant understory species vary widely.

Mature Douglas fir forests cover a very limited amount of land within the SDC property. The southwest corner holds a small section of Douglas fir forest integrated within other evergreens. Larger expanses of Douglas fir forests exist to the west of SDC on protected and private lands. The overstory of these forests is generally quite dense causing the shrub and herbaceous layer to be minimal.

Oak Woodlands

Oak woodlands dominate a large percentage of the SDC, occupying approximately 380 acres throughout. The deciduous woodlands vary in density and locations within the property, and the relatively open canopies allow for healthy understories. SOD is known to occur in the adjacent Jack London State Park, and oak woodlands within the SDC are susceptible to the disease.

Mixed Oak Woodlands

Mixed oak woodlands and forests are known from the southern North Coast Ranges southward through the Central Coast Ranges from Sonoma County to northern Santa Barbara County (Sawyer et al. 2009, Holland 1986). These forests typically are located on deep soils with a variety of hydric-thermic regimes, which are situated in valleys and

gentle to steep slopes. The overstories are a relatively even mix of oak species and other broadleaf species, with no clear dominant species.

Within the SDC, mixed oak forests are the most prevalent oak woodland community. They consist of coast live oak, blue oak, Oregon oak, and valley oak. Spread throughout the property, mixed oak woodlands occur in flat grass land areas, on denser slopes, adjacent to the lakes, near the developed area, and mixed within the other deciduous and evergreen forest types. No mixed oak woodland borders the Sonoma creek, thus none of it is considered riparian. Where denser and steeper woodland exists, mainly in the western half, the understory remains highly native-dominated. The woodlands to the east have been more disturbed by human activities and also were directly affected by a 2017 wildfire. These woodlands have greater dominance of non-native grasses and forbs within the understory such as wild oat (*Avena fatua*), yellow starthistle (*Centaurea solstitialis*), scotch broom (*Cytisus scoparius*), and harding grass (*Phalaris aquatica*). Native shrubs often regenerate in these areas as well, and coyote brush (*Baccharis pilularis*), manzanita (*Arctostaphylos* spp.), and regenerating oak trees can be abundant.

Coast Live Oak Woodland

Coast live oak woodlands are known from the outer and inner Coast Ranges, Transverse Ranges, and southern coast from northern Mendocino County south to San Diego County. This vegetation community is typically located on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained sandy or loam substrates with high organic content (Sawyer et al. 2009). These woodlands are located on all aspects and topographic positions but are most extensive on north-facing slopes from the ridgeline to mid-elevation into the deeper canyons. The underlying substrate is primarily composed of well-drained loam to gravelly clay loam with high organic content and a thin, scattered duff layer of leaves and thatch from annual forbs.

Coast live oak woodland makes up a moderate percentage of the total oak coverage within the SDC property. Six main stands are scattered on the property, with the majority existing within the western half. Coast live oak is occasionally found within drainages. Where denser and steeper woodland exists, mainly in the western half, the understory remains highly native-dominated. Shrub species typically observed in the coast live oak woodlands include poison oak (*Toxicodendron diversilobum*) and coyote brush (*Baccharis pilularis*). The herbaceous layer is typically dominated by a mix of shade tolerant native herbs and non-native, invasive forbs.

Blue Oak Woodland

Blue oak woodland is known from the Northern to Southern California Coast and Coast Ranges, Klamath Mountains, Southern Cascades to the Sierra Nevada Foothills and eastern Sierra Nevada, from Del Norte County south to Los Angeles County. This vegetation community is typically located on valley bottoms, foothills, and rocky outcrops. Soils are shallow, low in fertility, moderately to excessively drained with extensive rock fragments (CNPS 2018a).

Blue oak is the dominant oak woodland cover within the eastern half of the SDC. Found largely on flat agricultural land and around Suttonfield Lake, much of the blue oak woodlands within the property have high levels of human disturbance. These activities, such as grazing, have resulted in higher abundance of non-native understory species in these woodlands. Blue oak woodland has a sensitivity ranking of G4, S4 indicating that it is apparently secure both globally and in California and is thus not considered a sensitive community.

Oregon Oak Woodland

Oregon oak woodlands are known from the North Coast Ranges and Klamath Mountains from Del Norte County south to Marin County. This vegetation community is typically located on all aspects of stream benches, terraces, slopes, and ridgelines underlain by a variety of well-drained substrates (Sawyer et al. 2009). These woodlands are located on predominantly north-facing aspects in mid-slope positions, with scattered individuals of Oregon oak in open slopes. The underlying substrate is primarily composed of well-drained loam to gravelly clay loam high organic content and a thick duff layer of leaves and thatch from annual herbs. Oregon oaks are not known to be susceptible to SOD.

Oregon oak woodland makes up a moderate percentage of the total oak coverage within the SDC property, with the largest stand found in the southwestern section of the property. The SDC is within the southern limit of the Oregon oak distribution, and recruitment failure has been observed in some populations. In the majority of locations, the tree canopy is relatively open allowing for a fairly well-developed shrub and herbaceous layers. Shrub species typically observed in the Oregon oak woodlands include poison oak (*Toxicodendron diversilobum*), ocean spray (*Holodiscus discolor*), California gooseberry (*Ribes californicum* var. *californicum*), and sticky monkey (*Mimulus aurantiacus*). The herbaceous layer is typically composed of a mix of native and non-native herbs and forbs.

Valley Oak Woodland

Valley oak woodland is known from the southern Cascade Range, Coast Ranges, Central Valley, Transverse Range, and Sierra Nevada Foothills from Siskiyou County south to Los Angeles County. This vegetation community is typically located deep, poorly drained clay soils in valley bottoms, alluvial floodplains, and lower slopes (CNPS 2021).

Valley oak woodland is mainly grouped around the urban area within the center of the SDC campus. This is generally grassland-like land dominated by non-native herbs, yet large valley oaks specimens are known to occur here. This woodland type also borders parts of the Sonoma Creek and associated wetlands. Some areas feature regenerating valley oak saplings. The shrub layer in valley oak woodland is typically moderately dense with native species including arroyo willow (*Salix lasiolepis*), snowberry (*Symphoricarpos albus*) and California blackberry (*Rubus ursinus*).

Grassland

Non-native annual grasslands are known throughout California but are dominant in the Great Valley, the Coast Ranges, Transverse Ranges, Modoc Plateau, and South Coast. These vegetation communities are located on a range of topographic settings (Sawyer et al. 2009, Baldwin et al. 2012). Substrates are varied, though often clays and clay loams with low permeability. These communities are dominated by the non-native annual grasses, which are often considered a “moderate” to “high” invasive (Cal-IPC 2006), and have a variety of statuses in the Arid West regions.

Grasslands occupy approximately 210 acres within the SDC and is the dominant landcover in the far eastern part of the site. The eastern grasslands were historically used for agriculture and non-native annual species are dominant; while the patches of grassland in the west contain a higher percentage of native species. Specific grassland vegetation alliances have not been mapped on the SDC. Mature oaks are scattered within most grassland areas.

Perennial bunch-grass habitats within the SDC consist primarily of native California oatgrass (*Danthonia californica*) and purple needlegrass (*Nassella pulchra*). Other common perennial herbs include milk maids (*Cardamine californica*), soap root (*Chlorogalum* spp.), California buttercup (*Ranunculus californicus*), blue-eyed grass (*Sisyrinchium* spp.), and hedge nettle (*Stachys* spp.). Native annuals are less abundant but include species such as purple clarkias (*Clarkia purpurea*) and tarweeds (*Madia* spp.).

The eastern grasslands are more homogenous and uniform, with non-native annual grasses and forbs. Invasives found within the grasslands include yellow star thistle (*Centaurea solstitialis*), fennel (*Foeniculum vulgare*), Klamathweed (*Hypericum perforatum*), and medusahead (*Taeniatherum caput-medusae*), and are commonly found along roads and trails. Native species such as fiddleneck (*Amsinckia* spp.), miniature lupine (*Lupinus bicolor*), and California buttercup (*Ranunculus californicus*) exist more sporadically.

Shrub and Chaparral

Shrubland covers small patches in the SDC property and is positioned mostly within or near open grasslands. Coyote brush is the predominant shrub community and non-native Himalayan blackberry bramble is prevalent in some areas. Manzanita also exist sporadically within other vegetation communities but does not occur in high density patches.

Coyote Brush Scrub

Coyote brush scrub is known from the outer Coast Ranges and Sierra Nevada Foothills from Del Norte County south to San Diego County. This vegetation community is typically located on river mouths, riparian areas, terraces, stabilized dunes, coastal bluffs, open hillsides, and ridgelines on all aspects underlain by variable substrate of sand to clay (Sawyer et al. 2009). These scrubs are located primarily on mid- to high-slopes on north-facing aspects, predominantly underlain by rocky loam substrate.

Several small patches of coyote brush scrub exist within the SDC. This land cover is mainly found within grasslands and mixed oak woodlands, however coyote brush plants occur throughout the property integrated into many other vegetation communities. The herbaceous layer of coyote brush scrub habitat is typically dominated by non-native herbs such as soft chess (*Bromus hordeaceus*), dog-tail grass (*Cynosurus echinatus*), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), milk thistle (*Silybum marianum*), and hedge parsley (*Torilis arvensis*).

Riparian Forest

The County of Sonoma LCP defines riparian habitat as “tree and shrub vegetation of freshwater courses [consisting of a] line or belt of vegetation following the course of a river or stream on the immediate banks and appearing visually and structurally separate from the surrounding landscape.”

The riparian forest that follows Sonoma Creek through the SDC covers approximately 25 acres with an average width of 150-300 feet from the creek; widest in the north. The predominant tree is white alder (*Alnus rhombifolia*), with bay, redwoods, oaks, bigleaf maple (*Acer macrophyllum*), and willows (*Salix* spp.) also integrated in sections along the banks. Drought conditions may have caused recent observations of some alder dieback within the riparian corridor. The understory generally consists of dense shrubs, vines, and herbs, with giant reed (*Arundo donax*), Himalayan blackberry (*Rubus armeniacus*), and vinca (*Vinca* spp.) dominating the upslope banks in places. However, native sedges and rushes are common along the channels edge.

Wetlands and Vernal Pools

Wetlands are features on the landscape that are inundated with water for at least a portion of the year, are underlain by characteristic soil types and support vegetation that is either facultative or obligated to occur in soils that form under saturated conditions. Wetlands provide important functions with respect to ecosystem services and habitat function for a variety of plants and animals, including special-status species. Vernal pools are types of wetlands. For the purposes of this assessment, wetland types are lumped into the overarching wetland category. Further field work would be needed to provide a fine scale classification of wetlands on the site. However, because all wetlands are sensitive and because all of them are subject to regulation, the general classification is sufficient here.

Wetlands occupy approximately 30 acres on the SDC property, occurring in several locations. The biggest swath of wetland, which accounts for most of the 30 acres, is found in depressional areas in the eastern grasslands. Wetland lands are also found as narrow bands around both Fern Lake and Suttonfield Lake, and as a few other scattered seeps and swales. This community contains little overstory and mostly features hydrophytic herbaceous species. The herbaceous layer around the lakeshores includes native species like tule (*Schoenoplectus acutus*) and cattail (*Typha* spp.), with species such as mosquito fern (*Azolla* spp.) and waterweed (*Elodea* spp.) existing in the seasonally flooded areas. Non-natives and invasives include hydrilla (*Hydrilla verticillata*), milfoil (*Myriophyllum* spp.), and patches of poison hemlock (*Conium maculatum*) and teasel (*Dipsacus* sp.).

The large eastern wetland is dominated by non-native moisture adapted species like perennial grasses, forbs, and shrubs like Himalayan blackberry. Native rushes and sedges can be found in the wetter areas, generally near the center of the wetland. This wetland is lightly grazed by horses, and also features several mature willows and some young valley oaks. Other small patches of seep and swale wetlands on the property are typically beneath forest canopy and support herbaceous species such as mugwort (*Artemisia*

vulgaris), horsetail (*Equisetum* spp.), spice bush (*Lindera benzoin*), knotweed (*Polygonaceae* spp.), and ferns.

Existing Buildings

Developed areas and adjacent ruderal and landscaped vegetation is extensive throughout California, particularly in developed and disturbed areas; however, these communities are not described in Holland (1986) or Sawyer et al. (2009).

A large section of urban development, between the towns of Eldridge and Glen Ellen, exists within the central SDC property. Paved roads, buildings, sidewalks, open fields, agricultural land, and trails are scattered throughout the property, but are the densest within this urban area. Mature trees and vegetation line the streets, providing shade. These planted species include magnolias (*Magnolia* spp.), sycamores (*Platanus occidentalis*), and palms. Some remnant valley oaks can be found towards the southwest, and remnant orchard patches of walnut and apricot are present around the developed area. Irrigated lawns benefit the landscaped trees and vegetation, and dead or stressed trees have been observed within this area due to drought. Lawns are structurally the most uniform vegetative units of the California urban habitat, and can be found in the cemetery, baseball field, and soccer field. A variety of grass species are employed, which are maintained at a uniform height and continuous ground cover. Numerous wildlife crossings, both under and overcrossings, have been established to enable wildlife to cross the existing roads and water ways (Sonoma, Hill, and Ashbury creeks) within the SDC.

Streams/ Water Bodies

Three perennial streams are present within and bordering the SDC property: Sonoma Creek, Ashbury Creek, and Hill Creek. These streams are characterized by year-round surface water and rocky to silty substrates that regularly mobilize due to seasonal discharge events associated with rainfall. Butler Canyon Creek is a smaller stream. Other small, ephemeral drainages and springs that directly contribute to the three perennial streams are present.

Two reservoirs are present on the SDC property. Fern Lake and Suttonfield Lake provide drinking water to the existing developed areas. Smaller, unnamed ponds are also present.

Special-status Species

Special-status species are those plants and animals that, because of their acknowledged rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, State, or other agencies as deserving special consideration. The California Natural Diversity Database (CNDDDB; CDFW 2022), an inventory of the status and locations of rare plants and animals in California maintained by CDFW, was used to identify special-status species with the potential to occur in the SDC area based on previously reported occurrences of special-status species in the region. For wildlife, all species that have been documented to occur in Sonoma County were considered. For plants, the area within the SDC parcel boundary and surrounding nine USGS quads were evaluated. Special-status species that have been documented to occur in the SDC in the CNDDDB and other sources (including PCI 2015) are shown in **Table 3.4-1**. Lack of information in the CNDDDB and other reports about a species or an area does not imply that the species does not occur or that there is a lack of diversity in that area. This lack of information may reflect a lack of Project or reporting more than absence of special-status species. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped.

Table 3.4-1: Special-Status Wildlife Observed at SDC

<i>Scientific Name</i>	<i>Common Name</i>	<i>Status</i>
<i>Syncaris pacifica</i>	California freshwater shrimp	FESA and CESA Endangered
<i>Oncorhynchus mykiss</i>	Steelhead	FESA Threatened
<i>Dicamptodon ensatus</i>	California giant salamander	CDFW Species of Special Concern
<i>Rana boylei</i>	Foothill yellow-legged frog	CDFW Species of Special Concern

Special-Status Animal Species with Potential to Occur at SDC

Table 3.4-2 lists special-status animal species with potential to, or are known to, occur within the SDC campus. This includes 28 animal species, including five species listed as

Endangered or Threatened under FESA, and three species listed under CESA as Endangered, Threatened, or Candidate Threatened.

Table 3.4-2: Potential Special-Status Wildlife

<i>Scientific Name</i>	<i>Common Name</i>	<i>Conservation Status</i>	<i>Potential to Occur in the Planning Area</i>
<i>Agelaius tricolor</i>	tricolored blackbird	SMBTAT	Moderate Potential. The Planning Area contains two freshwater reservoirs that could support nesting tricolored blackbird.
<i>Ammodramus savannarum</i>	grasshopper sparrow	SSC	Moderate Potential. Grasslands in the Planning Area are potentially suitable to support this species.
<i>Antrozous pallidus</i>	pallid bat	SSC, WBWG High	High Potential. Trees with exfoliating bark and some structures within the Planning Area may provide areas suitable for roosting. The species has been documented within a mile of the Planning Area (CDFW 2022)
<i>Aquila chrysaetos</i>	golden eagle	BGEPA, SFP	Moderate Potential. The Planning Area contains suitable grasslands for foraging and suitable trees for nesting. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Ardea alba</i>	great egret	no status (breeding sites protected by CDFW)	Moderate Potential. The Planning Area contains some trees near the reservoirs that could support this species.

Table 3.4-2: Potential Special-Status Wildlife

<i>Scientific Name</i>	<i>Common Name</i>	<i>Conservation Status</i>	<i>Potential to Occur in the Planning Area</i>
<i>Ardea herodias</i>	great blue heron	no status (breeding sites protected by CDFW)	Moderate Potential. The Planning Area contains some trees near the reservoirs that could support this species.
<i>Athene cunicularia</i>	burrowing owl	SSC	Moderate Potential. Grasslands in the eastern portion of the site could support this species in the winter. The species does not breed in Sonoma County.
<i>Circus cyaneus</i>	northern harrier	SSC	Moderate Potential. The SDC contains open habitats for nesting and adequate areas for nesting.
<i>Contopus cooperi</i>	olive-sided flycatcher	SSC	Moderate Potential. The Planning Area does contain coniferous forests that could support this species.
<i>Corynorhinus townsendii</i>	Townsend's western big-eared bat	SSC, WBWG High	High Potential. Forests and structures within the Planning Area provide potentially suitable habitat for roosting.
<i>Dendroica petechia brewsteri</i>	(Brewster's) yellow warbler	SSC	Moderate Potential. The Planning Area does contain adequate riparian habitat to provide nesting habitat for this species.
<i>Dicamptodon ensatus</i>	California giant salamander	SSC	Present. This species is known to occupy forested areas near streams on the site, including

Table 3.4-2: Potential Special-Status Wildlife

Scientific Name	Common Name	Conservation Status	Potential to Occur in the Planning Area
			Ashbury Creek along the northern border.
<i>Elanus leucurus</i>	white-tailed kite	SFP	High Potential. The Planning Area contains suitable grassland and forested habitat for nesting and foraging.
<i>Emys marmorata</i>	Pacific (western) pond turtle	SSC	Moderate Potential. The permanent and perennial aquatic features and surrounding areas on the site contain suitable habitat for this species.
<i>Icteria virens</i>	yellow-breasted chat	SSC	Moderate Potential. Some suitable habitat is present in riparian areas.
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC	Moderate Potential. The Planning Area contains open grasslands and patches of sparse woodlands that could support this species.
<i>Lasiurus blossevillii</i>	western red bat	SSC, WBWG High	High Potential. The Planning Area contains some broad-leaved trees that are suitable for roosting.
<i>Myotis thysanodes</i>	fringed myotis	WBWG High	High Potential. Forests and structures within the Planning Area provides potentially suitable habitat for roosting. The nearest documented occurrence is along the northern border of the Planning Area (CDFW 2022).

Table 3.4-2: Potential Special-Status Wildlife

<i>Scientific Name</i>	<i>Common Name</i>	<i>Conservation Status</i>	<i>Potential to Occur in the Planning Area</i>
<i>Myotis volans</i>	Long-legged myotis	WBWG High	Moderate Potential. Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices and buildings are important day roosts.
<i>Nycticorax</i>	black-crowned night heron	no status (breeding sites protected by CDFW)	Moderate Potential. The Planning Area contains some trees near reservoirs that could support this species.
<i>Oncorhynchus mykiss irideus</i>	steelhead - central CA coast DPS	FT	Present. This species is known to occur within the reach of Sonoma Creek that runs through the Planning Area. Sonoma Creek, and streams in the SDC are designated Critical Habitat for the species.
<i>Oncorhynchus tshawytscha</i>	Chinook salmon - California coastal ESU	FT, RP	Moderate Potential. This species has been reported to be present within the Sonoma Creek watershed, Sonoma Creek, and connecting tributaries within and around the Planning Area, provide suitable habitat.
<i>Rana boylei</i>	foothill yellow-legged frog (northwest/north coast clade)	SSC	Present. The species has been documented in Asbury Creek and is assumed to be present in the other rocky streams on the site.

Table 3.4-2: Potential Special-Status Wildlife

Scientific Name	Common Name	Conservation Status	Potential to Occur in the Planning Area
<i>Rana draytonii</i>	California red-legged frog	FT, SSC	Moderate Potential. The nearest documented occurrence of this species is located about 2 miles from the site. Several aquatic features on-site have the physical and biological characteristics that could support CRLF. Despite the presence of bullfrogs and predatory fish in at least some of these features, the presence of CRLF cannot be ruled out without further, site specific analysis that employs CDFW protocol level surveys.
<i>Strix occidentalis caurina</i>	Northern spotted owl	FT, ST, SSC	High Potential. The Planning Area contains forest with suitable complexity necessary to provide nesting habitat for this species. Known occurrences are present in the adjacent Jack London State Park, with contiguous forest into the SDC.
<i>Syncaris pacifica</i>	California freshwater shrimp	FE, SE	Present. This species is known to occur within Sonoma Creek on the SDC property. Other streams and creeks in the Planning Area also contain suitable habitat for the species.
<i>Taricha rivularis</i>	red-bellied newt	SSC	Moderate Potential. There are nearby occurrences for this species and habitat in and around

Table 3.4-2: Potential Special-Status Wildlife

Scientific Name	Common Name	Conservation Status	Potential to Occur in the Planning Area
			the streams is suitable to support it.
<i>Taxidea taxus</i>	American badger	SSC	Moderate Potential. The Planning Area contains some areas that support fossorial mammals. The species has not been detected within the SDC, but grassland habitat is suitable for burrowing.
<p>*Key to status codes:FC Federal Candidate for Listing</p> <p>FE Federal Endangered</p> <p>BGEPA Bald and Golden Eagle Protection Act Species</p> <p>FT Federal Threatened</p> <p>SC (E/T) State Candidate for Listing (Endangered/Threatened)</p> <p>SE State Endangered</p> <p>SFP State Fully Protected Animal</p> <p>SR State Rare</p> <p>SSC State Species of Special Concern</p> <p>ST State Threatened</p> <p>Rank 1A CNPS Rank 1A: Plants presumed extinct in California</p> <p>Rank 1B CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere</p> <p>Rank 2A CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere</p> <p>Rank 2B CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere</p> <p>Rank 3 CNPS Rank 3: Plants about which CNPS needs more information (a review list)</p> <p>Rank 4 CNPS Rank 4: Plants of limited distribution (a watch list)</p> <p>WBWG Western Bat Working Group High or Medium-high Priority Species</p> <p>Potential to Occur:</p> <p><u>Moderate Potential:</u> Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.</p> <p><u>High Potential:</u> All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.</p>			

Special-Status Plant Species

Table 3.4-3 lists special-status plant species with potential to, or are known to, occur within the SDC campus. This includes 26 plant species, including six species listed as Endangered or Threatened under the FESA, and three species listed under the CESA as Endangered, Threatened, or Candidate Threatened.

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	FE, Rank 1B	Moderate Potential. The Planning Area contains freshwater streams, riparian, and pond/reservoir habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Amsinckia lunaris</i>	Bent-flowered fiddleneck	Rank 1B	Moderate Potential. The Planning Area contains valley and foothill grassland and cismontane woodland habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	Rank 1B	Moderate Potential. The Planning Area contains seasonal wetlands that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Blennosperma bakeri</i>	Sonoma sunshine	FE, SE, Rank 1B	Moderate Potential. The Planning Area contains seasonal wetlands that may support this species.

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
Sonoma sunshine			Furthermore two occurrences of this species exist within one mile of the Planning Area.
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	Rank 4.2	Moderate Potential. The Planning Area contains valley and foothill grassland and seasonal wetland habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Downingia pusilla</i>	dwarf downingia	Rank 2B	Moderate Potential. The Planning Area contains valley and foothill grassland, seasonal wetlands, and pond/reservoir margin habitats that may support this species. Furthermore three occurrences of this species exist within five miles of the Planning Area.
<i>Eleocharis parvula</i>	small spikerush	Rank 4	Moderate Potential. The Planning Area contains freshwater habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Fritillaria liliacea</i>	fragrant fritillary	Rank 1B	Moderate Potential. The Planning Area contains valley and foothill grassland and cismontane woodland habitats with open grassy sites that may support this species. Furthermore two occurrences of this

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
			species exist within five miles of the Planning Area.
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	hayfield tarplant	Rank 1B	High Potential. The Planning Area contains grassland habitat that may support this species. This species is tolerant of grazing and other similar disturbances.
<i>Hosackia gracilis</i>	harlequin lotus	Rank 4	Moderate Potential. The Planning Area contains cismontane woodland, meadows and seeps, valley and foothill grassland, seasonal wetland, and riparian habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Lasthenia burkei</i>	Burke's goldfields	FE; SE; Rank 1B	Moderate Potential. They Planning Area contains seasonal wetland, meadow, and seep habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE; Rank 1B	Moderate Potential. The Planning Area contains seasonal wetland habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
<i>Legenere limosa</i>	legenere	Rank 1B	Moderate Potential. The Planning Area contains seasonal wetland habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Lilium rubescens</i>	redwood lily	Rank 4	Moderate Potential. The Planning Area contains woodland and coniferous forest habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	FE; SE; Rank 1B	Moderate Potential. The Planning Area contains seasonal wetland habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Monardella viridis</i>	green monardella	Rank 4	Moderate Potential. The Planning Area contains broadleaf upland forest and cismontane woodland habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Navarretia cotulifolia</i>	cotula navarretia	Rank 4	Moderate Potential. The Planning Area contains cismontane woodland, and foothill grassland that may support this species. The

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
			species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	Rank 1B	Moderate Potential. The Planning Area contains mesic cismontane woodland and meadow, seep, seasonal wetland, and mesic valley and foothill grassland habitats that may support this species. Furthermore two occurrences of this species exist within five miles of the Planning Area.
<i>Pleuropogon hooverianus</i>	North coast semaphore grass	ST; Rank 1B	Moderate Potential. The Planning Area contains seasonal wetland, stream, and riparian habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Pleuropogon refractus</i>	nodding semaphore grass	Rank 4	Moderate Potential. The Planning Area contains seasonal wetland, stream, and riparian habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Ranunculus lobbii</i>	Lobb's buttercup	Rank 4	Moderate Potential. The Planning Area contains seasonal wetland habitat and man-made reservoirs/ponds that may support

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
			this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Trifolium amoenum</i> showy rancheria clover	showy rancheria clover	FE; Rank 1B	Moderate Potential. The Planning Area contains valley and foothill grassland, swales, and seasonal wetland habitats may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Trifolium hydrophilum</i>	saline clover	Rank 1B	Moderate Potential. The Planning Area contains seasonal wetland, riparian, and valley and foothill grassland habitat that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Triteleia lugens</i> dark-mouthed triteleia	dark-mouthed triteleia	Rank 4, LR	Moderate Potential. The Planning Area contains lower montane coniferous forest and broadleaf upland forest habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<i>Viburnum ellipticum</i>	oval-leaved viburnum	Rank 2B	Moderate Potential. The Planning Area contains cismontane woodland, lower montane coniferous

Table 3.4-3: Potential Special-Status Plants

Scientific Name	Common Name	Conservation Status	Potential Habitat in the Planning Area
			forest habitats that may support this species. The species has not been documented in or immediately near the Planning Area (CDFW 2022).
<p>*Key to status codes:</p> <p>FE Federal Endangered SE State Endangered ST State Threatened LR Local Rare</p> <p>Rank 1A = Presumed extirpated in California and either rare or extinct elsewhere; Rank 1B = Rare or Endangered in California and elsewhere; Rank 2A = Presumed extirpated in California, but more common elsewhere; Rank 2B = Rare or Endangered in California, but more common elsewhere; Rank 3 = Plants for which we need more information – Review list; 4 = Plants of limited distribution – Watch list.</p> <p>The California Rare Plant Ranks (CRPR) use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. .1 = Seriously threatened in California (over 80% of occurrences threatened); .2 = Moderately threatened in California (20-80% of occurrences threatened); .3 = Not very threatened in California (<20% of occurrences threatened).</p> <p>Potential to Occur: <u>Moderate Potential:</u> Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site. <u>High Potential:</u> All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.</p>			

Sensitive Habitats

Critical Habitat

Critical habitat is defined by the Endangered Species Act as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Sonoma Creek, flowing north/south through the property, as well as Ashbury Creek along the northern border and Mill Creek along the southern border, are designated critical habitat of the Central CA

coast steelhead. There are currently no other designated critical habitats within the Planning Area.

Wetlands and Other Waters

Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils (EPA). Wetlands provide a multitude of ecological, economic, and social benefits. They provide habitat for fish, wildlife, and plants, allow for groundwater recharge, reduce flooding, and support cultural and recreational activities. Technical standards for delineating wetlands have been developed by the USACE and the USFWS. Based on existing mapping from USFWS and the San Francisco Estuary Institute (SFEI), there are seasonal wetlands mapped along Sonoma Creek as well as to the east within the SDC property; however, formal wetland delineations have not been performed for the SDC and it is anticipated that additional wetlands will be mapped during future site assessments.

Wildlife Corridors

The northern portion of the SDC property is identified as a regionally important wildlife corridor. This corridor is approximately $\frac{3}{4}$ of a mile wide and its southern edge slightly infringes into the northern portion of the Core Campus on the site. In total, the SDC property extends across about the southern half of the width of the corridor, which is generally oriented in an east-west direction, linking large habitat blocks to the west, with large habitat blocks to the east. In addition to this regionally significant corridor, the riparian corridors along the streams that run through the SDC, in particular Sonoma Creek, serve as wildlife corridors for several species that use streams to transit from one habitat to another (e.g. steelhead).

3.4.3 Impact Analysis

3.4.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Criterion 2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- Criterion 3:** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Criterion 4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Criterion 5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Criterion 6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.3.2 Methodology and Assumptions

The Proposed Plan's Land Use Diagram was compared against existing biological conditions shown in **Figure 3.4-1** to determine potential impacts on biological resources that could result from implementation of the Proposed Plan. About 18% of the SDC planning area is comprised of highly developed areas (i.e., the core campus) with the remaining areas comprised of a variety of natural vegetation. The Specific Plan's land use designations would not directly, adversely affect areas of natural vegetation. Nor would the proposed Highway 12 connector, and upgraded wastewater treatment plant adversely affect areas of natural vegetation, with implementation of Conditions of Approval BIO 1 through 14, which are described below. No new field studies were conducted for the

preparation of this EIR, because existing resources contained information on pertinent aspects of biological resources in the Planning Area at level of detail appropriate for a program level environmental assessment. Future project specific detailed biological surveys will be necessary to confirm presence or absence of sensitive resources on future development sites. Cumulative impacts related to biological resources are discussed in Chapter 5: CEQA Required Conclusions.

3.4.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address biological resources:

Open Space and Resources and Hazards

Goals

- 2-D Biological Resources: Promote conservation of existing habitat, including creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.
- 2-E Wildlife Corridor: Maintain and enhance the size and permeability of the Sonoma Valley Wildlife Corridor (as shown in Figure 1.6-3) by ensuring a compact development footprint at the SDC site and by minimizing impacts to wildlife movement and safety from human activity and development at the campus.

Policies

- 2-6 Remove existing development and re-introduce compatible native species in the northeast corner of the core campus to expand the wildlife corridor.
- 2-7 Prohibit lights within the wildlife corridor and along the creek corridor.
- 2-8 Maintain wildlife crossing structures by periodically checking for and clearing debris, vegetation overgrowth, and other blockages from culvert and bridge crossing structures; within the Core Campus, the Project Sponsor should develop and execute a maintenance

program in collaboration with the owner and operator of the pre-served parkland and open space.

- 2-9 Within the wildlife corridor, meet but do not exceed the defensible space requirements of the County Fire Department to maintain wildlife habitat while maximizing fire safety.
- 2-10 Within the wildlife corridor, limit mowing and the removal of dead plant material to the absolute minimum required for fire safety. If possible, mowing should be conducted outside the nesting bird season, or nesting bird surveys should be constructed within 14 days of mowing.
- 2-11 Implement “dark skies” standards for all public realm lighting and all new buildings on the site, including by requiring that all outdoor fixtures are fully shielded, that outdoor lights have a color temperature of no more than 3,000 Kelvins, and that lighting for outdoor recreational facilities be prohibited after 11pm.
- 2-12 Restrict development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, and design trail networks to minimize travel through wildlife and creek corridors.
- 2-13 Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing.
- 2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.
- 2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things.
- 2-16 All fencing within the open space must be wildlife permeable, with at least 18 inches of clearance between the ground and the bottom

of the fence, and shall not cross or bisect streams or otherwise discourage wildlife movement. For any barbed wire fences, a smooth bottom wire at least 18 inches above the ground must be used.

- 2-17 Adhere to residential nighttime noise standards to the extent feasible.
- 2-18 Collaborate with local groups to remove invasive species and re-establish native species throughout the site, particularly along the riparian corridors.
- 2-19 Select a planting palette of native and/or low-water plant species that are climate appropriate, drought-resistant, support local insects and animals, and that require minimal irrigation and maintenance.
- 2-20 Require that new development preserve existing trees to the fullest extent feasible. Locate new construction and public realm improvements around existing landscaping features.
- 2-21 Preserve and enhance the wetlands east of the core campus as a fire break, groundwater recharge, and habitat area.
- 2-22 Leave standing or downed dead trees in place for wildlife habitat whenever they do not present a hazard for fire safety or recreational users, except within the managed landscape buffer.
- 2-23 Ensure that development does not contribute to or result in net loss of wetland area or wetland functional and habitat value.
- 2-24 Incorporate bird-friendly-building design features, including by minimizing use of reflective glass.
- 2-25 Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage

protective buffers so that they support continuous stands of healthy native plant communities.

- 2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.
- 2-27 Ensure that all development adheres to Sonoma County Municipal Code Sec 26-65 on riparian corridor protection.
- 2-28 Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level.
- 2-29 Ensure that all appropriate protective measures for any construction or ground-disturbing work are taken as described in Appendix A to limit impacts on sensitive species.
- 2-30 Maintain standard project procedures for any development adjacent to riparian corridors as outlined in Appendix A.

3.4.3.4 Impacts

Summary of Proposed Plan

The Proposed Plan would include residential development in the following districts: Marker Place, Core North Residential, Historic Core, Fire House Commons, Core South Residential, Creek West Residential, Agrihood, and Eldridge North. Approximately 1,000 housing units are planned to be developed throughout these districts as well as commercial, institutional, and public land uses and an Highway 12 connector road. The existing undeveloped portions of the Planning Area would be designated as Preserved

Open Space land use. Development is not proposed to occur within Preserved Open Space, where current daytime recreational uses would continue.

Impact 3.4-1 Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (*Less than Significant*)

A range of special-status species have been observed in and/or around the Planning Area as described above in the Physical Setting and listed in **Tables 3.4-2 and Table 3.4-3**. Existing habitat within the Planning Area includes forests, streams, reservoirs, grasslands, wetlands and other natural biological communities. However, the proposed area of development is already developed under existing conditions. Future development under the Proposed Plan could have a significant direct or indirect impact on special-status species or habitats if it would result in the removal or degradation of the species or potentially suitable habitat.

Construction

Development under the Proposed Plan is anticipated to take place primarily within the developed footprint of the Planning Area, limiting the potential for adverse impacts on special-status species and sensitive natural communities. Adverse impacts to special-status species could occur during implementation of the Proposed Plan. Potentially significant impacts could occur if future development were to degrade or remove significant amounts of suitable habitat for special-status species. This could occur as a result of grading, excavation, and construction activities. Sensitive habitats could also be adversely impacted through increased sediment run-off during construction activities. Two specific projects could have the potential to impact special status species and sensitive natural communities. The proposed Highway 12 connector project would follow Sonoma Creek in a southerly direction, and then proceed east adjacent the open space area outside the SDC core area. With implementation of Station Conditions of Approval BIO-1 through BIO-13, potential impacts would be less than significant.

Operation

In terms of potential operations and maintenance related impacts, some increased risk to special-status species may result from increased vehicular traffic, increased recreational use, and domestic pets. Direct impacts to streams and surrounding habitat could result in

the loss of suitable habitat or harm of these species if they are present. Species documented on the site or with potential to be present that would be potentially impacted by the Proposed Plan include steelhead, chinook salmon, western pond turtle, foothill yellow-legged frog, California giant salamander, red-bellied newt, California freshwater shrimp, and California red-legged frog and some special status plants. Other aquatic features on the site may support several of these species. Significant reduction in forest extent and quality could reduce the capacity for the site to support common and special-status species such as northern spotted owl and several bats. The open grasslands on the site may support American badger and burrowing owl. Direct mortality, substantial loss of habitat, or loss of breeding habitat may be considered potentially significant impacts.

Outside of the developed areas, the Proposed Plan establishes dedicated open space areas. Managed open space in these areas would preserve and, in some cases, enhance the quality of sensitive habitats such as wetlands, native grasslands and oak woodlands. Several special-status wildlife and some plant species would be positively impacted by the preservation of these habitats. The open space would preserve the Sonoma Valley Wildlife Corridor and maintain its permeability for the movement of wildlife at a regional scale.

Policies in the Proposed Plan would serve to reduce potential impacts. Policies 2-6 through 2-26 address development-related impacts on non-status and special-status species and their habitats. These policies reduce the potential for significant impacts, especially from operational impacts after the completion of the construction of individual projects. They also restrict most development near and in the most sensitive habitat types and habitat types that support special-status plant species, including all of those referenced in **Table 3.4-3**. Additionally, policies 2-25 (protective buffer of Sonoma Creek), 2-27 (County's Municipal Code for riparian corridor protection), and 2-30 (maintain standard project protection measures for any development adjacent to riparian corridors) would ensure protection of streams and riparian resources during any adjacent ground disturbing actions.

With implementation of these policies and implementation of the following Conditions of Approval Measures required by the County, the impact of future development under the Proposed Plan on species identified as candidate, sensitive, or special-status species would be less than significant.

Standard Conditions of Approval Policies

Policies

BIO-1 Perform specific Project biological resource assessments. Prior to the commencement of the approval of any specific project in the Proposed Plan area, Project Sponsors shall contract a qualified biologist to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensure implementation of appropriate mitigation measures to reduce impacts to sensitive habitat or habitat function to a less than significant level. These measures shall meet or exceed those described for special-status taxa in the following measures of this section. In addition, the following best management practices (BMPs) shall be implemented for all projects:

1. An environmental awareness training program shall be provided to personnel working on the project. The training shall include materials that describe the sensitive habitats and species present and the measures that have been incorporated into the project to protect those habitats and species. The training materials shall be prepared by a qualified biologist who will train a member of the contractor's crew to provide follow-up trainings to newly hired employees during the construction period. These materials may be updated as new information is available.
2. All work areas, including parking and staging areas, shall be the minimum size necessary to implement the project and will be clearly delimited prior to implementation of any work.
3. All trash and debris shall be confined in enclosed bins located within staging areas.
4. No pets will be allowed within the construction area.
5. Any soil or other material stockpiled during construction that could be easily transported by wind or rain shall be covered when not actively in use.
6. No materials shall be placed where they may enter sensitive habitat, receiving waters, or a storm drain, or be subject to wind or runoff erosion and dispersion.

7. Appropriate washout, trackout, and dust control BMPs shall be implemented during construction.
8. All vehicles and equipment scheduled for use in construction on the site shall be clean and free of mud or vegetation that could introduce plant pathogens or propagules of non-native plants. This includes equipment hauled into the site. The importance of this measure shall be discussed in the environmental awareness training materials.
9. No construction vehicles or machinery shall be allowed outside of the delimited parking, staging, and work areas.
10. All vehicles and equipment used on-site shall be well maintained and checked upon site entry for fuel, oil, and hydraulic fluid leaks or other problems that could result in spills of toxic materials. Drip pans will be used under all vehicles and equipment when not in active use.
11. All vehicle fueling and maintenance activities will occur at least 100 feet away from any wetland, stream, or other water body unless in a designated area with appropriate berms to prevent spills from traveling beyond the upland work area.
12. A Stormwater Pollution Prevention Plan (SWPPP) shall be developed for the project and all measures included in the SWPPP shall be implemented during all phases of construction, as appropriate.
13. Temporary erosion control materials shall be inspected on a regular basis during construction consistent with the SWPPP, and any required repairs shall be implemented immediately.
14. For any work within aquatic features or required setback around such features, the contractor shall be prepared to handle any localized hazardous waste spills (e.g. gas, oil, or pesticides). Spill control and clean-up materials (e.g., oil absorbent pads, fiber rolls) shall be kept on-site at all times in case a spill occurs. Any waste materials including, but not limited to, raw cement/concrete or washings thereof, asphalt, paint, construction waste, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, should be prevented from contaminating the soil and/or entering any waterway or sanitary sewer system.

15. All erosion control materials should use certified weed-free straw or other biodegradable, weed-free materials. No materials containing monofilament netting shall be used.

BIO-2 Avoid impacts to special-status bats and all bat maternity and hibernation roosts. A qualified biologist shall perform pre-construction survey(s) for bat roosts. Surveys shall be conducted by concentrating on large trees (DBH >12 inches), man-made buildings and cliffs/rocky outcroppings within 100 feet of any planned work areas. Surveys shall occur no more than 14 days prior to the start of work. The biologist will evaluate whether potential roost habitat occurs and to determine the type (i.e., maternity or non-maternity) and status (i.e., active or inactive) of the roost. No active maternity roost or hibernation roost will be removed. For other roosts:

1. If large trees (DBH >12 inches) identified as potential bat roosts that are not active maternity or hibernation roosts are to be removed, they shall be flagged by the surveying biologist. On the first day of removal of flagged trees, limbs shall be removed in the late afternoon from flagged trees. This disturbance shall cause any roosting bats to locate an alternative roost during their nighttime foraging. As potentially roosting bats will have left over the course of the night, the rest of the tree can be cut down on the second day. On the second day, the trees shall be felled as late in the afternoon as is practicable.

BIO-3 Avoid impacts to American badger.

1. No more than 14 days before the start of ground disturbance activities within open grassland and adjacent oak woodland, a biologist shall conduct pre-construction surveys to determine if American badger are present.
2. If American badger dens are determined to be present, the biologist shall monitor them for activity to determine whether the den is active. If the den is determined to be occupied by a female with young, ground disturbance and construction activity shall be avoided within 50 feet of the den until the young have matured and dispersed. If the den is determined to be active, but a female with young are not present, burrow exclusion using passive measures such as one-way doors or equivalent shall be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens shall be excavated by hand to prevent them from being re-occupied during construction.

BIO-4 Avoid impacts to nesting raptors including white-tailed kite and golden eagle.

1. Prior to starting construction activities during the nesting season, generally defined as February 1 through August 31, targeted surveys for active raptor nests shall be conducted. An active nest contains eggs or young.
2. If a non-listed raptor nest containing eggs or young is determined to be present within the work area, then a protective buffer shall be implemented and no project work shall occur within the buffered area until the chicks have fledged and no longer require parental support for survival, or the nest has been determined to be inactive. Buffer size shall be determined by the biologist based on species, nest location, planned disturbance footprint, and presence of any visual or auditory buffers.
3. If a special-status raptor nest is determined to be present within the work area, or within 0.5 mile of the work area, consultation with the CDFW and/or USFWS shall occur and any measures recommended or required by those agencies shall be implemented.

BIO-5 Avoid impacts to burrowing owl. Burrowing owl is listed as a species of special concern by the CDFW. While the species was not observed during the assessment, potentially suitable habitat is present, and suitable burrows may exist in the future. The following measures shall be implemented to avoid impacts to burrowing owls:

1. A pre-construction survey shall be performed prior to start of ground disturbance activities where ground squirrel burrow complexes or other refugia are present. This survey shall occur regardless of the time of year, as burrowing owls may use the Planning Area during the non-nesting season. The survey shall be performed according to the standards set forth by the Staff Report for Burrowing Owl Mitigation (CDFW 2012), unless more current guidance has been released.
2. Passive exclusion techniques, such as one-way doors, can be used to exclude burrowing owl from occupied burrows outside the nesting season or if a burrow is determined not to support an active nest. An active nest includes those with eggs or young. Once exclusion is completed, the burrows shall be collapsed to avoid attracting owl back to the planned or active work area.

3. If burrowing owls are excluded from wintering habitat (anytime between September 1 and February 1) and wintering habitat is converted, it shall be mitigated for at a ratio of no less than 1:1.
- BIO-6 Avoid impacts to northern spotted owl. Northern spotted owl has potential to nest in forests and forage in adjacent areas on the SDC. Prior to construction activities that are scheduled during the breeding season of northern spotted owls (typically March 15-July 31) within riparian, evergreen and/or oak forests, or within 0.5 miles of these forests, the specific Project Sponsor shall contract a qualified biologist to identify northern spotted owl activity centers and/or nests within a project area and within 0.5 miles of it in areas that could support northern spotted owl nesting. Surveys will occur between March 15 and the end of May. The survey methodology will be the most applicable, current, approved method from the USFWS. Any active northern spotted owl nest sites shall be avoided by a distance determined by a qualified biologist to be sufficient to avoid nest failure, but shall not be less than 0.25 miles. The no-work buffer shall remain in place until the end of the nesting season or until a qualified biologist determines that the nest is no longer active. If active nests are detected and work will occur before nests become inactive, the specific project will engage with the USFWS and CDFW to ensure that project activities would not result in take of northern spotted owls, or if take could occur, the specific project will acquire all needed permits prior to commencement of work.
- BIO-7 Avoid impacts to tricolored blackbird. Tricolored blackbird has potential to nest in the vegetation surrounding Fern Lake and Suttonfield Lake. Some portions of Sonoma Creek may also support the species. For work that will occur within 500 feet of these features during the nesting season (February 1- September 1), a qualified biologist shall conduct a nesting survey within 7 days of commencement of construction. If active nests are detected they shall be avoided by at least 250 feet. The 250-foot no-work area may be reduced by a qualified biologist after observation of active nests and consideration of the work to be performed. In no case shall the no-work buffer be reduced to less than 100 feet.
- BIO-8 Avoid impacts to other special-status and non-status nesting birds. In addition to the aforementioned species, several other special-status and non-status birds may nest on the SDC site. Most native bird species are protected under the MBTA as well as the CFCG may use the Planning Area for nesting. The following measures are required to avoid impacts to nesting birds:

1. If vegetation removal, demolition of buildings or work on bridges, or initial ground disturbance activity occur during the nesting season, defined as February 1 through August 31, then a pre-construction nesting bird survey within the work area shall be completed by a biologist no more than 7 days (or the time interval set by Department permits issued for the project) prior to the start of work.
2. If active nests (nests with eggs and/or chicks) are observed during the pre-construction survey, project activities shall avoid the area as determined by the biologist and resume the protective buffer only after the young have fledged the nest or the nest otherwise becomes inactive. Buffer size shall be determined by the biologist based on species, nest location, planned disturbance footprint, and presence of any visual or auditory buffers.

BIO-9 Avoid impacts to western pond turtle. Western pond turtle has potential to occur in or near aquatic features in the Planning Area. Direct impacts to aquatic features could result in the loss of suitable habitat or harm of pond turtles if they are present. While project-specific permits may require additional measures, the following measures shall be implemented to avoid impacts to western pond turtle:

1. To the extent possible, initial ground disturbance, vegetation clearing, and associated project activities within 300 feet of ponds, reservoirs, or wetted streams which may support western pond turtle shall occur between July 1 and October 31 to avoid the peak nesting season and winter inactivity periods for western pond turtle.
2. No more than two days prior to the start of work within 300 feet of ponds, reservoirs, or wetted streams with the potential to support western pond turtle, a pre-construction survey for western pond turtle shall be completed. If the species is observed, the biologist shall provide measures to avoid direct impacts based on the planned work. Such measures may include a protective no-work buffer, exclusion fencing, monitoring, or coordination with CDFW if relocation is required.

BIO-10 Avoid impacts to foothill yellow-legged frog (FYLF), red-bellied newt and California giant salamander. These special-status amphibians are all CDFW species of special concern and have potential to occur in or near the streams in the Proposed Plan Area. FYLF and California giant Salamander have been

detected on-site. While project-specific permits may require additional measures, the following measures shall be implemented to avoid impacts to FYLF, California giant salamander and red-bellied newt:

1. To the extent possible, initial ground disturbance, vegetation clearing, and associated project activities within 300 feet of wetted streams shall occur between March 1 and October 31 to avoid the rainy season, when amphibians are more likely to traverse the landscape.
2. For work below top of bank or within 100 feet of the top of bank of any stream, a qualified biologist shall be present to monitor work and ensure that FYLF, California giant salamander and red-bellied newts are not adversely impacted. Work each day shall not begin until the area to be disturbed has been surveyed and cleared by the qualified biologist.

BIO-11 Avoid impacts to California red-legged frog (CRLF). California red-legged frog has potential to occur in or near the streams, reservoirs and other aquatic features in the Proposed Plan Area. While project-specific permits may require additional measures, the following measures shall be implemented to avoid impacts to CRLF:

1. To the extent possible, initial ground disturbance, vegetation clearing, and associated project activities within 300 feet of aquatic features shall occur between June 1 and October 31 to avoid the rainy season, when CRLF are more likely to traverse the landscape.
2. For work that occurs within 300 feet of an aquatic feature, anytime, a qualified biologist will perform a pre-construction survey at least each morning prior to start of construction, unless otherwise authorized through a project-specific permit or consultation with USFWS. A qualified biologist shall be present during all initial ground disturbing construction activities and initial vegetation removal in non-developed areas within 300 feet of aquatic features during anytime of the year and anywhere these activities occur between October 31 and June 1. If CRLF is detected, work in the area where the CRLF was detected will stop and the CRLF will be avoided by 150 feet unless it can be relocated under a USFWS-issued permit.
3. For each specific project that will work within 300 feet of an aquatic feature anytime of the year or anywhere in the Proposed Plan area between October 31 and June 1, the specific project will be evaluated by a qualified biologist for its potential to result in take of individual CRLF or impact its habitat. If it is

determined that take of CRLF or its habitat could occur as a result of construction activities, consultation with the USFWS will occur and additional measures to protect CRLF will be developed in the permitting process and implemented during the construction phase.

BIO-12 Avoid impacts to California freshwater shrimp and listed salmonids. Federal-listed California freshwater shrimp and listed salmonids (e.g. steelhead) have potential to occur in the streams in the Project Area. While project-specific permits may require additional measures, the following measures shall be implemented to avoid impacts to California freshwater shrimp and listed salmonids:

1. Avoid work below top of bank of streams in the Proposed Plan Area. As long as no work occurs below top of bank, BMPs described in Measure Bio-1 and Proposed Plan Biological Resources / Habitat policies 2-25 and 2-26 would ensure no impacts to California freshwater shrimp and any listed salmonids.
2. If work below top of bank of streams cannot be avoided, an evaluation of the specific work area, project activities and any areas that could be indirectly impacted by the project shall be conducted by a qualified biologist. If it is determined that California freshwater shrimp, listed salmonids or their habitat could be adversely impacted, consultation with the USFWS and National Marine Fisheries Service (NMFS) shall occur and permit conditions shall be implemented. In addition to compliance with Sonoma County Municipal Code Sec 26-65 and permitting requirements, project activities shall implement BMPs described in Measure Bio-1 and Proposed Plan Biological Resources / Habitat policies 2-27, 2-28, and 2-29 to ensure protection of habitat, water quality, and the riparian corridor.

BIO-13 Avoid special-status plants. The following measures are required to avoid, minimize, or mitigate for impacts to special-status plants present on the site or with moderate or high potential to occur in project areas:

1. Pre-construction botanical surveys of non-developed areas shall be conducted prior to ground breaking. Pre-construction surveys shall be completed by a qualified biologist during the appropriate identification period for plants with the potential to occur in the area scheduled for ground breaking. Edge of populations shall be mapped and visibly marked prior to ground disturbance.

Additionally, previously mapped occurrences of any special-status plant shall be visibly marked.

2. To ensure no indirect impacts to populations outside of the project area, individual occurrences of special-status plants shall be avoided by a minimum of 20 feet.
3. For all specific, ground disturbing projects, when avoidance is not feasible or practicable, as determined by the botanical expert, species-specific mitigation shall be developed that minimizes impacts and compensates for any loss of plant occurrences through a combination of enhancement (e.g., weed management and supplemental seeding within existing stands of the species in question), restoration or creation (e.g., establishment of new populations), and preservation (e.g., placement of appropriate protective assurances over existing occurrences).
4. Any mitigation shall follow generally acceptable rare plant mitigation guidelines and shall consider the specific ecology of the species in question, as well as the conservation status and the number of occurrences within the overall property. The mitigation shall also include regularly scheduled monitoring, an adaptive management component, and clear performance standards to ensure success.
5. If any species listed under the federal or California endangered species act are encountered they shall be avoided unless the relevant permits for take of those species are issued.

Mitigation Measures

None required.

Impact 3.4-2 Implementation of the Proposed Plan would not have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service. (*Less than Significant*)

Construction

Future development under the Proposed Plan would take place primarily in previously developed portions of the Planning Area, limiting the potential for disruption to undeveloped habitat areas. Most of the areas that contain sensitive species are located in

the open space area under the Proposed Plan. The Proposed Plan does not propose any new building development in these areas. In addition, Policy 2-25 requires inclusion of protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank, to protect the sensitive communities. Section 7-14.5 of the Sonoma County Code establishes stream setbacks for structures requiring a building permit, with minimum setbacks equal to the greatest of 1) two and one-half times the height of the stream bank plus 30 feet, 2) 30 feet outward from the top of the stream bank, or 3) any distance established in the general plan and/or zoning code. Future development would be subject to these setbacks' requirements. However, there is a chance that riparian habitat and other sensitive natural communities could be impacted throughout the buildout of the individual project due to construction activities, such as grading, evacuation, and removal of vegetation. In addition, stream restoration and bridge maintenance projects are expected within aquatic features, direct impacts would occur. Therefore, implementation of the Proposed Plan may result in the degradation or removal of riparian habitat identified within a given project area. If riparian habitat and other sensitive natural communities are present and disturbance is required, federal and State regulations would require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these regulations are implemented through the permit process as indicated in Conditions of Approval Measure BIO-14 below. In addition, Conditions of Approval Measure BIO-1 requires conducting specific project biological resource assessments prior to commencement of any project.

With implementation of Measure BIO-1 and Conditions of Approval Measure BIO-14, impact of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant.

There are two public infrastructure projects that have potential to affect special status species; upgrading the wastewater treatment plant, and constructing a connector road to Highway 12. For both projects, Conditions of Approval BIO-1 through BIO-14 would be applied. For the proposed highway connector project, implementation of policies 2-25, 2-27, 2-29 and 2-30 would ensure impacts to riparian resources would be less than significant.

Operation

During operation, no new ground-disturbing activities would occur. The trails in the open space area would be used by existing or new residents. Using trails adjacent to riparian areas could result in trampling riparian habitat or sensitive natural communities. Proposed Policy 2-13 would restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage. Proposed Policy 2-14 would prohibit all unleashed outdoor cats and restrict off-leash dogs and other domestic animals to private fenced yards and designated area. With implementation of the applicable policies, the operational impact on riparian habitat and other sensitive activities would be less than significant.

Standard Conditions of Approval Policies

Policies

BIO-14 Avoid, minimize, or mitigate for impacts to aquatic communities. Prior to any impacts to protected aquatic resources, the Project Sponsor shall submit applications for necessary permits from the Army Corps, RWQCB, CDFW, and/or Sonoma County. Any avoidance, minimization, or compensatory mitigation measures required by those permits shall be incorporated into the project design. An aquatic resources mitigation plan (HMMP) shall be submitted as part of the permit applications in accordance with federal and state requirements.

Mitigation Measures

None required.

Impact 3.4-3 Implementation of the Proposed Plan would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (*Less than Significant*)

Construction

As shown in **Figure 3.4-1**, the Planning Area includes a myriad of aquatic features. No formal wetland delineation for the site has been conducted and as such additional wetlands may be detected during the implementation of Conditions of Approval Measure BIO-1. Implementation of the Proposed Plan could have a significant impact on federally protected wetlands if future development under the Proposed Plan includes construction activities that would result in the direct removal, filling, hydrological interruption, or otherwise degradation of the habitat.

Future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources. Conformance with these policies, Measure BIO-1 and the following Conditions of Approval Measures BIO-15 and BIO-16 would result in less than significant impacts from future projects.

Operation

During operation, no new ground-disturbing activities would occur. The Proposed Plan is intended to contain development within the already developed area (Core Area) and protect open space for recreational and preservation uses. The Proposed Plan could result in beneficial impacts to wetlands, because it would prevent development in open space area where protected wetlands occur. Therefore, the impact on protected wetland during operation would be less than significant.

Standard Conditions of Approval Policies

Policies

BIO-15 Avoid and protect wetlands during construction. Prior to commencement of ground disturbing activities, specific Project Sponsors shall ensure that wetlands to be protected are clearly identified on the site using flagging, lathe, pin flags or other methods sufficient to ensure that construction equipment does not enter protected areas. Field demarcation of wetlands shall be in agreement with the findings of a jurisdictional wetland delineation or biological resources report produced by a qualified biologist with experience in wetland delineation. Exclusion markers will be removed after construction is complete. This measure is additive to any applicable State or Federal permits issued for specific projects.

BIO-16 Compensate for impacts to jurisdictional wetlands and aquatic features. If specific projects impact sensitive aquatic features, including wetlands and such impacts cannot be avoided, Project Sponsors shall develop a habitat mitigation plan subject to approval by those agencies with oversight over the impacted resource. The plan shall detail the type and extent of impact, the type of habitat impacted, the agencies responsible for oversight of the resource, compensation strategy (via preservation, creation or restoration) and will describe the procedures for monitoring and provide clear success criteria for the compensation areas. Compensation areas will be as near to the impact as feasible, while still enhancing habitat function. The specific Project Sponsor will be responsible for the financial requirements associated with this measure.

Mitigation Measures

None required.

Impact 3.4-4 Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife

species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

In the Planning Area, continuous undeveloped areas outside of the already developed portions of the site and agricultural land serve as wildlife corridors for common and special-status species. Sonoma Creek and to a lesser extent, Asbury and Hill Creeks also provide corridors and nursery sites for aquatic and riparian species. Implementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of development allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites.

Construction

As discussed under Impacts 3.4-1, 3.4-2 though the Proposed Plan includes some recreational trails, in or near habitats that include wildlife corridors. However, these recreational paths are considered to be uses consistent with open space management and are not considered substantial impacts to the wildlife corridor functionality on the site. In addition, the majority of the new development is sited in an already developed area that does not provide significant wildlife transit pathways. Because the Proposed Plan preserves the overwhelming majority of the SDC parcel in open space, it ensures continuation of regional connectivity for wildlife, serving as a conduit for transit of wildlife between significant habitat blocks to the east and west.

As discussed under Impact 3.4-3, future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources.

The Proposed Plan includes a full suite of policies to minimize the impact of future development on wildlife and wildlife movement. The Proposed Plan would preserve the majority of the site that lies within the Sonoma Valley Wildlife Corridor and the avoidance of riparian corridors on the site. Only about 18% of the land within the SDC project area is developed. The Proposed Plan includes policies and implementation actions to ensure that adverse impacts to wildlife movement, special-status species and sensitive natural

communities are avoided and mitigated as development takes place. Other policies are designed specifically to minimize the impacts to wildlife at the interface of the built and natural environment (proposed policies 2-6 through 2-26). Multiple Proposed Plan policies support conservation and preservation of open space surrounding the already developed area. With implementation of the Proposed Plan's policies, Conditions of Approval Measures and existing regulations, impacts on wildlife movement or wildlife nursery sites would be less than significant.

Operation

As discussed above, the Proposed Plan includes a suite of measures that will reduce the potential impact of future projects to wildlife movement and wildlife nursery sites once they are operational. These measures are described in Section 3.4.3.3. and include:

- 2-11 Implement "dark skies" standards for all public realm lighting and all new buildings on the site, including by requiring that all outdoor fixtures are fully shielded, that outdoor lights have a color temperature of no more than 3,000 Kelvins, and that lighting for outdoor recreational facilities be prohibited after 11pm.
- 2-12 Restrict development in the wildlife corridor and creek corridor to limited trails/paths and informational signage, and design trail networks to minimize travel through wildlife and creek corridors.
- 2-13 Restrict access to the wildlife corridor and creek corridor to designated pedestrian paths marked with clear signage and delineated by strategic wildlife-permeable fencing.
- 2-14 Prohibit all unleashed outdoor cats, and restrict off-leash dogs and other domestic animals to private fenced yards and designated areas.
- 2-15 Collaborate with local wildlife protection groups to create and distribute educational information and regulations for residents and employees to guide safe interactions with wildlife onsite. Materials should be accessible to all ages and abilities and could include posted signs, disclosures, fliers, or informational sessions, among other things.

- 2-16 All fencing within the open space must be wildlife permeable, with at least 18 inches of clearance between the ground and the bottom of the fence, and shall not cross or bisect streams or otherwise discourage wildlife movement. For any barbed wire fences, a smooth bottom wire at least 18 inches above the ground must be used.
- 2-17 Adhere to residential nighttime noise standards to the extent feasible.

Mitigation Measures

None required.

Impact 3.4-5 Implementation of the Proposed Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

Construction and Operation

Future projects under the Proposed Plan would conform with local policies and ordinances such including the Sonoma County Tree Protection Ordinance and the Sonoma County General Plan. Implementation of the Proposed Plan would have a significant impact if it would conflict with the local policies or ordinances protecting biological resources. The Proposed plan does not conflict with local ordinances, therefore, impacts related to conflict with local policies or ordinances would be less than significant.

Mitigation Measures

None required.

Impact 3.4-6 Implementation of the Proposed Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (*Less than Significant*)

Construction and Operation

There are no Habitat Conservation Plans (HCPs) that apply within the Planning Area. There are no Natural Community Conservation Plans at the county level that include land within the Planning Area. The Sonoma County General Plan does contain several

sections that deal with land conservation. Implementation of the Proposed Plan would have a significant impact if it would conflict with the provisions one or more of these plans.

The Proposed Plan would not conflict with any local, regional, or state habitat conservation plan. Therefore, impacts related to conflicts with any applicable habitat conservation plan or natural community conservation plan from implementation of the Proposed Plan would be less than significant.

Mitigation Measures

None required.

3.5

Cultural, Historic, and Tribal Cultural Resources

3.5 Cultural, Historic, and Tribal Cultural Resources

This section assesses potential environmental impacts on historic and cultural resources from future development under the Proposed Plan. Cultural resources refer broadly to prehistoric and historic buildings, structures, objects, districts, and sites exhibiting important historical, cultural, scientific, or technological associations. For the purposes of CEQA, cultural resources are separated into three subcategories: historic resources, archaeological resources, and Native American tribal cultural resources and remains. The section describes the historical setting of the Planning Area, as well as the context for cultural resources in the Planning Area. It also includes a description of relevant federal, State, and local regulations and programs related to cultural resources. Appendix C includes a list of all historic and prehistoric resources identified in the Planning Area and correspondence related to tribal consultation.

There were 21 responses to the Notice of Preparation (NOP) regarding topics covered in this section:

- Several responses related to recognizing SDC as a historic district that has been found eligible for listing in the National Register of Historic Places with two individually significant buildings, as well as the Glen Ellen Historical Society's initiative to nominate the property to the National Register. Responses discussed the importance of the landscape on the historic character of the property and the importance of recognizing the cultural significance as an indigenous sacred site. Responses also advocated for adaptive reuse of historic buildings, restoration of the cemetery, and establishment of a visitor's center and/or interpretive displays addressing the full scope of human history on the site. These topics are addressed in the following Environmental Setting and Impact Analysis.
- Two responses advocated for analysis on how the Proposed Plan will preserve the legacy of and support native people which is incorporated into the following Impact Analysis. The Native American Heritage Commission (NAHC) also provided a brief summary of portions of Assembly Bill (AB) 52 and Senate Bill (SB) 18 as well as the NAHC's recommendations for conducting cultural resources assessments. AB 52 and SB 18 are summarized in the Regulatory Settings section of this chapter and the NAHC's recommendations for conducting cultural resources assessments are incorporated into the following analysis.

3.5.1 Regulatory Setting

3.5.1.1 Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966, 80 Stat. 915, 16 U.S.C. 470 et seq., as amended, authorizes the Secretary of the Interior to expand and maintain a National Register of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering and culture. The National Register of Historic Places (NRHP) is an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment.

A "historic property" is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the NRHP. The NRHP is maintained by the Secretary of the Interior. Historic properties include artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 Code of Federal Regulations (CFR) Part 800 Protection of Historic Properties, Section 800.16 Definitions 1).

National Register of Historic Places (NRHP)

The NRHP is the nation's official list of historic places. The register is overseen by the National Park Service and requires that a resource eligible for listing on the register meet one of several criteria at the national, state, or local level and also retain sufficient physical integrity of those features necessary to convey historic significance. Resources listed in the National Register are automatically listed in the California Register. The criteria are:

- Property is associated with events that have made a significant contribution to the broad patterns of our history.
- Property is associated with the lives of persons significant in our past. Eligible properties based on this criterion are generally those associated with the productive life of the individual in the field in which it achieved significance.
- Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values,

- or represents a significant and distinguishable entity whose components lack individual distinction.
- Property has yielded, or is likely to yield, information important to prehistory or history.

In addition to meeting at least one of these four criteria, listed properties must also retain sufficient physical integrity of those features necessary to convey historic significance. National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation defines the following seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Properties are nominated to the register by the State Historic Preservation Officer (SHPO) of the state in which the property is located, by the Federal Preservation Officer for properties under federal ownership or control, or by the Tribal Preservation Officer if on tribal lands.

Listing in the NRHP provides formal recognition of a property's historic, architectural, or archeological significance based on national standards used by every state. Once a property is listed on the NRHP, it becomes searchable in the NRHP's database of research information. Documentation of a property's historic significance helps encourage preservation of the resource. Listing in the NRHP provides incentives to property owners such as: federal preservation grants for planning and rehabilitation, federal investment tax credits, preservation easements to nonprofit organizations, international building code fire and life safety code alternatives, state tax benefits, and grant opportunities. The Federal Tax Incentive Program encourages private sector rehabilitation of historic buildings and is a successful and cost-effective community revitalization program which generates jobs and creates moderate and low-income housing in historic buildings. Listing does not lead to public acquisition or require public access. In addition, listing does not place any obligations on the private property owners; and there are no restrictions on use, treatment, transfer, or disposition of private property. At SDC, the Main Building is listed as an individual resource on the NRHP. Sonoma House and its six support structures was found eligible for listing on the NRHP as an individual resource. The Sonoma State Home Historic District (SSHHD) was also found eligible for listing on the NRHP.

National Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 to provide for the protection of Native American graves. The act conveys to Native American's of demonstrated lineal descent, the human remains, including the funerary or religious items, that are held by federal agencies and federally supported museums, or that have been recovered from federal lands. NAGPRA makes the sale or purchase of Native American remains illegal, whether or not they were derived from federal or Native American lands.

3.5.1.2 State Regulations

California Historic Resources

California Register of Historical Resources (CRHR)

The California Office of Historic Preservation (OHP) administers four different registration programs, including the California Historical Landmarks, California Points of Historical Interest, California Register of Historical Resources (CRHR), and the NRHP. Each registration program is unique in the benefits offered and procedures required. If a resource meets the criteria for registration, it may be nominated by any individual, group, or local government to any program at any time. Resources do not need to be locally designated before being nominated to a state program nor do they need to be registered at the state level before being nominated to the National Register. The CRHR includes buildings, sites, structures, objects and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Resources on the California Register have met criteria for designation or have been included due to their presence on the NRHP, the State Historical Landmark program, or the California Points of Historical Interest program. The Main Building is listed as an individual resource on the CRHR. The SSHHD was also found eligible for listing on the CRHR. These historic resources are catalogued in Appendix C.

State Historical Landmark Program

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of several criteria. The resource must be the first, last, only, or most significant of its type in the state or within a large geographic region; associated with an individual or group having a profound influence on California history; or be a prototype of, or outstanding example of, a period, style, architectural movement, or construction, or be one of the more notable

works or best surviving work in a region of a pioneer, designer, or master builder. The SHPO has also determined that the Sonoma State Home Historic District meets the eligibility requirements as a California Historical Landmark.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events of local (city or county) significance, having anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Criteria are the same as those for Historical Landmarks, but directed to local areas. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a Landmark and a Point; if a Point is subsequently granted status as a Landmark, the Point designation will be retired.

California Environmental Quality Act

According to CEQA, a “historical resource” includes, but is not limited to, any object, building, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. CEQA mandates that lead agencies consider a resource “historically significant” if it meets the criteria for listing in the CRHR. Such resources meet this requirement if they (1) are associated with events that have made a significant contribution to the broad patterns of California history, (2) are associated with the lives of important persons in the past, (3) embody distinctive characteristics of a type, period, region, or method of construction, and/or (4) represent the work of an important creative individual or possesses high artistic value. These criteria parallel the criteria utilized to determine eligibility for the National Register.

In addition, Public Resources Code Section 21083.2 and CEQA Guidelines Section 15064.5(f) recognize that historical or unique archaeological resources other than potential Native American burials may be accidentally discovered during project construction. This guideline recommends that immediate evaluation conducted by qualified archaeologists be included in mitigation measures. This guideline also recommends that if the find is determined to be a historical or unique archaeological resource, that contingency funding and time allotments sufficient to allow for implementation and avoidance measures be available.

California Government Code Section 65040.2(g)

California Government Code Section 65040.2(g) provides guidelines for consulting with Native American tribes for the following: (1) the preservation of, or the mitigation of impacts on places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code; (2) procedures for identifying through NAHC the appropriate California Native American tribes; (3) procedures for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects; and (4) procedures to facilitate voluntary landowner participation to preserve and protect the specific identity, location, character, and use of those places, features, and objects.

Senate Bill 18 (SB 18)

SB 18 was signed into law in September 2004, and effective March 1, 2005. The term “California Native American tribe” is defined as “a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC.” The bill also requires that, prior to the adoption or amendment of a city or county’s general plan, the city or county consult with California Native American tribes for the purpose of preserving specified places, features, and objects located within the city or county’s jurisdiction. SB 18 also applies to the adoption or amendment of specific plans. This bill requires the planning agency to refer to the California Native American tribes specified by the NAHC and to provide them with opportunities for involvement.

The County maintains its own list of tribal contacts per SB 18 and AB 52 and contacted nine tribal representatives in February 2022. The County received two responses, as discussed in the Environmental Setting section. Tribal correspondence is also provided in Appendix C.

Assembly Bill 52 (AB 52)

AB 52, passed in 2014, establishes a consultation process with all California Native American Tribes on the NAHC List and federally non-recognized tribes. It establishes a new class of resources: tribal cultural resources, and consideration is now given to Tribal Cultural Values in the determination of project impacts and mitigation. It requires Tribal notice and meaningful consultation (Public Resources Code 21080.3.2(b)). Consultation ends when parties either agree to mitigation measures or avoid a significant effect on tribal cultural resources. The County maintains its own list of tribal contacts per SB 18 and AB 52 and contacted nine tribal representatives in February 2022, providing information about

the planning process and inviting them to initiate consultation under AB 52 if desired. The County received two responses, as discussed in the Environmental Setting section and provided in Appendix C.

Tribes must submit a written request to the lead agency requesting to be notified of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe. (§21080.3.1(b)(1)). The Lead agency must submit written notification to the tribe that requested notification within 14 days of determining that an application for a project is complete. Notification must include project description and proposed location. (§21080.3.1(d)). Tribes must submit written response within 30 days of receiving notification requesting consultation. Tribes must designate a lead contact person. If no designation, or if a tribe designates multiple lead contacts, the lead agency shall consult with NAHC's SB 18 list contact person. (§21080.3.1(b)(2)). Consultation shall begin prior to the release of the environmental document. (§21080.3.1(b)). Consultation shall include discussion regarding alternatives, recommended mitigation measures, or significant effects, but only if the tribe requests consultation regarding these issues. (§21080.3.2(a)).

Consultation may include discussion concerning the type of environmental review necessary (in circumstances where consultation begins prior to that determination), the significance of tribal cultural resources, the significance of a project's impacts on tribal cultural resources, and, if necessary, project alternatives or mitigation measures. (§21080.3.2(a)). Any mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. (§21082.3 (a)). Consultation shall be concluded when either occurs (§21080.3.2(b)):

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that a mutual agreement cannot be reached.

A "tribal cultural resource" is one of the following (§21074):

- a. A site, feature, place, cultural landscape, sacred place, and object with cultural value to the tribe that is either (1) included or determined to be eligible for inclusion in the California Register of Historical Resources or (2) included in a local register of historical resources; or
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in

subdivision (c) of Section 5024.1. In applying these criteria, the lead agency must consider the significance of the resource to a California Native American tribe.

California Public Resources Code

California Public Resources Code sections 5024 and 5024.5 provide guidance for consulting with the California Office of Historic Preservation (OHP) to ensure that projects and programs carried out or sponsored by federal and State agencies comply with federal and State historic preservation laws and that projects are planned in ways that avoid or minimize adverse effects to heritage resources. These sections of the code require State agencies to take a number of actions to ensure preservation of State-owned historical resources under their jurisdictions. These actions include evaluating resources for NRHP eligibility and California Historical Landmark (California Landmark) eligibility; maintaining an inventory of eligible and listed resources; and managing these historical resources so that they will retain their historic characteristics. Section 5024 requires consultation with OHP when a project may impact historical resources located on State-owned land.

Sections 5097–5097.6 of the California Public Resources Code outline the requirements for cultural resource analysis prior to the commencement of any construction project on state lands. The state agency proposing the project may conduct the cultural resource analysis or they may contract with the State Department of Parks and Recreation. In addition, this section stipulates that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands and provides for criminal sanctions. This section was amended in 1987 to require consultation with the California NAHC whenever Native American graves are found. Violations for the taking or possessing remains or artifacts are felonies.

The Public Resources Code Section 5097.9-991, regarding Native American heritage, outlines protections for Native American religion from public agencies and private parties using or occupying public property. Also protected by this code are Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property.

California Health and Safety Code

The California Health and Safety Code Section 7050.5 states that if human remains are discovered, no further disturbance shall occur until the County Coroner has made a

determination of origin and disposition. If the Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. This regulation is applicable to any project where ground disturbance would occur. Section 7052 of the California Health and Safety Code makes the willful mutilation, disinterment, or removal of human remains a felony.

3.5.1.3 Local Regulations

The 2020 General Plan includes the following goals and policies associated with cultural and tribal cultural resources:

Goal OSRC-19: Protect and preserve significant archaeological and historical sites that represent the ethnic, cultural, and economic groups that have lived and worked in Sonoma County, including Native American populations. Preserve unique or historically significant heritage or landmark trees.

Objective OSRC-19.1: Encourage the preservation and conservation of historic structures by promoting their rehabilitation or adaptation to new uses.

Objective OSRC-19.2: Encourage preservation of historic building or cemeteries by maintaining a Landmarks Commission to review projects that may affect historic structures or other cultural resources.

Objective OSRC-19.3: Encourage protection and preservation of archaeological and cultural resources by reviewing all development projects in archaeologically sensitive areas.

Objective OSRC-19.4: Identify and preserve heritage and landmark trees.

Objective OSRC-19.5: Encourage the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during a project.

Objective OSRC-19-6: Develop and employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive

archaeological resources and Native American cultural resources, sacred sites, places, features, or objects.

Policy OSRC-19a: Designate the County Landmarks Commission to review projects within designated historic districts.

Policy OSRC-19b: Refer proposals for County Landmark status and rezonings to the Historic Combining District to the County Landmarks Commission.

Policy OSRC-19c: The County Landmarks Commission shall review Historic Building Surveys and make recommendations for designation of structures or cemeteries as County landmarks.

Policy OSRC-19d: Include a list of historic structures proposed for designation as County landmarks in Specific or Area Plans or Local Area Development Guidelines and refer the list to the Landmarks Commission for their recommendations.

Policy OSRC-19e: Refer applications that involve the removal, destruction or alteration of a structure or cemetery identified in a historic building survey to the Landmarks Commission for mitigation. Measures may include reuse, relocation, or photo documentation.

Policy OSRC-19f: Use the Heritage or Landmark Tree Ordinance and the design review process to protect trees.

Policy OSRC-19g: Pursue grant funding for the preparation and updating of historic resource inventories.

Policy OSRC-19h: Designate the County Landmarks Commission to administer a preservation program for stabilization, rehabilitation, and restoration of historic structures.

Policy OSRC-19i: Develop a historic resources protection program that provides for an ongoing process of updating the inventory of historic resources. Such a program should include:

- 1) Periodic historic building surveys,

- 2) Formalized recognition of the inventory of historic resources as recommended by the State Office of Historic Preservation, including rezoning to the Historic Combining District (HD), and
- 3) Procedures for the protection of recognized historic resources for both ministerial and discretionary permits.

Policy OSRC-19j: Develop an archaeological and paleontological resource protection program that provides: (1) Guidelines for land uses and development on parcels identified as containing such resources, (2) Standard project review procedures for protection of such resources when discovered during excavation and site disturbance, and (3) Educational materials for the building industry and the general public on the identification and protection of such resources.

Policy OSRC-19k: Refer applications for discretionary permits to the Northwest Information Center to determine if the project site might contain archaeological or historical resources. If a site is likely to have these resources, require a field survey and preparation of an archaeological report containing the results of the survey and include mitigation measures if needed.

Policy OSRC-19l: If a project site is determined to contain Native American cultural resources, such as sacred sites, places, features, or objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites, notify and offer to consult with the tribe or tribes that have been identified as having cultural ties and affiliation with that geographic area.

Policy OSRC-19m: Develop procedures for consulting with appropriate Native American tribes during the General Plan adoption and amendment process.

Policy OSRC-19n: Develop procedures for complying with the provisions of State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, if applicable, in the event of the discovery of a burial or suspected human bone. Develop procedures for consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.

Sonoma County Code

Chapter 11, Construction Grading and Drainage, outlines standards required in construction or grading in Article 14, including the protection of human remains and archaeological resources. (Section 11.14.050.) Where human remains or archaeological resources are discovered during construction grading and drainage, all work shall be halted in the vicinity of the find. If human remains or suspected human remains are discovered, the permittee shall notify the county coroner and comply with all state law requirements, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98, to ensure proper disposition of the human remains or suspected human remains, including those identified to be Native American remains.

The Historic Combining District (HD) also applies to the Planning Area. As stated in Section 26-68-005, the purpose of the HD is to protect those structures, sites and areas that are remainders of past eras, events and persons important in local, state or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the county and its communities. Alterations to existing structures and construction of new structures within historic districts shall be consistent with the historic district design guidelines adopted by the board of supervisors.

Sonoma County Design Review for Historic Resources (PJR-114)

The Board of Supervisors adopted the design review process for historic resources to preserve the County's unique and irreplaceable structures and sites that have significant historic, architectural, or aesthetic interest. This process is intended to ensure that exterior alterations, additions, new construction, and relocation of structures involving historic resources or sites are conducted in a way that preserves the significance of the resource and the character of any historic district in which it is located. The level of Landmarks Commission Design Review varies based on the scope of the project. All projects must be consistent with applicable policies of the General Plan, specific or area plans, and the Zoning Ordinance.

3.5.2 Environmental Setting

3.5.2.1 Historical Setting

Prehistory and Native Americans in the Historical Period

Earliest known occupation in the region was approximately 11,300 years ago, based on an artifact from the Laguna de Santa Rosa. At that time the population would have likely been Yukian ancestors of the modern Wappo people. Pomo and Miwok ancestors moved into the area compressing the Yukians into smaller territory. The Miwok controlled this area at the time of California incursion into the region. Several archaeological sites on the property speak to this early use of the land by Native Americans, including a bedrock milling feature, a scatter of stone tool making debris, and a large habitation site. Prior to development as a home for the disabled the property was part of two land grants, and there is evidence that timber was harvested. Based on map evidence, the land was used for agriculture immediately prior to acquisition as a care facility. Agriculture continued during the use as a care facility and evidence of this early use is seen in remnant of the orchard, and in the extensive historical dump along Sonoma Creek.³³

19th and 20th Century Development of Glen Ellen/Eldridge

The area's first European settlers were of Mexican heritage, and the area was at the far northeast corner of General Mariano Vallejo's vast Petaluma land grant. In 1839, Vallejo constructed a sawmill along Sonoma Creek and used it to process redwood and Douglas fir. The mill, built of local stone, was converted to a grist mill, and a wood-frame general store was added ca. 1856, which became a stagecoach stop between Sonoma and Santa Rosa. The mill remains the oldest historic resource in the immediate area, while the adobe Sonoma Barracks in downtown Sonoma dates to 1836 and the adjacent adobe Mission San Francisco Solano was built in 1840 (though largely reconstructed). Other homesteads of the mid-nineteenth century were simple in design and built of wood; commercial buildings were built of wood, stone, or brick. Several that remain today, such as

³³ WRT. 2018. Sonoma Developmental Center Existing Conditions Assessment. Available: <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>. Accessed: May 11, 2020.

Wegenerville Resort in Glen Ellen, which was designed in a vernacular style in 1868, are identified as local landmarks.

Rail service came to Glen Ellen and Eldridge in the 1880s, and the area became a popular summer vacation destination for residents of San Francisco. Some residents turned their private homes into informal summer resorts, and several small hotels and resorts were built, including the Mervyn Hotel (1885), Dr. C.C. O'Donnell's health resort (1891), and the Chauvet Hotel (1906).

The era of rail tourism waned in the 1920s as auto tourism increased. Glen Ellen and Eldridge became towns of permanent residents. The rail lines that brought the area its brief period of rapid expansion were removed in the 1940s and the steel was repurposed in the shipbuilding effort of World War II. During and after the war, the area experienced a large period of growth, as evidenced by the addition of swaths of housing and related businesses, primarily set for those working at Mare Island and other industrial sites.

Today, Sonoma Valley remains a vibrant local and international agricultural and tourism area with an eclectic mix of nineteenth- and twentieth-century architecture.

Sonoma Developmental Center History³⁴

SDC originated in 1884 as a small private school based in Vallejo called the California Home for the Care and Training of Feeble-Minded Children. Initially, the institution's goal was to teach moderately impaired children "to be self-helpful, more industrious, and if possible, a little less incorrigible." Financial pressures soon caused the school to appeal to the state to take over operating the institution. The state legislature authorized this in March 1885, at which point the school became the first public facility for people with developmental disabilities in the western United States. The legislature greatly expanded the school's mission, specifying that the institution would be open to "all imbecile and feeble-minded children" who were incapable of receiving instruction in common schools. Additionally, Governor Stoneman withheld signing the bill until he was assured that the

³⁴ The historic context of SDC's site development in this section is sourced is from the State of California Department of Parks and Recreation (DPR) 523D (District Record) and 523L (Continuation Sheet) forms for the Sonoma State Home Historic District in Appendix B of the *Historical Resources Inventory and Evaluation Report: Sonoma Developmental Center, PRC § 5024 and § 5024.5 Compliance Report* (May 2017), prepared by JRP Historical Consulting, LLC (JRP).

home would admit severe cases of “feeble-mindedness,” a term understood at the time as encompassing “morons, idiots, imbeciles, epileptics, paralytics, and hydrocephalics.”³⁵

The state-run center was first located in Santa Clara, though the relatively small property there prohibited establishing a true asylum along the lines of eastern institutions. The Board of Trustees appealed to the legislature for a new site with greater privacy and resources. In 1889, the state purchased 1,670 acres from Senator William McPherson Hill located in the Sonoma Valley for use by the center. Superintendent W. J. G. Dawson described the property in his report of 1892 as having “beautiful stretches of valley land [and an] abundant and never-failing water supply.”³⁶ A rail line passed through the site, connecting the home to the state’s transportation network.

In planning the campus’s buildings, the Board of Trustees looked to major eastern institutions as a guide. The dominant institutional model at the time was the so-called Kirkbride plan, developed by Dr. Thomas Kirkbride of Pennsylvania. His ideas first appeared in print in 1851 and were fully fleshed out in his 1854 book *On the Construction, Organization and General Arrangements of Hospitals for the Insane*. The model called for locating institutions on large rural sites that could offer privacy and good health while supporting farms and pleasure gardens. The hospital itself would be a congregate facility, in which all the patients lived and received their services beneath a single roof. Kirkbride advocated a linear form of hospital with a central administration building flanked by symmetrical two- or three-story wards that stepped backwards to form a V or U shape. Patients were segregated into wards according to their sex, age, and degree of disability. In California, the model had been utilized at the state insane asylums, and major Kirkbride-styled buildings were constructed at Napa in 1872 and at the Agnews facility near Santa Clara in 1875. Two additional insane asylums in Mendocino County and San Bernardino County were authorized in 1889 and constructed contemporaneously with the Sonoma institution.

The San Francisco architectural firm of Copeland and Pierce prepared the design for the main Kirkbride building at Sonoma. The Board of Trustees selected Andrew McElroy of San Francisco to construct the first buildings, which included a bakery and laundry building, kitchen wing to the main building, and an engine and boiler house. Accusations of fraud and financial shortfalls delayed the completion of the building for more than a

³⁵ California State Commission in Lunacy, *Biennial Report*, Vol. 12, (1920), 69.

³⁶ Board of Trustees of the California Home, *Annual Report*, Vol. 8 (1892), 6.

decade and a half, until in 1906 the institute requested further funds to construct the central administration wing. State Architects George Sellon and Edward C. Hemmings designed the new central administration building in 1908, which remains in place at the facility today.

The client population at Sonoma expanded rapidly as parents sought out the educational and custodial care that the facility offered. When the Eldridge facility opened in 1890, there were 150 clients enrolled. By the end of the decade, the patient population had tripled, and the wait list for admission included several hundred more. To meet the demand, the Sonoma institution transitioned to building out the campus along “cottage plan” lines, which called for small, widely spaced buildings. This again followed national trends, although the Sonoma center was an early adapter of the plan among California state institutions. The Manse, built in 1894 for epileptic patients, was the first of these cottages, and it was followed by a half-dozen more through the first decade of the twentieth century, though only Oak Lodge remains extant. Sonoma Developmental Center’s transition occurred prior to the Office of the State Architect solidifying a particular design for its implementation across state hospitals, which began with the complete redesign of Agnews State Hospital following the catastrophic collapse of the main building in the 1906 earthquake. Unlike Agnews, Sonoma State Home never redesigned its overall campus to implement the cottage plan. Rather, small clusters of cottages were added around the original Kirkbride building.

In its first decades, the Sonoma facility functioned largely as a custodial institution, providing relatively little medical therapy but filling clients’ days with practical duties. Clients made up much of the institution’s labor force and were supervised in performing such tasks as laundry work, sewing and mending, cobbling, cooking, baking, and general housekeeping. Much of the heavy construction work on campus was also performed by clients and many of them had a hand in building the cottages in which they lived. The center maintained orchards and farms that produced a large portion of the facility’s food. This helped to economize on operational expenses, while also being treated as a form of occupational therapy. Patients with epilepsy but no other developmental or intellectual disability performed the most complex tasks and served as foremen for other laborers. Academic schooling improved in the early twentieth century, and by 1914, there were five teachers on staff. Instruction included basic kindergarten and grade school subjects as well as gym, music, arts and crafts, and home economics.

With World War I, the home’s purpose shifted significantly as juvenile courts and schools began identifying large numbers of “defective delinquents” to be housed at the Sonoma campus. Many of the new clients had only mild impairments, but a powerful and popular eugenics campaign regarded them as a grave threat to the genetic well-being of society.

Eugenicists campaigned for a sterilization law that would allow state institutions to operate upon prisoners or patients without requiring consent. The California legislature passed such a law in 1909, becoming the second state to legalize involuntary sterilization. Californian institutions ultimately sterilized more than 20,000 individuals, far more than any other state. The Sonoma center, under Superintendent William Dawson, initially sterilized very few patients. After Dawson died in 1918, however, the hospital's surgeon, Fred O. Butler, was appointed as superintendent and he immediately instituted an aggressive sterilization program. A total of 5,530 men and women were sterilized at Sonoma, more than at any other state hospital or at any single facility in the nation. Butler retired in 1949 and the program all but ended by 1952, though the law remained on the books until 1979. The California state government has since offered a formal apology for performing nonconsensual sterilizations but has paid no reparations to the victims.

The development of the sterilization program produced renewed overcrowding as hundreds of generally high-functioning young men and women were committed by the courts. An industrial parole program was created in 1919 to hire out clients for work on farms or as domestics. Social workers assisted and supervised paroled clients, and many parolees were eventually discharged entirely from the hospital. By 1930, more than 1,000 individuals were regularly on parole at one time, allowing for large numbers of men and women to be admitted for sterilization and then rapidly returned to the community on a supervised basis. The problem of overcrowding was also met by a new cottage building boom through the 1920s. A number of the extant residential cottages were constructed at this time including Walnut (1918), Hatch (1924), Wright (1925), Dunbar (1925), and Wagner (1926).

Construction funding dried up with the onset of the Great Depression, but projects already in the pipeline were seen through to completion, including Chamberlain Hospital (1931), Oak Valley School (1931), Paxton detention ward (1932), and the firehouse (1932). Little new construction occurred through the remainder of the 1930s until the very end of the decade. In 1939, federal funds provided through New Deal public works programs paid for the construction of six new ward buildings (Goddard, McDougall, Hill, Osborne, King, and Thompson-Bane), three residences for staff (Residences 135, 136, and 137), a sewage treatment facility, water treatment plant, ice house, a school-house addition, and miscellaneous improvements to the center's grounds. The vast majority of surviving west campus ward buildings and staff residences date to these two decades of rapid expansion following the introduction of sterilization.

Following the end of World War II, the Sonoma State Home, like California as a whole, experienced considerable growth. Newly affluent middle-class parents demanded

improved, modern care for their disabled children, and the state responded with a massive institutional building program from the late 1940s through mid-1950s. The growth at Sonoma spread east across Arnold Drive and Sonoma Creek, where 18 new wards and a major hospital addition were constructed. Reflecting post-war architectural trends, these facilities largely featured identical concrete buildings grouped around outdoor courtyards. The program of care became more medically oriented around the same time, and the new buildings had many of the trappings of modern hospitals. Symbolizing this transition, the facility was renamed in 1953 from Sonoma State Home to Sonoma State Hospital. On the west campus, the Frederickson Receiving Center was constructed in 1959 just inside the entrance gate. This building was the first that clients encountered on being admitted to Sonoma, and its architecture and function were intended to convey that the nineteenth-century asylum was a thing of the past, replaced by the promise of medical progress. Medical research was regularly conducted through the post-war decades by both the hospital's staff and by outside university scientists.

Sonoma State Hospital's educational program expanded in 1961 with the construction of a new school wing. The International-style building was sited near the main entrance gate, across from Frederickson Receiving Center, reinforcing the modern orientation of the institution. The training aimed for self-reliance, providing instruction in self-help (feeding, dressing, washing and grooming), motor skills, and personality development, as well as traditional academics, homemaking, arts and crafts, and vocational training. The teachers increasingly had specialized training in educating students with developmental and other disabilities. A vocational program, Sunrise Industries, also started around this time, providing both on-campus and off-campus employment.

Growth finally slowed and then reversed in the 1960s owing to a national trend toward deinstitutionalization in favor of community care, including the National Mental Health Act of 1963, which caused significant fund reductions at the Sonoma facility and other state hospitals. The number of clients at Sonoma decreased, until the facility housed principally the severely disabled who could not be placed out in community care. One new hospital building, the Nelson Treatment Center, was constructed in 1967, but the general trend was toward the repurposing or shuttering of older buildings. Wards were remodeled to provide greater privacy in bath and bedrooms and to improve environmental conditions with better heating and cooling systems, added wheelchair ramps, and other accessible accommodations. The center continued to add some new programs, starting a Special Olympics group in 1971, for example, but the general trend was toward downsizing. Farm and orchard programs closed as the number of patients declined and as the courts declared compulsory labor at state institutions to be illegal. In the late 1970s and early

1980s, Sonoma State Hospital identified several hundred acres as surplus land. These lands were transferred to the county and state park systems, including a 2002 transfer of approximately 600 acres to Jack London State Park. This decreased the total land holdings of the institution to approximately 900 acres. In 1985, the facility again changed names, becoming Sonoma Developmental Center, the title by which it known today.

3.5.2.2 Historic Resources

A historic resource is a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old. Historic resources are often designated and listed on the national, state, or a local register, making them eligible for certain protections or other benefits.

Under the direction of the California Department of General Services (DGS), and in cooperation with California Department of Developmental Services (DDS), JRP Historical Consulting, with Denise Bradley, submitted a Historical Resources Inventory and Evaluation Report (HRIER) to the OHP, including the SHPO, in May 2017 for compliance with Public Resources Code § 5024 and § 5024.5.³⁷

JRP surveyed and inventoried all buildings, structures, and features built in 1967 or earlier; completed existing documentation review and extensive research; developed historic contexts; and evaluated the resources for listing in the NRHP, in the CRHR, as a California Historical Landmark, and as a cultural landscape. All of this was synthesized and incorporated into the HRIER, which identified that there are two buildings that meet the criteria for individual listing in the NRHP and CRHR: the extant administrative wing of the original Main Building (also called the Professional Education Center or P.E.C. Building) and Sonoma House (also called Residence 140), as well as its six support buildings and structures.

³⁷ JRP Historical Consulting, LLC and Denise Bradley, Cultural Landscapes, *Historical Resources Inventory and Evaluation Report: Sonoma Developmental Center, PRC § 5024 and § 5024.5 Compliance Report* (May 2017), i.

In addition, the HRIER identified a Sonoma State Home Historic District (SSHHD), which is eligible for inclusion in both the NRHP and CRHR, as well as designation as a California Landmark. Among the contributing resources to the historic district, both individual historic resources were included as contributors.

The HRIER found that the SSHHD contains a significant concentration of buildings, structures, objects, and landscape features that are united historically by plan, purpose, and physical development. The historic district possesses significance for its pioneering role in housing, educating, and medically treating the state's population of people with intellectual and developmental disabilities. The significance is demonstrated by the presence of buildings within the historic district that clearly convey their function in caring for people with developmental disabilities. In addition, the SSHHD is a representative example of institutional design in California utilizing both Kirkbride and Cottage Plan models. The historic district's period of significance begins in 1889 with the purchase of the Eldridge site and ends in 1949 with the retirement of Superintendent Fred Butler.

In a letter dated July 22, 2019, the SHPO concurred that the SSHHD is significant under National Register Criterion A at a state and national level with a period of significance of 1889 to 1949. SHPO also determined that the SSHHD is eligible under National Register Criterion C at the state level as a representative example of institutional design in California utilizing both Kirkbride and Cottage Plan models. Additionally, the SSHHD met eligibility requirements as a California Historical Landmark and was placed on the Master List of Historic Resources pursuant to Public Resources Code § 5024(d).

While the SHPO concurred on the period of significance described in the HRIER, the boundary of the historic district was changed to include all of the current SDC campus excluding a section of undeveloped, wooded land in the northwest section of campus. It was determined that a cultural landscape does not exist, but that there are landscape features that contribute to the SSHHD. JRP updated the HRIER in October 2019 to reflect the SHPO's determination. Not all buildings, structures, and landscape elements within the historic district boundary are considered contributing resources because some of them are outside the 1889-1949 period of significance and others do not have sufficient historical integrity. Due to the expansion of the historic district boundary, the number of contributing resources grew from 46, as identified in JRP's May 2017 report, to 94 buildings and structures. There are five non-contributing sheds associated with contributing buildings or landscape features.

The SSHHD now contains 75 contributing historic resources; 19 of the previously identified 94 contributing buildings that were located within the boundaries of the historic district

were destroyed in the 2017 Sonoma Complex Fire. The Core Campus, between Railroad and Manzanita roads, contains 65 of these historic resources, which are almost exclusively to the west of Arnold Drive.

Appendix C lists all the historic and prehistoric resources. See Section 3.1: Aesthetics for more information regarding existing visual conditions of contributing historic resources.

3.5.2.3 Tribal Cultural and Archaeological Resources

Tribal Cultural Potential Resources

A tribal cultural resource is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a tribe that is included or determined to be eligible for inclusion in the CRHR, included in a local register of historical resources, or otherwise determined to be significant by the lead agency of an environmental review process. At the time of Euroamerican contact, the Native Americans that lived in the area were speakers of the Coast Miwok language, part of the California Penutian language family.³⁸ There are no Native American resources in or adjacent to the proposed Sonoma Development Center Specific Plan project area referenced in the ethnographic literature (Barrett 1908). According to the 2022 Northwest Information Center (NWIC) records search, the Planning Area contains six recorded Native American archaeological resources including habitation sites, lithic scatters, isolates, and Bed Rock Mortars.

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Sonoma County have been found on ridges, midslope benches, in valleys, near intermittent and perennial watercourses and near areas populated by oak, buckeye, manzanita, and pine, as well as near a variety of plant and animal resources. The Planning Area is located immediately South of the Town of Glen Ellen in the hill area West of and within the Valley of the Moon and includes ridge to valley lands. The Planning Area is bisected by Sonoma Creek and includes its confluence with Mill Creek. The area also includes two lakes, Lake Suttonfield and Fern Lake. Aerial maps indicate heavily wooded area, bare areas, low grasses, areas of buildings and roads, lakes, creeks. Given the similarity of these environmental factors and the archaeological sensitivity of the area, there is a high potential for Native American

³⁸ Kelly 1978:414

resources to be within the proposed Sonoma Development Center Specific Plan Planning Area.

Potential Archaeological Resources

The National Parks Service defines archaeological resources as any material remains of human life or activities that are at least 100 years of age and are capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics. According to the 2022 Northwest Information Center (NWIC) records search, the Planning Area contains six historic-period archaeological resources, including a cemetery, a trash dump, an orchard, and the site of a Historic District.

Based on the NWIC review of historical literature and maps, there is also the possibility of additional historic-period archaeological resources within the Planning Area. Early Rancho Maps of the area indicate the Planning Area was located within C.P. Stone's Tract of the Petaluma Rancho. In addition, early Sonoma County Maps indicated the 'State Home for Feeble Minded' with buildings, roads, and railroads.³⁹ With this in mind, there is a high potential for historic-period archaeological resources to be within the proposed Planning Area of the Sonoma Development Center Specific Plan.

3.5.2.4 Native American Consultation

To determine sensitivity for Native American resources within the Planning Area, consultation with NAHC and local Native American groups was conducted. The County has maintained the following Tribal consultation list per AB 52 and SB 18 requirements.

- Jose Simon III, Middletown Rancheria Band of Pomo Indians
- Michael Mirelez, Torres Martinez Desert Cahuilla Indians
- Chris Wright, Rancheria Band of Pomo Indians
- Scott Gabaldon, Mishewal Wappo Tribe of Alexander Valley
- Patricia Hermosillo, Cloverdale Rancheria Band of Pomo Indians
- Greg Sarris, The Federated Indians of Graton Rancheria
- Margie Mejia, Lytton Rancheria of California
- Dino W. Franklin, Kashia Pomos Stewarts Point Rancheria

³⁹ Ricksecker and Walkup 1900:4, McIntire and Lewis 1908:7

- Michael Mirelez, Torres Martinez Desert Cahuilla Indians

These individuals and tribal representatives were sent formal notification under SB 18 and AB 52 in February 2022. One response was received from the Federated Indians of Graton Rancheria requesting further consultation. In addition, the Lytton Rancheria of California shared knowledge of historical Native American occupants. Correspondence with tribal contacts is included in Appendix C. Additionally, the NOP was shared with the NAHC and in February 2022, the NAHC responded with recommendations for conducting cultural resources assessments.

The environmental setting in the Planning Area and the sites of known Native American archaeological resources in the Planning Area indicate that there is a high potential for the Planning Area to contain tribal cultural resources from past Native American activities.

3.5.3 Impact Analysis

3.5.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;**
- Criterion 2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;**
- Criterion 3: Disturb any human remains, including those interred outside of dedicated cemeteries; or**
- Criterion 4: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**
- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical**

resources as defined in Public Resources Code section 5020.1(k), or

- ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision I of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision I of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.5.3.2 Methodology and Assumptions

The analysis of potential cultural and tribal cultural resources impacts is based upon a comprehensive records search conducted at the NWIC, located at Sonoma State University. The records search included a review of all recorded historic and prehistoric cultural resources within the Planning Area. In addition, the California State Historic Property Data File (HRI), which includes the NRHP, California Historical Landmarks, and California Points of Historical Interest was examined. The analysis also included a search of the NAHC Sacred Lands File, tribal outreach, review of Sonoma County documents, State regulations, and Proposed Plan goals and policies.

3.5.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address cultural and tribal resources:

Open Space and Resources and Hazards

Goals

- 2-I Legacy of Care: Ensure that future development at the site preserves the heritage and legacy of care at SDC through preservation of important historic resources, intentional consideration of the needs of developmentally disabled individuals in new development, and by highlighting the site's history for residents and visitors.
- 2-J Native People: Preserve the heritage and legacy of the native people in the area through land stewardship and preservation of cultural resources on the site.

Policies

- 2-47 Consider adaptively reusing Sonoma House as a museum dedicated to the history of the SDC facility, collaborating with Sonoma County, the State of California, the Glen Ellen Historical Society, and other community groups for design and programming of the space, if feasible.
- 2-48 Provide resources and learning opportunities for residents and visitors about all phases of the history of the site. Materials should be accessible to all ages and abilities and could include posted signs, fliers, or informational sessions, among other things.
- 2-49 Promote public art through programs, such as the establishment of a Public Art Committee, to ensure ongoing inclusion of high-quality public art that references and highlights the site's history.
- 2-50 Promote the inclusion of temporary and permanent activities and attractions to the core campus, such as entertainment venues, performance spaces, artist studios and gallery spaces, and other arts and cultural destinations.
- 2-51 Ensure that all amenities and public spaces on the site are accessible to visitors of all ages and abilities.
- 2-52 Require any unanticipated discovery of archeological or paleontological resources to be evaluated by a qualified archeologist or paleontologist.
- 2-53 Ensure that the eventual owner and operator of the preserved parkland and open space preserves maintains public access to the SDC cemetery, and maintains and enhances existing signage and seating, as feasible.

Land Use

Goals

- 4-G Preserve the historic character of the SDC campus through the preservation and reuse of the National Register-eligible Sonoma House and the National Register-listed Main Building, key historic landscape

elements, and of a portion of the contributing buildings to the National Register-listed Sonoma State Home Historic District, while balancing conservation with development and contemporary land use and development feasibility objectives.

- 4-H Select historic buildings for conservation to maximize their presence along streets and public places.
- 4-I Provide flexibility in design for conservation when conservation of an entire building is not feasible in keeping with the Secretary of the Interior Standards for rehabilitation.
- 4-J Provide opportunities for historic interpretation onsite.

Policies

- 4-20 Preserve and reuse the two historically significant buildings, the Main Building (PEC) and the Sonoma House Complex, including its six support structures.
- 4-21 Preserve and enhance the landscape elements that contribute to the significance and character of the Sonoma State Home Historic District, including the formal tree grid at the Central Green, the baseball field, Sonoma Bridge, the front entrance gate, and the Eldridge Cemetery, as well as primary circulation routes.
- 4-22 Require that the developer prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows.
- 4-23 Preserve and reuse the contributing resources identified in Figure 4.3-1, to the greatest extent feasible.

- a. If all of the contributing resources identified in Figure 4.3-1 cannot be retained, the following buildings should be considered as least significant of those 28 contributors and studied for removal:
 - i. Acacia II
 - ii. Goddard
 - iii. Workshop
 - b. If all 28 contributing resources identified in the Sonoma Developmental Center Land Use Diagram cannot be retained, in addition to those listed above as least significant contributors, the following buildings should be considered less significant of those 28 contributors and studied for removal:
 - i. Walnut (significant damage)
 - ii. Firehouse
 - iii. Main Store Room
 - iv. Maintenance Shop
 - v. Acacia I
- 4-24 Preserve and reuse buildings at both the north and south terminus of Sonoma Avenue, including Wagner, Dunbar and Wright to the north, and Walnut and Hatch to the south.
- 4-25 Preserve and reuse at least 8 of the 10 contributing buildings fronting Sonoma Avenue (including Sonoma Circle), as listed below.
 - a. Wagner
 - b. Dunbar
 - c. Wright
 - d. Finnerty
 - e. McDougall
 - f. Oak Lodge
 - g. Hill
 - h. Walnut
 - i. Hatch
 - j. Main Building

- 4-26 Preserve and reuse all the contributing buildings that face the Central Green, as listed below.
 - a. Main Building
 - b. Chamberlain Hospital
 - c. Palm Court
 - d. Pines
 - e. Entrance Gate
- 4-27 Preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Require that the developer hire a preservation architect to undertake a conditions assessment and reconstruction plan prior to demolishing and reconstructing houses on Arnold Drive that are in poor condition. Reconstruction should adhere to the Secretary of the Interior's Standards for Reconstruction.
- 4-28 Prepare interpretive signage, art, or other exhibition onsite to educate residents and visitors about the history of the site, including pre-history, Native American history and the history of the Sonoma State Home. Signage should be available in English and Spanish and Native American tribal language as appropriate.
- 4-29 Ensure that proper documentation is made prior to any substantial change to or demolition of a contributing historic structure, as described in Appendix A.
- 4-30 For any contributing historic structures that are demolished within the Planning Area, require that materials be made available as salvage as described in Appendix A, in order to facilitate the reuse of materials and historic detailing, and to reduce demolition waste.
- 4-31 Require that construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings, as described in Appendix A.
- 4-32 Consider preserving the hog and poultry area east of the Core Campus and the SDC water and sewage system to the west and north.

Standard Conditions of Approval

Policies

- LU-1 For any historic resource that is considered for demolition, require that the developer hire a preservation architect to undertake a conditions assessment and feasibility study to justify the action. The project sponsor of a development project in the Plan Area shall also consult with the Sonoma County Planning Division at the time of submittal of an environmental evaluation application to determine whether there are feasible means to avoid a substantial adverse change in the significance of a contributing resource(s) to the SSHHD. Avoidance and minimization measures shall seek to avoid demolition and retain the resource's character-defining features. This includes consideration of the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties, which cover adaptive reuse, retention and repair of character-defining features, moving contributing resources within the site as an alternative to demolition, and designing sensitive additions and alterations. Reuse feasibility studies for each individual project that proposes demolition of a contributing resource shall be produced and compatibility analyses for new construction within 75 feet of an extant contributing resource shall be prepared to ensure that new buildings do not overwhelm or unnecessarily contrast with the historic buildings.
- LU-2 In evaluating the feasibility of avoidance or reduction of effects, the Planning Division shall consider whether avoidance or reduction can be accomplished successfully within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors, along with the Proposed Plan policies and project objectives. The applicability of each factor may vary from project to project, and will be determined by staff on a case by-case basis. Should Planning Department staff determine through the project review process that avoidance or reduction of effects on historic architectural resources is infeasible, policies LU-3, LU-4, LU-5, LU-6, and LU-7 shall be applicable.
- LU-3 The Project Sponsor shall retain a professional who meets the Secretary of the Interior's Professional Qualifications Standards for History or Architectural History to prepare written, photographic, and measured drawing documentation of the California Register- and National Register-eligible Sonoma State Home Historic District. Prior to the first demolition or construction permit issued for the site, documentation as described below for the overall SSHHD and the first adversely impacted contributing resource(s) shall be required. When additional

demolition or construction permits are required, documentation of those contributing resource(s) shall be undertaken.

- a) The documentation for the SSHHD shall be prepared based on the National Park Service's Historic American Building Survey (HABS)/Historic American Engineering Record (HAER)/ Historic American Landscape Survey (HALS) Historical Report Guidelines. The documentation will include the following:
 - b) Drawings
 - i) Efforts shall be made to locate original drawings and/or site plans of the SSHHD during its period of significance. If located, these drawings shall be photographed or scanned at high resolution, reproduced, and included in the dataset. In addition, an existing conditions site plan depicting the current configuration and spatial relationships of the contributing buildings and landscape features shall be included in the dataset.
 - ii) At the time of each proposal that is deemed to adversely impact a contributing resource to the SSHHD, either through demolition or substantial alteration, effort should be made to locate original drawings of the resource to the SSHHD that will be demolished. If located, these drawings should be photographed or scanned at high resolution, reproduced, and added in the dataset. HABS-style measured drawings of each contributing resource that will be adversely impacted shall also be produced. The HABS-style drawings shall be prepared by a professional who meets the Secretary of the Interior's Professional Qualification Standards for Architecture or Historic Architecture.
 - c) Photographs
 - i) Standard large-format or digital photography shall be used. If large-format photography is undertaken, it shall follow the HABS/HAER/HALS Photography Guidelines (November 2011; updated June 2015). If digital photography is used, it shall follow the National Park Service's National Register Photo Policy Factsheet (June 2013), including ink and paper combinations for printing photographs that have a permanency rating of approximately 115 years. Digital photographs shall be taken in uncompressed .TIF file format. The size of each image shall be 1600x1200 pixels at 300 pixels per inch or larger, color format, and printed in black and white. The file name for each electronic image shall correspond with the index of photographs and photograph label. Photograph views for the dataset shall include:

- ii) Context and oblique views throughout the SSHHD, including the campus core, poultry area to the east, and the SDC water and sewage system to the west and north.
 - iii) Orthogonal, oblique, and detail views of any contributing buildings, structures, or landscape features that are deemed to be adversely impacted, either through demolition or substantial alteration. These may be produced as individual projects are approved and shall be added to the data set.
 - iv) All views shall be referenced on a photographic key. This photograph key shall show the photograph number with an arrow indicating the direction of the view.
 - d) Written History
 - i) A historical report shall be prepared that provides a property description and summarizes the history of the SSHHD and its historical significance, and briefly describes each contributing building and landscape feature. Documentation shall adhere to National Park Service standards for “short form” HABS/HALS documentation, and shall include the 2019 DPR forms as an appendix. The written historical report shall be prepared by a consultant meeting the Secretary of the Interior’s Professional Qualifications Standards for History or Architectural History and submitted for review and approval prior to issuance of any demolition or construction permits for the site.
 - ii) Copies of the photographs, drawings, and report shall be offered to the Sonoma County Planning Division, Glen Ellen Historical Society, and Sonoma Valley Historical Society, and to publicly accessible repositories including the Sonoma County Public Library, the California Historical Society, and the Northwest Information Center (NWIC) of the California Historical Resources Information System. The materials may be offered in the format (digital files and/or hard copies) preferred by each recipient. These organizations and repositories are invested in archiving the history of California. This measure would create a collection of reference materials that would be available to the public and inform future research.
- LU-4 The Project Sponsor shall prepare a permanent on-site, publicly accessible site-wide interpretive program, in coordination with an experienced architectural historian and interpretation/exhibit designer. The interpretive program may include display panels with historic and current condition photographs, interpretive text, and other graphics; smartphone apps; artworks; electronic media; and other

- means of presenting information regarding the history of the SSHHD, based on the historic district's stated significance, as well as the history of indigenous peoples on the site.
- a) In addition, for each contributing building, structure, or landscape feature is deemed to be adversely impacted, either through demolition or substantial alteration, an interpretive display involving the above-described media options shall be developed that conveys the contributing resource's specific history, use, and contribution to the SSHHD. Display panels, if included in the interpretive program, shall be placed within or as near as possible to, the location where the resource was historically located.
 - b) The site-wide interpretive program shall be approved prior to the issuance of a site permit, and interpretive programs for specific contributing resources shall be approved prior to the issuance of a demolition permit for that resource. The specific interpretive program(s) shall be fully implemented and/or installed before the issuance of a certificate of occupancy for the applicable new building(s).
 - c) Long-term maintenance of the permanent interpretive displays shall be the responsibility of the County, which may delegate to Planning or another relevant agency.
- LU-5 Before the demolition of any contributing building or structure on the site, the subject building or structure shall be made available for salvage to companies or individuals facilitating reuse of historic building materials, including local preservation organizations. Noticing for salvage opportunities shall include notification in at least one newspaper of general circulation and online platforms as appropriate, which may include the Sonoma County Gazette, Sonoma Index-Tribune, and Santa Rosa Press Democrat (print and online) and the Sonoma County Planning Division. Noticing shall be compliant with Sonoma County policies and shall include a notice at the entrance to SDC on Arnold Drive about the building(s) or structure(s) proposed for demolition. The time frame for materials salvage noticing shall be 30 days. The project sponsor shall incorporate into construction specifications for proposed projects implemented under the Proposed Plan a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent and nearby contributing historic buildings within 75 feet of the construction site. This may include maintaining a safe distance between the construction site and the building, using construction techniques that reduce vibration, appropriate excavation shoring methods to prevent movement of

adjacent structures, and providing adequate security to minimize risks of vandalism and fire.

The specification shall outline general information about the purpose of the specification, submittal requirements, project schedule, site security plan, and project performance requirements and construction techniques. The latter shall include:

- a) Where proposed excavations are within 5 feet of historic buildings and/or would extend below the foundations of historic buildings, protection and stabilization shall be designed as necessary to provide vertical support throughout the shoring, underpinning, and excavation process.
- b) Explosive charges shall not be used.
- c) If existing pavement or foundation demolition, breakup and removal operations is performed less than 75 feet from adjacent historic buildings, the contractor shall utilize deep saw cutting of existing pavement, foundations, and/or concrete structures to be removed. Alternatives to this will be allowed if mockups are satisfactory and approved by a qualified preservation professional.
- d) Route truck traffic and heavy construction equipment to minimize impacts to the adjacent structures.
- e) Secure street and sidewalk trench plates and decking at cut and cover excavations shall be installed.
- f) Minimize the duration of scheduled activities to the extent possible to reduce risks to adjacent historic structures, while allowing for safe completion.
- g) Provide adequate drainage on the site to prevent drainage-related damage to the adjacent structures, and comply with all applicable local, state, and federal requirements for drainage.
- h) Provide engineered shoring/underpinning at excavations to prevent soil movement-related damage to adjacent historic buildings. Design foundations and ground-stabilization measures where necessary and permitted by building owners to prevent uplift of adjacent soils and to prevent damage to existing building foundations.
- i) Methods that outline the contractor's responsibility to protect historic resources from damage during construction.

In addition, a qualified historic preservation professional shall review project drawings for demolition and site disturbing activities that may affect adjacent contributing historic buildings, including:

- a) Demolition
- b) Temporary and permanent shoring/underpinning
- c) Foundation design
- d) Temporary buildings, including site mounted cranes, if applicable
- e) Staging plans showing the locations of materials staging areas and indicating types of materials to be staged and time periods for staging
- f) Construction barricade and fencing plan
- g) Vehicular circulation and staging paths, indicating proposed routes and paths of travel for heavy vehicles through the site with individual plans for the different stages of construction
- h) Re-submitted project drawings produced on an as-needed basis when project details are revised, or if project techniques are changed after Construction Protection Specification review.

LU-6 Where heavy equipment would be used on a development project, the project sponsor of such a project shall undertake a monitoring program to minimize damage to contributing buildings and structures to the SSHHD within 75 feet of the project site and to ensure that any such damage is documented and repaired. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a historic architect or qualified historic preservation professional to undertake a pre-construction survey of contributing resource(s) within 75 feet of planned construction to document and photograph the existing conditions of the resource(s). The qualified historic preservation professional shall submit regular monitoring reports to the Sonoma County Planning Division documenting findings from regular inspections. Should damage to contributing historic resources occur, resources shall be remediated to their pre-construction condition at the conclusion of ground-disturbing activity on the site. This policy shall be conducted in coordination with HAZ-2.

GEO-4 Halt Work if Cultural Resources are Encountered and Evaluate Resource. Developers of projects in the Planning Area shall halt all work if cultural resources are encountered during excavation or construction of a project and retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation. All such recommendations shall be in accordance with section 5097.98 of the California Public Resources Code, and section 7050.5 of the California Health and Safety Code, as applicable.

GEO-5 Inadvertent Discovery Protocol. In the event an archaeological resource is encountered during excavation or construction activities for projects within the

Planning Area, the construction contractor shall halt construction within 50 feet of the find and immediately notify the City. Construction activities shall be redirected and the project proponent shall, in consultation with the City, retain a qualified professional archaeologist to 1) evaluate the archaeological resource to determine if it meets the CEQA definition of a historical or unique archaeological resource and 2) make recommendations about the treatment of the resource, as warranted. If the resource does meet the CEQA definition of a historical or unique archaeological resource, then it shall be avoided to the extent feasible by project construction activities. If avoidance is not feasible, then adverse effects to the deposit shall be mitigated as specified by CEQA Guidelines Section 15126.4(b) (for historic resources) or Section 21083.2 (for unique archaeological resources). This mitigation may include, but is not limited to, a thorough recording of the resource on Department of Parks and Recreation Form 523 records, or archaeological data recovery (b)(3)(C), which requires a data recovery plan prior to data recovery excavation, shall be followed. If the significant identified resources are unique archaeological resources, mitigation of these resources shall be subject to the limitations on mitigation measures for archaeological resources identified in CEQA Guidelines Sections 21083.2 (c) through 21083.2 (f).

GEO-6 Conduct Cultural Resources Awareness Training. Prior to the start of any ground disturbance or construction activities, developers of projects in the Planning Area shall retain a qualified professional archaeologist to conduct cultural resource awareness training for construction personnel. This training shall include an overview of what cultural resource are and why they are important, archaeological terms (such as site, feature, deposit), project site history, types of cultural resources likely to be uncovered during excavation, laws that protect cultural resources, and the unanticipated discovery protocol.

GEO-7 All local tribes contacted per SB 18 and AB 52 must be given the opportunity to monitor ground disturbance activities during implementation of the Proposed Plan.

3.5.3.4 Impacts

Impact 3.5-1 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of individually significant historical resources pursuant to § 15064.5. (*Less than Significant*)

Implementation of the Proposed Plan has the potential to result in the destruction of or damage to individually listed or eligible historical resources, namely the Main Building and

Sonoma House with its six support buildings and structures. However, the Proposed Plan includes policies and actions that would minimize or avoid impacts on individual historical resources by requiring the preservation and maintenance of such resources (Policies 2-47, 4-20, 4-25, 4-26, 4-31). Because the Main Building and Sonoma House and its support buildings and structures are also contributing resources to the SSHHD, projects involving these buildings are subject to the Standard Conditions of Approval policies LU-5 and LU-6, per the discussion under Impact 3.5-2.

Furthermore, at the time when rehabilitation projects for these two individual historic resources or new work immediately adjacent to the historic resources are proposed, the project-level CEQA document would need to identify potential impacts to historic resources. The CEQA Guidelines require a project that will have potentially adverse impacts on historical resources to conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Therefore, the impact of implementation of the Proposed Plan on individually significant historical resources would be less than significant with implementation of the proposed policies and actions referenced above and existing State regulations.

Mitigation Measures

None required.

Impact 3.5-2 Implementation of the Proposed Plan would cause a substantial adverse change to the significance of a historic district, as defined as physical demolition, destruction, relocation, or alteration of the historic district or its immediate surroundings such that the significance of the historic district would be materially impaired pursuant to § 15064.5.
(Significant and Unavoidable)

The Proposed Plan includes policies and actions that encourage the preservation of the historic character of the Core Campus. This includes retention, rehabilitation, and adaptive reuse of buildings, structures, and landscape features in the Core Campus area that contribute to the SSHHD (policies 4-20 through 4-31), as well as considering the preservation of contributing resources that are located in the hog and poultry area east of the Core Campus and the SDC water and sewage system to the west and north (Goals 2-I and 2-J and policy 4-32).

While some of the historic character would be preserved, demolition of some contributing resources to the historic district are assumed in the Proposed Plan. Of 94 originally

documented contributing resources, 19 were destroyed in the 2017 Sonoma Complex Fire and at least 13 may be demolished as part of future development permitted under the Proposed Plan (see Appendix C). If this occurs, up to 65 percent of contributing resources may remain from the historic district as it was concurred upon by the SHPO, which included the resources destroyed by fire. Of the 75 currently extant contributing resources, up to 83 percent would remain. Within the Core Campus area there are 47 extant contributing resources, and up to 34 (72 percent) are planned to remain.

Contributing resources are located within the Maker Place, Core North Residential, Historic Core, Utilities, Fire House Commons, Core South Residential, and Walnut Court districts/neighborhoods, which include proposed residential, commercial retail and office, recreational, and institutional uses with maximum heights for new buildings between 30' and 45', depending on the district/neighborhood. Implementation of future development and redevelopment permitted under the Proposed Plan would allow more dense new development adjacent to contributing resources, as well as alteration and reconstruction of contributing resources in the Core Campus area. New construction has the potential to disconnect the remaining contributing resources in the Core Campus from those in Community Separator and Regional Parks lands to the east and west, consequently disrupting the feeling and character within the historic district. This would affect the cohesiveness of SSHHD's overall integrity to the point that it would no longer be eligible for listing in the NRHP, CRHR, or as a California Historic Landmark. The impact of such activities is considered significant because they would cause a substantial adverse change to the historical district as defined by CEQA Guidelines Section 15064.5.

While proposed policies noted above and the Standard Conditions of Approval (LU-1, LU-2, LU-3, LU-4, LU-5, and LU-6) would help reduce these impacts to the maximum extent practicable, there are no mitigation measures available to avoid impacts entirely. As such, this impact would remain significant and unavoidable.

Mitigation Measures

None required.

Impact 3.5-3 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5. (*Less than Significant*)

There are known prehistoric and historic archaeological resources in and around the Planning Area. According to NWIC, there are six historic-period archaeological resources, including a cemetery, a trash dump, an orchard, and site of the Historic District. In order

to preserve archaeological resources outside the Core Campus, all development facilitated in the Planning Area would be in the existing developed area of the 180-acre Core Campus which is located within the SSHHD. Therefore, there is still a high potential for additional historic-period archaeological resources to be within the Planning Area and impacts may be potentially significant.

Future development projects or public works activities allowed under the Proposed Plan may involve grading, excavation, overland vehicle travel, or other ground-disturbing activities, or could facilitate public access to archaeological sites, which could disturb or damage unknown archaeological resources. Even so, the impact of such activities would be considered significant if they were to cause a substantial adverse change to the archaeological resources as defined by CEQA Guidelines Section 15064.5.

Although implementation of the Proposed Plan may result in actions that could adversely affect archaeological resources, Proposed Plan policies and actions would minimize or avoid impacts by requiring the protection and preservation of such resources. In accordance with PRC Section 21083.2 and CEQA Guidelines Section 15064.5(f), which recognize that historical or unique archaeological resources may be accidentally discovered during project construction, proposed Policy 2-52 requires any unanticipated discovery of archeological or paleontological resources to be evaluated by a qualified archeologist or paleontologist. Policy 2-53 ensures that the eventual owner and operator of the preserved parkland and open space preserves maintains public access to the SDC cemetery, and maintains and enhances existing signage and seating, as feasible.

Further, from the Standard Conditions of Approval, GEO-4 requires developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation, Policy GEO-5 requires developers to create an inadvertent discovery plan to be implemented if cultural resources are encountered during excavation or construction of a project, and Policy GEO-6 requires developers to conduct cultural resource awareness training prior to project-related ground disturbance. At the program level, the impact of implementation of the Proposed Plan on archaeological resources would be less than significant, with implementation of existing State regulations, the proposed policies referenced above, and the following mitigation measures.

Mitigation Measures

None required.

Impact 3.5-4 Development allowed by the Proposed Plan would not have the potential to disturb any human remains, including those interred outside of dedicated cemeteries. (*Less than Significant*)

Human remains, particularly those interred outside of formal cemeteries, could be disturbed during construction through grading, excavation, or other ground-disturbing activities associated with future development or redevelopment projects allowed under the Proposed Plan. Operation of the Proposed Plan would not include on-going ground disturbance activities; therefore, operational activities would not have the potential to disturb any human remains. As previously discussed, consultation with the tribes per SB 18 and AB 52 provides the opportunity for Native American tribes to identify if known resources could be compromised by implementation of the Proposed Plan, including those containing human remains. Consultation with tribes did not identify known areas that could contain human remains. However, given the historical occupation of Native Americans tribes in the Planning Area, development allowed by the Proposed Plan may have the potential to disturb human remains.

Implementation of proposed Policy 2-53 would require the preservation and maintenance of the SDC cemetery, resulting in no potential for the Proposed Plan to disturb human remains within the cemetery boundaries. Implementation of the Standard Conditions of Approval policies GEO-4, GEO-5, and GEO-6 would also reduce any potential impact on archaeological and tribal cultural resources, including human remains. In addition, all future development in the Planning Area shall occur in accordance with State laws pertaining to the discovery of human remains. If human remains of Native American origin are discovered during project construction, the developer and/or the Planning Department shall comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). At the program level, the impact of implementation of the Proposed Plan on human remains would therefore be less than significant with implementation of existing State regulations as well as policies and actions within the Proposed Plan.

Mitigation Measures

None required.

Impact 3.5-5 Implementation of the Proposed Plan would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size

and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (*Less than Significant*)

Implementation of the Proposed Plan would not directly result in physical construction or operational activities that could impact known tribal cultural resources. Under Public Resources Code Section 5097.5, no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site (including fossilized footprints), inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency that has jurisdiction over the lands.

However, future development or redevelopment projects allowed under the Proposed Plan could result in impacts through grading, overland construction vehicle travel, or other ground-disturbing activities, or through facilitation of public access to culturally significant sites. The impact of such activities would be considered significant if they were to cause a substantial adverse change to the resources as defined by PRC Section 21074. As previously discussed, HRIER determined that a cultural landscape does not exist in the Planning Area. However, NWIC identified six recorded Native American archaeological resources within the Planning Area. While the exact location of these resources is not public information, consultation with the tribes per SB 18 and AB 52 provides the opportunity for Native American tribes to identify if known resources could be compromised by implementation of the Proposed Plan. Consultation with tribes also provides the opportunity to identify approaches to avoiding or developing proposed policies to mitigate significant effects on tribal cultural resources. Through consultation, no responses identified if known resources could be compromised by implementation of the Proposed Plan. However, the Lytton Rancheria of California requests that conditions be placed on the project requiring all ground disturbing activities to be tribally monitored.

Subsequently, Standard Conditions of Approval policy GEO-7 requires that all local tribes contacted per SB 18 and AB 52 must be given the opportunity to monitor ground disturbance activities during implementation of the Proposed Plan.

In addition to consultation with tribes required by State law, and in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15064.5(f), which recognize that historical or unique archaeological resources may be accidentally discovered during project construction, Standard Conditions of Approval policy GEO-4 requires developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation, Policy GEO-5 requires developers to create an inadvertent discovery plan to be implemented if cultural resources are encountered during excavation or construction of a project, and Policy GEO-6 requires developers to conduct cultural resource awareness training prior to project-related ground disturbance. At the program level, the impact of implementation of the Proposed Plan on tribal cultural resources would therefore be less than significant with implementation of existing State regulations as well as policies and actions within the Proposed Plan.

Mitigation Measures

None required.

3.6

Energy and Greenhouse Gas Emissions

3.6 Energy and Greenhouse Gas Emissions

This section assesses potential environmental impacts on energy resources and due to greenhouse gas (GHG) emissions from future development under the Project. The section describes the existing environmental setting for GHGs and energy resources and services for the Planning Area, as well as relevant federal, State, and local regulations and programs. There were 22 comments on the Notice of Preparation (NOP) regarding topics covered in this section:

- The North Sonoma Valley Municipal Advisory Council and many community members requested that analysis include anticipated energy demands (discussed in Impact 3.6-1) and availability of renewable energy sources (Impact 3.6-2).
- The Sonoma Valley Collaborative, Sonoma County Transportation and Land-Use Coalition, California River Watch, Sierra Club Sonoma Group, Sonoma Valley Citizens Advisory Commission, and several other community members voiced concerns about the impacts of additional GHG emissions due to increased intensity of land uses and more traffic density. Impacts of the Project on GHG emissions are analyzed in Impact 3.6-3.
- The Sonoma Land Trust called for GHG analysis to be compliant with recent statewide regulations and executive orders and that existing conditions be based on a current (2022) baseline. Regulatory setting is discussed in Section 3.6.1 below and used to analyze Impact 3.6-4. In addition, potential impacts on GHG emissions reduction capacity due to changes in land uses as a result of the Project are discussed in Impact 3.6-3.
- Caltrans commented that potential emissions from the Project, such as those generated by a potential new road, should be consistent with the State's goals for GHG reductions. GHG emissions and compliance with regulations are addressed in impacts 3.6-3 and 3.6-4.

3.6.1 Regulatory Setting

3.6.1.1 Federal Regulations

There is currently no federal overarching law specifically related to climate change or the reduction of GHG emissions. However, the following programs and standards are part of the U.S.'s effort to play its part in addressing global climate change by reducing energy consumption and production of GHGs.

Corporate Average Fuel Economy Standards

The National Highway Traffic Safety Administration's (NHTSA's) Corporate Average Fuel Economy (CAFE) standards require substantial improvements in fuel economy and reductions in GHG emissions generated by passenger cars and light trucks (collectively, light-duty vehicles) sold in the U.S. Medium- and heavy-duty trucks and engines are also regulated separately. In March 2020, NHTSA and EPA published CAFE and carbon dioxide emissions standards for model years 2021-2026 under the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule that increased standards by 1.5 percent each year for light-duty vehicle model years 2021 through 2026. Originally, the SAFE Vehicles Rule Part One (SAFE I Rule) codified and pronounced that federal fuel economy standards preempted state and local laws. After a series of petitions, a filed lawsuit, extensive public comment, and a presidential executive order, NHTSA repealed the SAFE Vehicles Rule in December 2021. This decision allows California to continue to set state standards to address local communities' environmental and public health challenges including tailpipe emissions. In March 2022, NHTSA finalized revised CAFE Standards for model years 2024-2026, which require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for light-duty vehicles in model year 2026 (increases 8 percent annually for model years 2024-2025 and 10 annually for model year 2026). NHTSA estimates that the final standards will avoid consumption of about 234 billion gallons of gas between model years 2030 to 2050 and reduce GHG emissions, air pollution, and the country's dependence on oil.

Energy Star Program

Energy Star is a joint program of the EPA and the U.S. Department of Energy (DOE). The program establishes criteria for energy efficiency for household products and labels energy efficient products with the Energy Star seal. For example, homes can earn the Energy Star certification if they are verified to meet the EPA's guidelines for energy efficiency. To earn the Energy Star certification in California, site-built or modular homes must meet energy efficiency the performance target as determined by energy modeling

through a California Energy Commission- (CEC-) approved software program, construct the home using the preferred set of efficiency measures, and verify that the home meets every item on the National Rater Checklist through a Rater. Energy Star certified homes typically feature more efficient walls; windows; air ducts; heating, ventilation, and air conditioning (HVAC) system; and lighting and appliances that allow homeowners to operate their homes using less power and resources.

3.6.1.2 State Regulations

Statewide GHG Emission Targets

Reducing GHG emissions in California has been the focus of the State government for approximately two decades. GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and then reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016), consistent with the target in Executive Order (EO) 30-15. EO S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. These targets are in line with the scientifically established levels needed to limit the rise in global temperature from pre-industrial levels to no more than two degrees Celsius (°C), the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected.⁴⁰ Based on worldwide scientific agreement that carbon neutrality must be achieved by midcentury (established by the Paris Agreement in 2015), EO B-55-18 sets a State goal to achieve carbon neutrality no later than 2045 and achieve and maintain net negative emissions thereafter. EO B-55-18 charges CARB with developing a framework for implementing and tracking progress toward these goals. This executive order extends EO S-3-05 and acknowledges the role of increased carbon sequestration on natural and working lands for the State to achieve carbon neutrality and become net carbon negative.

⁴⁰ United Nations, Historic Paris Agreement on Climate Change: 195 Nations Set Path to Keep Temperature Rise Well Below 2 Degrees Celsius, December 13, 2015, <https://unfccc.int/news/finale-cop21>, accessed August 16, 2021.

Climate Change Scoping Plan

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emissions target for 2030 and "substantially advance toward our 2050 climate goals."⁴¹ It also identifies the reductions needed by each GHG emission sector (e.g., industry, transportation, electricity generation). The State has also passed more detailed legislation to address GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption, as summarized below.

In May 2022, CARB released its Draft 2022 Scoping Plan that continues the path set by the 2017 Scoping Plan for achieving statewide reduction targets for 2030 (40 percent below 1990 levels) and carbon neutrality by 2045 or earlier. The draft plan scientifically reinforces the importance of comprehensive GHG reduction strategies and introduces new emphasis on the role of Natural and Working Lands (NWL) such as forests, shrublands/chaparral, croplands, wetlands, and other lands that will help sequester carbon from the atmosphere. The Draft 2022 Scoping Plan draws on four modeled scenarios that reduce petroleum use from 81 to 99 percent below 2022 levels, and the proposed scenario reduces petroleum use by 91 percent in 2045 from 2022 levels. Finalization of the Draft 2022 Scoping Plan is expected by the end of 2022.

California Climate Adaptation Strategy

The California Climate Adaptation Strategy (AB 1482, 2015) links together the State's existing and planned climate adaptation efforts, showing how they fit together to achieve California's six climate resilience priorities:

- Strengthen protections for climate vulnerable communities,
- Bolster public health and safety to protect against increasing climate risks,
- Build a climate resilient economy,
- Accelerate nature-based climate solutions and strengthen climate resilience of natural systems,

⁴¹ California Air Resources Board, California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed August 16, 2021.

- Make decisions based on the best available climate science, and
- Partner and collaborate to leverage resources.

The strategy is required to be updated every three years, most recently in 2021. The 2021 strategy builds on successful elements of previous strategies and reflects concentrated efforts to protect communities, the economy, and nature from climate change impacts. The Climate Adaptation Strategy seeks to draw connections between sectors by bringing together numerous state plans and strategies including statewide climate action plans (like the Natural and Working Lands Climate Smart Strategy, discussed below), sector-based strategies, regionally-focused strategies, and State stewardship plans.

Nature-Based Climate Solutions (Executive Order N-82-20)

In October 2020, the Nature Based Solutions EO N-82-20 elevated the role of natural working lands in the fight against climate change and advanced biodiversity conservation as an administration priority. As part of this order, the State committed to the goal of conserving 30 percent of California's lands and coastal waters by 2030 (referred to as the "30x30" strategy), overseen by the California Natural Resources Agency (CRNA). The Pathways to 30x30⁴² strategy identifies key objectives and strategic actions toward this target.

Critical to this effort is the recognition of the role of NWL in offsetting atmospheric carbon. The Natural and Working Lands Climate Smart Strategy⁴³ defines the eight types of NWL in California (forests, shrublands/chaparral, developed lands, wetlands, seagrasses and seaweeds, croplands, grasslands, and sparsely vegetated lands), highlights priority nature-based climate solutions to address the climate crisis, and explores opportunities for regional climate smart land management, among other objectives. Nature-based solutions focus on enhancing the co-benefits of ecosystem services of resources like

⁴² California Natural Resources Agency, Pathways to 30x30 California: Accelerating Conservation of California's Nature, April 22, 2022, <https://canature.maps.arcgis.com/sharing/rest/content/items/8da9faef231c4e31b651ae6dff95254e/data>, accessed May 19, 2022.

⁴³ Natural and Working Lands Climate Smart Strategy Draft for Public Comment, October 11, 2021, https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508-opt.pdf, accessed May 19, 2022.

natural vegetation (e.g., trees, parks, and urban forestry), wetlands and riparian areas, agricultural practices, and forest management.

Transportation-related Standards and Regulations

In 2007, CARB adopted the Low-Carbon Fuel Standard to reduce the carbon intensity of California's transportation fuels. The Low-Carbon Fuel Standard applies to fuels used by on-road motor vehicles as well as off-road vehicles, including construction equipment. In addition to regulations to address issues related to tailpipe emissions and transportation fuels, the State legislature has passed regulations to address issues related to the number of miles driven in on-road vehicles.

EO B-16-12 orders CARB, the CEC, and the California Public Utilities Commission (CPUC), to support the rapid commercialization of zero-emission vehicles (ZEVs) and achieve various benchmarks related to ZEVs. In response, CARB established the Advanced Clean Cars program (now referred to as Advanced Clean Cars 1) that set more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles. These regulations are projected to reduce GHG emissions from new vehicles by approximately 40 percent in 2025 relative to 2012 model-year vehicles.⁴⁴ In addition, the program's ZEV regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to make up a growing percentage of California's new vehicle sales. By 2025, when the rules are fully implemented, the statewide fleet of new cars and light-duty trucks will emit 75 percent less smog-forming pollution than the statewide fleet in 2012.⁴⁵ The proposed Advanced Clean Cars 2 program lays out California's legally binding path (Executive Order N-79-20) to achieving 100 percent ZEV sales in 2035. Additionally, Executive Order B-48-18, signed into law in January 2018, requires all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, 200 hydrogen fueling stations available, and 250,000 EV charging stations installed by 2025. Furthermore, it specifies that 10,000 of these charging stations must be direct-current fast chargers.

⁴⁴ California Air Resources Board, Advanced Clean Cars Program, 2021, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>, accessed August 16, 2021.

⁴⁵ Ibid.

Since passage of the Sustainable Communities and Climate Protection Act (SB 375) in 2008, CARB has required metropolitan planning organizations (MPOs) to adopt plans that show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035.⁴⁶ These plans, known as Sustainable Communities Strategies (SCS) link land use and housing allocations to transportation planning and related mobile-source emissions. The Metropolitan Transportation Commission (MTC) serves as the MPO for the nine counties in the Bay Area region, including Sonoma County, which is where the Planning Area site is located.

Under SB 743, in 2013, the Governor's Office of Planning and Research (OPR) implemented changes to the California Environmental Quality Act (CEQA) Guidelines, including the addition of Section 15064.3, which requires CEQA transportation analyses to move away from a focus on vehicle delay and level of service (LOS).⁴⁷ In support of these changes, OPR published its Technical Advisory on Evaluating Transportation Impacts in CEQA, which recommends that the determination of the transportation impact of a project be based on whether project-related vehicle miles traveled (VMT) per capita (or VMT per employee) would be 15 percent lower than that of existing development in the region.⁴⁸ OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions."⁴⁹ This metric is intended to replace the use of vehicle delay and LOS to measure transportation-related impacts.

⁴⁶ California Air Resources Board, SB 375 Regional Greenhouse Gas Emissions Reduction Targets, Approved by the California Air Resources Board on March 22, 2018, <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>, accessed August 16, 2021.

⁴⁷ Governor's Office of Planning and Research, Proposed Updates to the CEQA Guidelines, November 2017, http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf, accessed August 16, 2021.

⁴⁸ Governor's Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA, November 2017, http://www.opr.ca.gov/docs/20171127_Transportation_Analysis_TA_Nov_2017.pdf, accessed August 16, 2021.

⁴⁹ Ibid.

In response to executive orders N-19-19 and N-79-20, the California State Transportation Agency (CalSTA) adopted the Climate Action Plan for Transportation Infrastructure (CAPTI) in July 2021 to support state goals for reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions. CAPTI outlines strategies and actions that will advance more sustainable, equitable, and healthy modes of transportation and accelerate the transition to ZEV technology. CAPTI also helps California plan for how to best administer potential new sources of federal climate-related transportation funding.

Legislation Associated with Electricity Generation

In 2002, the State passed legislation (SB 1078) that required 20 percent of electricity retail sales to be served by renewable resources by 2017, known as the Renewables Portfolio Standard (RPS) program. In 2015, this requirement was increased to 50 percent by 2030 (SB 350), and under SB 100 (2018), California utilities are now required to achieve 52 percent of their electric retail sales to end-use customers from renewable and zero-carbon resources by 2027, 60 percent by 2030, and 100 percent by 2045. SB 100 also requires the CEC, CPUC, and CARB to issue a joint policy report by 2021 and every four years thereafter; the 2021 SB 1000 Joint Agency Report assesses the costs and benefits of additional energy resources and resource building rates needed to achieve 100-percent clean electricity, which modeling results have shown is technically achievable through multiple pathways.⁵⁰

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Code of Regulations (CCR), Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The CEC updates the California Energy Code every 3 years with more stringent design requirements to reduce energy consumption, resulting in lower GHG emissions. The 2019 California Energy Code, which took effect on January 1, 2020, requires builders to use more energy-efficient building technologies to comply with requirements regarding energy use. New residential units are required to include solar panels to offset the estimated electrical demands of each unit (California Solar Mandate, CCR, Title 24, Part 6, Section 150.1[c]14). CEC estimates that the 2019 California Energy Code's combination of required energy-efficient features and

⁵⁰ California Energy Commission, "SB 100 Joint Agency Report," September 2021, <https://www.energy.ca.gov/sb100>, accessed May 13, 2022.

mandatory solar panels will result in new residential units that use 53 percent less energy than those that were designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those that were designed to meet the 2016 California Energy Code, primarily through the transition to high-efficacy lighting.⁵¹

The 2022 Energy Code has been adopted by CEC and will take effect starting January 1, 2023. This update focuses on four key areas in new construction of homes and businesses that support the State's mission to achieve a 100-percent clean energy future: encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. This means that all new homes are required to be electric-ready, with dedicated 240-volt outlets and space for electric appliances that will eventually replace installed gas appliances. Additionally, select businesses will have systems maximized for onsite solar energy to avoid peak energy demand times and improved efficiency standards for building design and grid integration.⁵²

Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code—Title 24, Part 11, California Code of Regulations—known as CALGreen, is the nation's first mandatory green building standards code. In 2007, the California Building Standards Commission (CBSC) developed green building standards in an effort to meet the GHG reduction goals of AB 32. CBSC has the authority to propose CALGreen standards for nonresidential structures that include new buildings or portions of new buildings, additions and alterations, and all occupancies where no other State agency has the authority to adopt green building standards applicable to those occupancies. Voluntary green building measures can also be used to achieve CALGreen Tier 1 or Tier 2 levels, which comply with or exceed by at least 15 percent (respectively) the latest edition of "Savings By Design, Healthcare

⁵¹ California Energy Commission, 2019 Building Energy Efficiency Standards: Frequently Asked Questions, March 2018, https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf, accessed August 16, 2021.

⁵² California Energy Commission, 2022 Building Energy Efficiency Standards Summary, August 2021, https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf, accessed May 19, 2022.

Modeling Procedures.”⁵³ The 2019 CALGreen Code is the current version that took effect January 1, 2020. The 2021 Triennial Code Adoption Cycle is currently underway, and once approved, the 2022 CALGreen Code will take effect January 1, 2023. Changes under the 2022 CALGreen Code include increased requirements for EV charging spaces and facilities for multifamily developments.

Clean Energy and Pollution Reduction Act of 2015

SB 350 was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions require the following by 2030: 1) a renewables portfolio standard of 50 percent and 2) a doubling of energy efficiency by 2030, including improvements to the efficiency of existing buildings. These provisions will be implemented by future actions of the CPUC and CEC.

Solid Waste Diversion Regulations

To minimize the amount of solid waste that must be disposed of in landfills, the State legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 50 percent of all solid waste from landfill facilities by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. AB 341 also established the goal that no less than 75 percent of solid waste generated by source-reduced, recycled, or composted by 2020.

In 2014, AB 1826 required businesses, including State agencies, to recycle organic waste and required local jurisdictions to implement an organic waste recycling program (as of January 2016). From January 2017, AB 2396 further required state agencies to include information on their compliance with mandatory commercial recycling (AB 341) and commercial organics recycling (AB 1826) requirements in their annual report to

⁵³ Pacific Gas and Electric Company, 2016 Savings By Design Healthcare Baseline Procedures, April 2016, https://www.calmac.org/publications/2016_Savings_by_Design_Healthcare_Baseline_Study_Final.pdf, accessed June 16, 2022.

CalRecycle. This information is collected in the State Agency Reporting Center (SARC) database.

Cap-and-Trade Program

CARB administers the State's cap-and-trade program, which covers GHG sources that emit more than 25,000 metric tons of carbon dioxide equivalents per year (MTCO₂e/year), such as refineries, power plants, and industrial facilities. This market-based approach to reducing GHG emissions provides economic incentives for achieving GHG emission reductions.

Short-Lived Climate Pollutant Reduction Strategy

In 2014, SB 605 directed CARB, in coordination with other State agencies and local air districts, to develop a comprehensive Short-Lived Climate Pollutant (SLCP) Reduction Strategy. In 2016, SB 1383 directed CARB to approve and implement the SLCP Reduction Strategy to achieve the following reductions in SLCPs, which account for about one-third of the cumulative GHG emissions reduction the State is relying on to achieve the statewide 2030 GHG emissions target established under SB 32:

- 40 percent reduction in CH₄ relative to 2013 levels by 2030,
- 40 percent reduction in HFC gases relative to 2013 levels by 2030, and
- 50 percent reduction in anthropogenic black carbon relative to 2013 levels by 2030.

SB 1383 also establishes the following targets for reducing organic waste in landfills as well as CH₄ emissions from dairy and livestock operations, as follows:

- 50 percent reduction in organic waste disposal relative to 2014 levels by 2020,
- 75 percent reduction in organic waste disposal relative to 2014 levels by 2025, and
- 40 percent reduction in CH₄ emissions from livestock and dairy manure management operations relative to the livestock and dairy sectors' 2013 levels by 2030.

CARB adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the CH₄, HFC, and anthropogenic black carbon reduction targets set by SB 1383. The SLCP Reduction Strategy includes 10 measures to reduce SLCPs, which fit within a wide range of ongoing planning efforts throughout the state. In November 2020, CalRecycle finalized new and amended regulations to CCR Title 14 and Title 27 to achieve the organic waste reduction goals under SB 1383. Among other things, the regulations set forth

minimum standards for organic waste collection, hauling, and composting, which took effect on January 1, 2022.

Water Conservation Act of 2009

Reductions in water consumption reduce the amount of energy, as well as the emissions, associated with conveying, treating, and distributing the water; emissions from wastewater treatment are also reduced. The overall goal of SB X7-7, the Water Conservation Act of 2009, was to reduce per capita urban water use by 20 percent by 2020, with an incremental progress benchmark of at least 10 percent by 2015. Urban Water Management Plans (UWMPs) are prepared by urban water suppliers every five years (starting in 2010) and support long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs while also reporting progress toward meeting the 20 percent reduction per capita goal for 2020. UWMPs for 2020 were due July 2021.

Water Conservation Legislation (AB 1668 and SB 606)

The 2018 Water Conservation Legislation (AB 1668 and SB 606) builds on the Water Conservation Act of 2009 and the long-term framework (“Making Water Conservation a California Way of Life”) developed in 2017 in response to EO B-37-16. The 2018 legislation establishes a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California by amending existing law to provide expanded and new authorities and requirements to enable permanent changes and actions. This legislation applies to the actions of the Department of Water Resources (DWR), the State Water Resources Control Board (SWRCB), and water suppliers; it does not directly set any standards or rules for individual use. As a first step in implementation, DWR and SWRCB published a “primer” handbook that outlines the key authorities, requirements, timeline, roles, and responsibilities of State agencies, water suppliers, and other entities during implementation of actions described in the 2018 legislation. The handbook organized by the four goals of EO B-37-16—use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning—which guide the major areas of coverage such as regulating urban retail water use, expanding water loss reporting requirements, requiring countywide drought planning for small water suppliers and rural communities, and increasing requirements for

agricultural water use.⁵⁴ The handbook anticipated that the State Legislature and SWR will adopt new standards affecting water use as soon as 2020; the first of these rulemakings, the Water Loss Control performance standards (California Water Code Section 10608.34) is currently underway.

3.6.1.3 Regional Regulations

Metropolitan Transportation Commission

The MTC is the Metropolitan Planning Organization for the nine counties that comprise the San Francisco Bay Area and the San Francisco Bay Area Air Basin (SFBAAB), which includes Sonoma County. The first per-capita GHG emissions reduction targets for the SFBAAB were seven percent by 2020 and 15 percent by 2035 from 2005 levels. MTC adopted a SCS as part of their first regional transportation plan for the SFBAAB in 2013, known as Plan Bay Area.⁵⁵ The Association of Bay Area Governments (ABAG) and MTC adopted a strategic update to this plan in 2017, known as Plan Bay Area 2040. As a limited and focused update, Plan Bay Area 2040 built upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning assumptions that incorporate key economic, demographic, and financial trends since 2013.⁵⁶ The most recent update is Plan Bay Area 2050, which was adopted in October 2021, and serves as a roadmap for the region's future through 2050.⁵⁷ For the San Francisco Bay Area, the per

⁵⁴ California Department of Water Resources and State Water Resources Control Board, Making Water conservation a California Way of Life – Primer of 2018 Legislation on Water conservation and Drought Planning, Senate Bill 606 (Hertzberg) and Assembly Bill 1668 (Friedman), November 2018, <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Make-Water-Conservation-A-California-Way-of-Life/Files/PDFs/Final-WCL-Primer.pdf?la=en&hash=B442FD7A34349FA91DA5CDEFC47134EA38ABF209>, accessed August 1, 2022.

⁵⁵ Metropolitan Transportation Commission and Association of Bay Area Governments. 2017. Plan Bay Area 2040. Adopted July 26. Available: <http://files.mtc.ca.gov/library/pub/30060.pdf>. Accessed: August 16, 2021.

⁵⁶ Ibid.

⁵⁷ Association of Bay Area Governments and Metropolitan Transportation Commission. 2021. Plan Bay Area 2050: A Vision for the Future,

capita GHG emissions reduction target from vehicles and light-duty trucks applicable to Plan Bay Area 2050 is 19 percent below 2005 levels by 2035 .

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for addressing air quality concerns in the San Francisco Bay Area, including southern Sonoma County. Its role is discussed further in Section 3.2, Air Quality. BAAQMD has adopted advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's GHG emissions, including long range plans (e.g., general plans, specific plans), which are outlined in its 2017 California Environmental Quality Act: Air Quality Guidelines (CEQA Guidelines).⁵⁸ The 2017 CEQA Guidelines also outline methods for quantifying GHG emissions, as well as potential mitigation measures. On April 20, 2022, BAAQMD adopted new CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans⁵⁹, which is intended to be consistent with CARB's 2022 Scoping Plan (once adopted). The new adopted thresholds (which are intended to apply to CEQA projects for which a NOP is issued and environmental analysis is begun after the April 20, 2022 adoption) are consistent with statewide goals—40 percent below 1990 levels by 2030 and carbon neutrality by 2045—or consistency with a local GHG reduction strategy (such as a climate action plan) that meets the criteria under State CEQA Guidelines Section 15183.5(b). Furthermore, BAAQMD recommends “fair share” analysis focused on incorporation of design elements for individual land use development projects that support the State's carbon neutrality goals. BAAQMD's CEQA Guidelines have not yet been updated to reflect these changes.

https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed January 3, 2022.

⁵⁸ Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, May 2017, https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed August 16, 2021.

⁵⁹ Bay Area Air Quality Management District, Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans, April 2022, <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en>.

Pacific Gas and Electric and Sonoma Clean Power

As further detailed in the Environmental Setting, Pacific Gas and Electric (PG&E) and Sonoma Clean Power (SCP) are the energy providers for the Planning Area, and both providers offer a 100-percent renewable power purchase option for their customers. Both PG&E and SCP have updated their integrated resource plans (IRPs) to meet State requirements for RPS in 2020. SCP's 2020 IRP⁶⁰ describes how SCP meets State determinations for the provider's benchmarked and preferred conforming portfolios needed to meet statewide RPS, GHG, and resource adequacy goals and are consistent with CPUC's statewide plan. PG&E's 2020 IRP⁶¹ builds on challenges and findings from its original IRP (2018) to set a plan for safely and reliably delivering affordable and clean energy to its customers while building the energy network of the future. Considerations include need for additional procurement to meet resource adequacy as well as RPS requirements under the different State scenarios.

3.6.1.4 Local Regulations

Sonoma County General Plan

The Planning Area is State-owned land, and as such, County General Plan and zoning does not apply to the Planning Area as long as the State remains the owner. However, the County General Plan provides an appropriate policy context. The Sonoma County General Plan, last updated in 2008 for the horizon year 2020, is the guiding document for land use, zoning, and other planning decisions for unincorporated communities in Sonoma County, including those adjacent to the Planning Area. The Open Space and Resource Conservation Element includes objectives to minimize GHG emissions as well as encourage reduced motor vehicle use as a means of reducing GHG emissions. This element also includes policies for energy conservation and demand reduction as well as energy production and supply that encourage use of on-site energy production and

⁶⁰ Sonoma Clean Power Authority, Standard LSE Plan: 2020 Integrated Resource Plan, October 2, 2020, https://sonomacleanpower.org/uploads/documents/soma_v2.pdf, accessed June 19, 2022.

⁶¹ Pacific Gas and Electric, Integrated Resource Plan, September 1, 2020, https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-supply/integrated-resource-planning/2020-PGE-Integrated-Resource-Plan.pdf, accessed June 19, 2022.

renewable energy sources. The Circulation and Transit Element describes goals, objectives, and policies that seek to reduce VMT by promoting non-automobile modes of transit and reducing single-occupancy vehicle trips, thereby reducing GHG emissions and energy consumption resulting from mobile sources.

Sonoma County is currently preparing an update to its general plan, which will be based on a framework of five central concepts from the Strategic Plan 2021 approved by the County's Board of Supervisors: Healthy and Safe Communities, Organizational Excellence, Racial Equity and Social Justice, Climate Action and Resiliency, and Resilient Infrastructure. In parallel with this general plan update process and following adoption of the Project, the Sonoma County General Plan would be concurrently amended to maintain Project consistency. See Section 3.11: Land Use and Planning for more information about the Project's relationship with the Sonoma County General Plan.

Regional Climate Protection Authority

The Regional Climate Protection Authority (RCPA) was formed in 2009 to coordinate countywide climate protection efforts among Sonoma County's nine cities and multiple agencies. In 2016, RCPA developed and adopted a regional Climate Action Plan (CAP), "Climate Action Plan 2020 and Beyond," and EIR, which was subsequently litigated. Because the Superior Court found the EIR to be inadequate, the County Board of Supervisors were not able to adopt the CAP. Resolution 18-0166, the "Climate Change Action Resolution," (described further below) instead reaffirms the Board's intent to reduce GHG emissions as part of a coordinated effort through RCPA and adopt local implementation measures as outlined in RCPA's CAP.

Climate Action 2020 and Beyond

Though the CAP cannot be used for CEQA purposes, it helps guide RCPA's efforts in countywide coordination of climate protection efforts. As such, the following information is included for informational purposes only. The CAP includes:

- An inventory of GHG emissions by sector,
- An overall strategy for reducing GHG emissions for each source,
- Implementation strategies for achieving GHG emissions reductions,
- Near-term actions for each city and the unincorporated County, and
- An analysis of the County's "climate readiness" (ability to withstand future climate-related hazards).

The CAP found Sonoma County's 2010 baseline community-wide GHG emissions inventory to be approximately 3,601,000 MTCO₂e, and the 2050 business-as-usual forecast was estimated as 5,113,000 MTCO₂e. In July 2018, RCPA published the first update to the community-wide GHG inventory using 2015 data. This update shows the County's progress toward achieving its goals of reducing emissions by 25 percent below 1990 levels by 2020 and 80 percent below 1990 levels by 2050; in 2015, the County's emissions reductions were only nine percent below 1990 levels.

Climate Change Action Resolution (Sonoma County Resolution 18-0166)

The Sonoma County Board of Supervisors adopted the Climate Change Action Resolution in May 2018 to affirm local goals to reduce GHG emissions and provide that the County will pursue local actions to support these goals. This resolution helps create countywide consistency about coordinated implementation of GHG reduction measures by including the following goals/actions:

- Work toward RCPA's countywide target to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (pursuant to AB 32).
- Reduce GHG emissions by:
 - Increasing building energy efficiency;
 - Reducing travel demand through focused growth;
 - Encouraging a shift toward low-carbon transportation options;
 - Encouraging a shift toward low-carbon fuels in vehicles and equipment, including switching equipment from fossil fuel to electricity;
 - Increasing vehicle and equipment fuel efficiency;
 - Reducing idling;
 - Increasing solid waste diversion;
 - Increasing capture and use of methane from landfills;
 - Increasing renewable energy use, including for water and wastewater systems;
 - Reducing water consumption and increasing water/wastewater infrastructure efficiency;
 - Increasing recycled water and greywater use;

- Reducing emissions from livestock operations, fertilizer use, and consumption of goods and services;
 - Protecting and enhancing the value of open and working lands;
 - Promoting sustainable agriculture; and
 - Increasing carbon sequestration.
- Work to increase the health and resilience of social, natural, and built resources to withstand the impacts of climate change.
- Increase resilience by pursuing local actions that promote healthy, safe communities; protect water resources; promote a sustainable, climate-resilient economy; and mainstream the use of climate projections.

Climate Emergency Resolution (Sonoma County Resolution 19-0367)

On September 17, 2019, the Sonoma County Board of Supervisors approved the Climate Emergency Resolution (19-0367), endorsing the declaration of a climate emergency and immediate emergency mobilization to restore a safe climate. The resolution affirms federal and State findings and actions on climate change, including the statewide target to achieve carbon neutrality by 2045 as well as a 40-percent reduction in GHG emissions from 1990 levels, and highlights the role of the Recovery and Resiliency Framework approved in December 2018 to develop a framework for both fire recovery and greater community resiliency through community preparedness and infrastructure, housing, economy, safety net services, and natural resources.

Sonoma Climate Mobilization Strategy

On March 8, 2021, RCPA adopted the Sonoma Climate Mobilization Strategy in response to the 2019 Climate Emergency Resolution (described above) to mobilize an emergency response that builds on the Climate Action 2020 and Beyond plan and sets a goal of carbon neutrality by 2030, a more ambitious goal than the statewide target for 2030. To meet this goal, Sonoma County must reduce its GHG emissions by at least 80 percent below 1990 levels as well as achieve an increase in carbon sequestration that is large commensurate with the remaining CO₂ emissions to the atmosphere. The Sonoma Climate Mobilization Strategy includes 13 countywide strategies across four initiatives—decarbonization, carbon sequestration and ecosystem services, resilience and adaptation, and equity and community engagement—to be implemented over 10 years. Key efforts include implementing the Sonoma County Climate Resilience Index, securing

funding, and monitoring progress (such as through RCPA GHG inventory updates) to adjust the plan as needed.⁶²

3.6.2 Environmental Setting

3.6.2.1 Greenhouse Gases

The Greenhouse Gas Effect

The process known as the greenhouse effect keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted toward the surface by GHGs. Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a process commonly referred to as global warming. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events. Large-scale changes to Earth's system are collectively referred to as climate change.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC estimates that human-induced warming reached approximately 1°C above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current nationally determined

⁶² Sonoma County Regional Climate Protection Authority, Sonoma Climate Mobilization Strategy, adopted March 8, 2021, <https://rcpa.ca.gov/wp-content/uploads/2020/12/Sonoma-Climate-Mobilization-Strategy-Adopted-2021-03-08.pdf>, accessed August 3, 2022.

contributions of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterward. Large increases in global temperatures could have substantial adverse effects on the natural and human environments worldwide and in California.

Common Greenhouse Gases

The principal anthropogenic (human-made) GHGs contributing to global warming are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds, including sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources.

The primary GHGs of concern associated with the project are CO₂, CH₄, and N₂O. Principal characteristics of these pollutants are discussed below.

- **Carbon dioxide** enters the atmosphere through fossil fuels (oil, natural gas, and coal) combustion, solid waste decomposition, plant and animal respiration, and chemical reactions (e.g., manufacture of cement). CO₂ is also removed from the atmosphere (or sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane** is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO₂e), which compares the gas in question to that of the same mass of CO₂. CO₂ has a GWP of 1.0 by definition.

In comparison, CH₄ has a 100-year GWP of 25 years, and N₂O has a 100-year GWP of 298 years. The lifetimes of CH₄ and N₂O are 12 and 114 years, respectively.⁶³

CARB recognizes the importance of SLCPs (described in Regulatory Setting) and reducing these emissions to achieve the State's overall climate change goals. SLCPs have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂. Given their short-term lifespan and warming impact, short-lived climate pollutants are measured in terms of CO₂e using a 20-year time period. The use of GWPs with a time horizon of 20 years captures the importance of the short-lived climate pollutants and gives a better perspective as to the speed at which emission controls will affect the atmosphere relative to CO₂ emission controls. The SLCP Reduction Strategy, as discussed in the Regulatory Setting, addresses CH₄, HFC gases, and anthropogenic black carbon. CH₄ has lifetime of 12 years and a 20-year GWP of 72. HFC gases have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200. The Project's emission sources are not major contributors of HFC and black carbon; thus, they are not discussed herein.

Greenhouse Gas Reporting

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources. **Table 3.6-1** outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

⁶³ California Air Resources Board, "GHG Global Warming Potentials," 2021, <https://ww2.arb.ca.gov/ghg-gwps>, accessed June 18, 2022.

Table 3.6-1: Global, National, State, and Regional Greenhouse Gas Emission Inventories

<i>Emissions Inventory</i>	<i>Carbon Dioxide Equivalent (MTCO₂e)</i>
2019 United Nations Global Inventory ¹	24,821,331,500
2020 U.S. EPA National Inventory ²	5,981,354,000
2019 CARB State Inventory ³	418,200,000
2015 BAAQMD GHG Emissions Inventory ⁴	85,000,000
2018 Sonoma County Inventory ⁵	3,413,292
2018 Unincorporated Sonoma County ⁵	858,105

Sources:

1. United Nations, GHG data from UNFCCC, November 8, 2019, <https://unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc>, accessed May 20, 2022.
2. U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2020, April 2022, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/gas/current>, accessed May 20, 2022.
3. California Air Resources Board, 2000-2019 GHG Emissions Trends Report Data, May 16, 2022, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf, accessed May 20, 2022.
4. Bay Area Air Quality Management District, Final 2017 Clean Air Plan: Spare the Air, Cool the Climate, April 19, 2017, https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.
5. Regional Climate Protection Authority, Sonoma County Greenhouse Gas Inventory 2018 Update, September 25, 2020, <https://scta.ca.gov/wp-content/uploads/2020/06/2018-GHG-Report-FINAL-9-25.pdf>, accessed May 20, 2022.

3.6.2.2 Energy Resources and Use

Energy resources in the State of California include natural gas, electricity, water, wind, oil, coal, solar, geothermal, and nuclear resources. Energy production and energy use both result in the depletion of nonrenewable resources, such as oil, natural gas, and coal, and result in the emissions of pollutants. This section discusses the existing conditions related to energy statewide, regionally, and in the Planning Area.

State

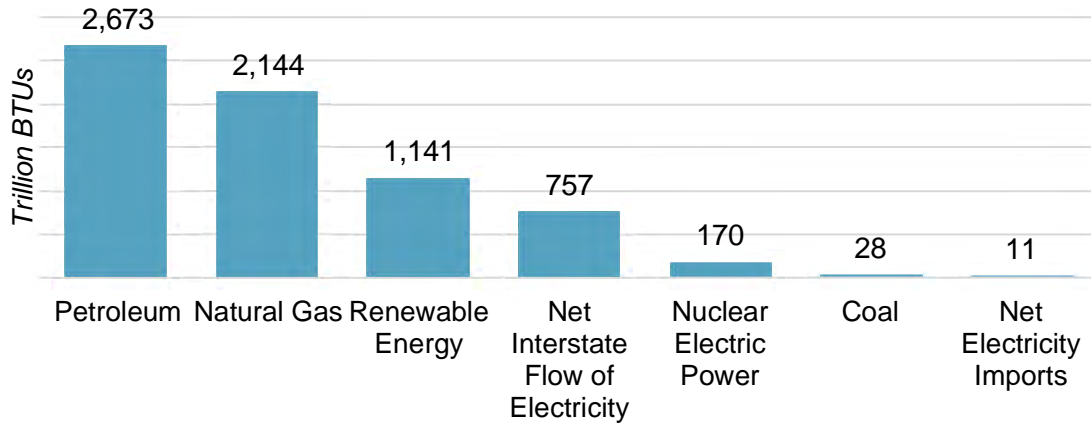
California has a diverse portfolio of energy resources that produced 2,190 trillion British thermal units (BTUs) in 2020.⁶⁴ Excluding offshore areas, the State ranked seventh in the nation in crude oil production in 2020, producing the equivalent of 814.5 trillion BTUs. The State ranked first in total renewable energy generation, with 845.3 trillion BTUs. Other energy sources in the State include natural gas (192.1 trillion BTUs) and nuclear (169.8 trillion BTUs). According to the U.S. Energy Information Administration, California consumed approximately 6,923 trillion BTUs of energy in 2020. Additionally, due to the mild Mediterranean climate and strict energy-efficiency conservation requirements, California has the third lowest total energy consumption rates per capita in the United States, at 175 million BTUs per capita in 2020.

As shown in **Figure 3.6-1**, petroleum accounted for the majority (39 percent) of energy consumption in 2020; followed by natural gas (31 percent); renewable energy (16 percent) including hydroelectric power, biomass, geothermal, solar, and wind; net interstate flow of electricity (11 percent); nuclear electric power (two percent); and other sources including coal and net electricity imports (less than one percent). Of the natural gas consumed in 2020, residential uses constituted 23 percent, commercial uses made up 12 percent, and industrial uses consumed 24 percent; electric power (30 percent) and vehicle fuel (one percent) made up the balance. In the same year, the transportation sector consumed the highest quantity of energy (2,356 trillion BTUs or 34 percent), followed by the industrial (1,701 trillion BTUs or 25 percent), residential (1,508 trillion BTUs or 22 percent), and commercial (1,358 trillion BTUs or 20 percent) sectors.

Per capita energy consumption in general is declining because of improvements in energy efficiency and design. However, despite this reduction in per capita energy use, the state's total overall energy consumption (i.e., non-per capita energy consumption) is expected to increase over the next several decades as a result of growth in population, jobs, and vehicle travel.

⁶⁴ U.S. Energy Information Administration, July 29, 2022, California State Energy Profile Data, <https://www.eia.gov/state/data.php?sid=CA>, accessed August 3, 2022.

Figure 3.6-1: California Energy Consumption by Source, 2020



Source: U.S. Energy Information Administration, 2022

Regional

PG&E provides natural gas and electricity services to the majority of Northern California, including Sonoma County and the Planning Area. PG&E's service extends from Eureka to Bakersfield (i.e., north to south) and from the Sierra Nevada to the Pacific Ocean (i.e., east to west). PG&E purchases gas and power from a variety of sources, including other utility companies. PG&E also obtains energy supplies from power plants and natural gas fields in northern California. PG&E operates a grid distribution system that channels all power produced at the various generation sources into one large energy pool for distribution throughout the service territory. PG&E provides all of the natural gas and electric infrastructure in Sonoma County.

SCP also provides electricity to customers in Sonoma and Mendocino counties using PG&E infrastructure, unless individuals choose to opt out of the program, at which point, the default electricity provider is PG&E. SCP's power comes from a variety of clean sources such as hydropower, geothermal, solar, biomass, and wind. SCP allows customers to choose between two different electricity product operations: CleanStart, which contains at least 49 percent renewable resources and 44 percent carbon-free resources as electricity sources, or EverGreen, which contains 100 percent renewable (geothermal and solar) resources as electricity sources. PG&E also offers purchase up to 100 percent of their electricity from a community renewable program generating renewable power within California, without needing to install private rooftop solar panels.

In Sonoma County, a total of 105.0 million therms of natural gas were consumed in 2020, which is about one percent of the State's total consumption in 2020. In 2020, natural gas in Sonoma County was primarily consumed by the residential sector (66 percent); the non-residential sector consumed 34 percent. In 2020, Sonoma County consumed a total of 2,867.7 million kilowatts of electricity, which is about one percent of the State's total consumption. In the county, electricity was primarily consumed by the non-residential sector (53 percent), followed by the residential sector (47 percent) in 2020.

Planning Area

The 945-acre Planning Area is comprised of primarily open space (755 acres), and the developed core campus covers approximately 180 acres, where historical uses prior to the SDC's closure in 2018 included residential, medical, educational, recreational, industrial/support services, and administrative uses in addition to agricultural uses mostly on the eastern portion of the site where the former Sunrise Industries farm was located.

The energy consumption analysis in this EIR is based on energy consumption from future development under the Project minus energy consumption related to the existing land uses to be removed as part of the Project's implementation. Energy consumption associated with existing land uses within the Planning Area that are to remain were not evaluated; this assumption is consistent with the air quality, GHG emissions, and transportation analyses.

PG&E (or SCP) would be the energy providers for the Planning Area. Future development would require new or upgraded infrastructure to service the Planning Area.

3.6.3 Impact Analysis

3.6.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Project would:

Criterion 1: Result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;

Criterion 2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency;

Criterion 3: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

Criterion 4: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

3.6.3.2 Methodology and Assumptions

Applicability of Available Greenhouse Gas Thresholds

CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of environmental impacts pertaining to GHG emissions. CEQA Guidelines Section 15064.4(a) states that a lead agency should make a good-faith effort that is based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions that would result from implementation of a project. CEQA Guidelines Section 15064.4(b) also states that, when assessing the significance of impacts from GHG emissions, a lead agency should consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions; (2) whether the project's GHG emissions would exceed a threshold of significance that the lead agency has determined to be applicable to the project; and (3) the extent to which the project would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The California Supreme Court's decision in *Center for Biological Diversity v. Department of Fish and Wildlife* (62 Cal.4th 204) confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA. Several air quality management agencies throughout the state have also drafted or adopted varying threshold approaches and guidelines for analyzing GHG emissions in CEQA documents. Common threshold approaches include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, (4) efficiency-based thresholds, and (5) compliance with regulatory programs.

The following sections discuss the threshold approaches recommended by the Courts and supported by CEQA and analyzes their applicability to the Proposed Plan.

Compliance with a Qualified GHG Reduction Strategy

OPR acknowledges that the State legislature encourages lead agencies to tier or streamline their environmental documents whenever feasible, and that GHG emissions may be best analyzed and mitigated at the programmatic level. A qualified plan may be

used in the cumulative impact analysis for later projects when the analysis “identifies those requirements specified in the plan that apply to the project.” For a GHG reduction plan to be considered a qualified plan, it must meet certain criteria established under CEQA Guidelines Sections 15183.5 (b) and 15064.4, also specified above. Consequently, if a project is consistent with a local CAP that was created to meet that area’s fair share reductions towards the AB 32 GHG target for 2020, then the project would be considered consistent with statewide GHG reduction goals for 2020. In addition, if a CAP was adopted that was consistent with the State’s overall goals for post-2020, including the downward trajectory as clarified in SB 32 and EO S-03-05, and a project is consistent with that CAP, it would be considered consistent with the State’s post-2020 GHG emission strategy. Section 15183.5 also specifies that the project’s CEQA analysis “must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project.”

As discussed under Regulatory Setting, the RCPA CAP for Sonoma County is not adopted due to a lawsuit; therefore, tiering per CEQA Guidelines Section 15183.5 is not an applicable option to assess the Proposed Plan’s GHG impacts.

Performance-Based Reductions

Performance-based thresholds are based on a percentage reduction from a projected future condition; for example, reducing future business-as-usual (BAU) emissions by the AB 32 target of 29 percent (below 2020 BAU levels) through a combination of State measures, project design features (e.g., renewable energy), or mitigation. The BAAQMD recommends a 26 percent reduction from 2020 BAU levels to meet the AB 32 target.

Based on the court’s reasoning in the Newhall Ranch decision⁶⁵, relating a given project to the achievement of State reduction targets may require adjustments to CARB’s statewide BAU model to not only isolate new development emissions, but also to consider unique geographic conditions and operational characteristics that may affect the performance of reduction measures in certain locations. To date, this type of adjustment to the statewide BAU target has not been performed and, therefore, is not appropriate for the Proposed Plan’s analysis. The primary value of a performance-based target, as indicated in the Newhall Ranch decision, is that it can provide a scenario by which to evaluate the effectiveness of a project’s reduction efficiency relative to an unmitigated

⁶⁵ Center for Biological Diversity v. Department of Fish and Wildlife, 2015, 62 Cal. 4th 204

condition. As such, future year targets can be used to benchmark performance, using either statewide or regional emission targets, to determine a project's fair share of mitigation.

Given that the Planning Area is part of unincorporated Sonoma County and that the Proposed Plan applies only to the approximately 945-acre area boundaries of the State-owned SDC property, information about past GHG emissions levels specific to the Planning Area is not available. Emissions that have been quantified in the following analysis are based on Planning-Area-specific traffic data and land use inputs for existing (2019, consistent with transportation modeling) and future conditions for the Proposed Plan's horizon year of 2040. Emissions outside of this temporal and spatial scope cannot be quantified due to lack of specific information.

Numeric Bright-Line Thresholds

Numerical bright-line thresholds identify the point at which additional analysis and mitigation of project-related GHG emission impacts is necessary. BAAQMD has not developed bright-line thresholds for construction but has for the operation of land use development projects (1,100 MTCO₂e/year) and stationary-source (10,000 MTCO₂e/year) projects.

The land use development threshold is based on a gap analysis, and ties back to the State's AB 32 reduction target (1990 levels by 2020). Given that the Proposed Plan is a programmatic plan rather than a development project and because the buildout year for the Proposed Plan is 2040, use of BAAQMD's numeric-bright line land use development threshold tailored to 2020 reduction targets would not be appropriate for the Proposed Plan's analysis. Moreover, information about specific emissions levels for the Planning Area is not available and cannot be feasibly determined.

The stationary-source threshold is derived from the California Air Pollution Control Officers Association's (CAPCOA's) capture rate analysis of required reductions needed to meet EO S-3-05, which indicates that in order to reach the 2050 milestone, future BAU emissions will need to be reduced by 90 percent. The Proposed Plan does not propose stationary sources, and specific information for individual development projects that would be allowed by the Proposed Plan is not available at this time. As such, the stationary-source project threshold is not appropriate, and potential impacts related to stationary sources are discussed qualitatively.

BAAQMD's CEQA Guidelines do not identify a GHG emission threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from construction

be quantified and disclosed, and that a determination regarding the significance of these GHG emissions be made with respect to whether a project is consistent with the emission reduction goals. BAAQMD further recommends incorporation of BMPs to reduce GHG emissions during construction, as feasible and applicable. However, because the Proposed Plan is a programmatic land use plan and does not propose individual developments for which the specific location and timing of construction is known, construction emissions resulting from the Proposed Plan cannot be reliably quantified. As such, emissions due to construction is evaluated qualitatively.

Efficiency-Based Thresholds

Another type of quantitative threshold is an efficiency-based threshold. Efficiency-based thresholds represent the GHG efficiency needed for development to achieve California's GHG emissions targets. Although the Newhall Ranch decision did not specifically recommend the efficiency-based approach, the ruling did note that numerical threshold approaches may be appropriate for determining significance of GHG emissions and to emphasize the consideration of GHG efficiency. Efficiency-based thresholds allow lead agencies to compare projects of various types, sizes, and locations equally, and determine whether a project is consistent with the State's reduction goals. Efficiency-based thresholds for a residential project can be expressed on a per-capita basis, for an office project on a per-employee basis, or for a mixed-use project (such as the Proposed Plan) on a per service population (the sum of jobs and residents) basis.

BAAQMD has developed GHG efficiency thresholds for land use projects (4.6 MTCO₂e per service population) and plans (6.6 MTCO₂e per service population) with GHG emissions resulting from a mixture of building energy, transportation, solid waste, and other emissions. Specific plans are advised to use the land use project threshold of 4.6 MTCO₂e per service population. These threshold values are based on the required efficiency emissions that these sources must achieve per service population (i.e., per the sum of jobs and residents) to meet the State's 2020 reduction targets. Given that this threshold was developed to meet the State's goal for 2020 (which has now passed) and that current regulations have updated the targets beyond 2020, use of BAAQMD's performance-based thresholds, as-is, would not be appropriate for the Proposed Plan's analysis. Instead, the following analysis uses the SB 32 goal of achieving a 40-percent reduction in GHG emissions from 1990 levels by 2030 to derive a revised threshold of 2.8 MTCO₂e per service population per year for a specific plan by applying the 40-percent reduction to the 2020 threshold of 4.6. This metric is used to determine compliance with BAAQMD guidance for projects post-2020.

As indicated by the 2017 Scoping Plan, CARB recommends statewide efficiency targets of no more than 6.0 MTCO₂e per capita by 2030 and no more than 2.0 MTCO₂e per capita by 2050. These targets were derived based on total statewide emissions from all emission categories (including emissions from stationary and industrial sources) and the reductions needed to achieve California's 2030 statewide target under SB 32 and the longer-term EO S-3-05 reduction goal of 80 percent below 1990 levels by 2050.

Because CARB's per capita efficiency targets are based on statewide emissions, they represent an average efficiency that does not specifically consider the unique geographic and project-specific features that could influence emissions reductions achieved by the Proposed Plan. The targets are also based on an inventory of GHG emissions from existing and future development through 2050, and therefore do not isolate the required emissions reductions from new development that are needed to meet State goals. Tailoring CARB's per capita targets to local project conditions is not possible with the available data published in either the 2017 Scoping Plan or Draft 2022 Scoping Plan. However, given the absence of another viable means (i.e., percent reductions from 1990 levels) to quantitatively evaluate the Proposed Plan's contribution to statewide GHG emissions reductions goals, the statewide efficiency metric is used in this analysis as a comparative threshold of significance.

Compliance with Regulatory Programs

A lead agency could rely on regulatory compliance to show a less-than-significant GHG impact if a project complies with or exceeds those programs adopted by CARB or other State agencies. However, such analysis is only applicable within the area governed by the regulations. For example, consistency with regulations addressing building efficiency would not suffice to determine that a project would not have significant GHG emissions from transportation.

The Newhall Ranch decision specifically mentions consistency with both the SCS (per SB 375) and AB 32 as potential mechanisms for evaluating significance. A lead agency could assess project-level consistency with AB 32 in whole or part by evaluating whether a project complies with applicable policies in the AB 32 Scoping Plan. The AB 32 Scoping Plan does not consider deeper reductions needed to meet the State's 2030 target under SB 32. Accordingly, exclusively relying on consistency with the AB 32 Scoping Plan and related programs to evaluate emissions generated by land use development projects constructed after 2020 would not fully consider a project's potential GHG impacts to the State's long-term reduction trajectory.

More recent guidance on GHG reduction strategies and thresholds for operational emissions has been provided at the state level through the 2017 Scoping Plan, OPR, Draft 2022 Scoping Plan, and CARB. The 2017 Scoping Plan outlines GHG reduction strategies by emission sector (water, transportation, and energy) required to meet the State's 2030 target under SB 32. OPR guidance specifies that a "land use development project that produces low VMT, achieves applicable building energy efficiency standards, uses no natural gas or other fossil fuels, and includes Energy Star appliances where available, may be able to demonstrate a less-than-significant greenhouse gas impact associated with project operation." Further, CARB guidance specifies per capita VMT reduction targets that would be needed statewide to meet long-term (2050) mobile-source GHG reduction targets, considering increased vehicle efficiency and reduced carbon content in vehicle fuels. The Draft 2022 Scoping Plan affirms the State's intentions to achieve carbon neutrality by 2045, as outlined by EO B-55-18, representing a more aggressive target than the 80 percent reductions below 1990 levels by 2050 used in the 2017 Scoping Plan. However, because the 2022 draft has not been adopted and given the issue date of the NOP for this EIR, the 2017 Scoping Plan remains the most current guidance applicable to the Proposed Plan. The 2022 Scoping Plan and carbon neutrality goals stated by EO B-55-18, which has also not been legislatively adopted, are discussed for informational purposes only.

To the extent the Proposed Plan's policies are applicable to GHGs and comply with or exceed the regulations outlined in the 2017 Scoping Plan and adopted by CARB or other State agencies, the Proposed Plan could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill the statewide goal for reducing GHG emissions. The Proposed Plan's compliance with regulatory programs adopted by CARB and other State agencies is therefore used to evaluate the significance of the Proposed Plan's GHG emissions. While the regulatory framework to achieve long-term (post-2030) emissions reductions is in its infancy, many of the programs outlined in the 2017 Scoping Plan are likely to be carried forward or have already been adopted with post-2030 requirements (e.g., RPS). Accordingly, evaluating consistency with these programs and relevant guidance published by OPR and CARB for the reduction of long-term emissions is therefore also considered in the analysis of the Proposed Plan's emissions.

Quantification of Emissions and Energy Use

GHG and energy impacts associated with construction and operation of the Proposed Plan were assessed and quantified (where applicable) using standard and accepted

software tools, methodologies, and emission factors. A full list of assumptions can be found in Appendix B: Air Quality and GHG Data.

As discussed in Chapter 2: Project Description, the Proposed Plan would facilitate development of a mix of uses, including a range of housing options, employment and institutional uses, commercial/retail uses, and community and recreational spaces. Implementation of the Proposed Plan could ultimately result in a net new development of up to 1,000 residential units, 190,000 square feet (s.f.) of office use, 40,000 s.f. of commercial/retail use, and 90,000 s.f. of hotel, 70,000 s.f. of public/institutional uses, and 20,000 of utility/infrastructure uses. This amount of development would result in approximately 2,400 new residents and 940 new jobs.

Construction

The new Highway 12 connector road and land uses that could be developed under the Proposed Plan would require energy and generate construction-related GHG emissions from mobile and stationary construction equipment exhaust and employee and haul truck vehicle exhaust. Construction activities may also require additional electricity consumption or result in tree removal, which would correspond with a loss of pollutant and GHG sequestration potential as well as other long-term ecological benefits. With an anticipated buildout year of 2040, development of the various land uses associated with the Proposed Plan would occur over an extended period and would depend on factors such as local economic conditions, market demand, and other financing considerations. However, the specific size, location, and construction techniques and scheduling that would be utilized for each individual development project, including alignment of the proposed Highway 12 connection, occurring within the Planning Area from implementation of the Proposed Plan is not currently known. Without specific project-level details (e.g., size and scale of the project to be constructed, construction schedule, equipment fleet, construction worker crew estimates, and demolition and grading quantities), it is not possible to develop a refined construction inventory, and the determination of construction emission and energy use impacts associated with GHGs and energy resources for each individual development project, or a combination of these projects, would be speculative regarding such potential future project-level environmental impacts. Thus, in the absence of the necessary construction information required to provide an informative and meaningful analysis, the evaluation of potential construction-related impacts resulting from implementation of the Proposed Plan is conducted qualitatively in this Draft EIR and assessed against applicable BAAQMD criteria.

Operations

Operation of the land uses introduced by the Proposed Plan would require energy (electricity and natural gas) consumption and generate long-term emissions of CO₂, CH₄, and N₂O. GHG emissions are expected during operation of the land uses associated with the Project from area, energy, mobile, waste, and water sources. Area sources include landscaping activities. Energy sources include electricity consumption and natural gas combustion for lighting and heating requirements. Mobile sources are vehicle trips that are generated by the service population associated with the Proposed Plan. Waste sources refer to CH₄ and N₂O from the decomposition of waste generated from the new land use developments in the Planning Area. Water sources includes electricity consumption for the supply, treatment, and distribution of water for the new land uses.

Long-term (i.e., operational) GHG emissions were quantified for the Proposed Plan using California Emissions Estimator Model (CalEEMod), version 2020.4.0. Although CAPCOA has released a newer version of CalEEMod in May 2022, this “Beta” version is still under development and is not currently capable of producing reliable results for the Proposed Plan. Modeling for GHG emissions was performed using the same methodology and inputs as described in Section 3.2: Air Quality. Where air quality analysis focuses on criteria air pollutants and toxic air contaminants, the following analysis focuses on GHG emissions and energy, including from sources not discussed for air quality (energy, waste, and water).

Like area sources, energy, waste, and water emissions were modeled according to the amount (i.e., commercial/industrial square footage or number of dwelling units) and type of land uses proposed. Energy sources account for emissions associated with the combustion of natural gas for building heating and hot water, apart from natural gas and wood hearths, which are prohibited in the air basin per BAAQMD Regulation 6, Rule 3. Quantification of energy use (i.e., gasoline and diesel fuel) additionally accounts for the daily vehicle trips generated by the Proposed Plan. Waste and water directly relate to the scale of the land use inputs.

Stationary sources such as emergency generators and boilers that would be developed for each individual development project, or a combination of these projects, would be subject to the permitting requirements by the BAAQMD. These are not included in modeled emissions because details of future projects and their stationary sources cannot be known at this time.

Emissions were quantified for existing (2019, to align with traffic data provided by the Proposed Plan’s traffic engineers, W-Trans) conditions based on land uses and traffic data that reflect the closed SDC facility. The CalEEMod “City Park” land use subtype was used to model existing conditions due to its representative level of low intensity use and was scaled for the Planning Area based on traffic inputs provided by the Proposed Plan’s transportation engineers. As a result, existing conditions reflect only mobile sources of GHG emissions and energy consumption. Full detail about modeling inputs is provided in Appendix B. Additionally, it is noted that because there has been no change in land uses at the facility since its closure in 2018, 2019 baseline conditions are appropriately comparable to current (2022) conditions. Project buildout conditions (2040) were quantified for the Proposed Plan based on anticipated land uses and modeled traffic data, which includes the Highway 12 connector road. Emissions modeled in CalEEMod include quantifiable policies, including building electrification, prohibited natural gas, prohibited pesticides, complete streets with pedestrian-oriented design, traffic-calming measures, mixed-use diversity of uses, on-site energy (microgrid) with renewable resources and methane capture, Title 24 and CALGreen Tier 2 levels, water recycling and water conservation strategies and design, and solid waste reduction. As noted above, construction and stationary sources are not modeled. The effect of extensive (750-acre) vegetated open space in the Planning Area is also excluded from quantified emissions but is noted in qualitative discussion.

3.6.3.3 Relevant Proposed Plan Goals and Policies

The following relevant goals and policies of the Proposed Plan address energy resources and GHG emissions:

Community Design

Policies

- 5-1 Provide consistent canopy shade tree plantings at approximately 36’ on center along all street frontages to establish tree-lined avenues as a key SDC identity element that complements the surrounding hills and open space landscape.
- 5-6 Reconfigure corner curb radii to 15’ maximum and add 6’ wide corner curb extensions where curbside parking is present to slow traffic movements and shorten pedestrian crossing distances.

- 5-7 Ensure connectivity and pedestrian permeability across all districts by creating multi-modal slow-speed streets, pedestrian walkways, and a fully connected sidewalk network.
- 5-8 Require a mix of high-quality, long-lasting materials such as pavers, brick, stone, or concrete for new paving and landscape improvements.
- 5-43 Use thickly-planted deciduous and evergreen trees and shrubs, in tandem with dark-sky compliant lighting, to buffer the Sonoma Creek habitat corridor from lights and human activity, particularly along Redwood, interspersed with small clearings for visual access to the creeks.
- 5-46 Use large canopy trees, including California sycamore and oak, intermixed with redwood trees throughout the Eldridge North neighborhood, especially clustering redwood trees near Sonoma Creek.
- 5-48 Use low-water, low-maintenance agricultural landscape plantings in the streetscapes and public spaces of the Agrihood, such as artichokes; native strawberry and grape varieties; boysenberries; passionfruit and kiwi vines; and fruiting fig, persimmon, olive, and citrus trees.
- 5-55 Retain and adaptively reuse historic buildings at the north and south terminus of Sonoma Avenue – Wagner, Dunbar, Wright, Hatch and Walnut.
- 5-59 Require a mix of high-quality, long-lasting materials for all new buildings, and use reclaimed and salvaged materials from demolished SDC buildings wherever feasible.
- 5-60 Ensure that development meets Title 24 and CALGreen Tier 2 requirements and incorporates green building measures such as sustainably designed sites, greywater systems or stub-outs, rooftop rainwater catchment systems, passive heating and cooling, sustainable materials, indoor environmental air quality, and use of innovative sustainability techniques.

Development Standards

- DS-24 Sustainability Standards. All new buildings shall be designed to meet and exceed CALGreen standards. Emphasis on carbon neutrality, low water use, long term flexibility and wildfire resilience are all important considerations for any new building design.

Land Use

Goals

- 4-A Diverse Mix of Land Uses: Promote a diverse and integrated mix of residential development and employment uses, including research, creative services, education, office, retail, and small businesses, to create a vibrant, walkable community hub that provides economic and cultural opportunities for Sonoma Valley communities.
- 4-D Generate deed restricted affordable housing at a range of income levels, household sizes, and ability levels, including both income-restricted affordable housing and housing that is affordable by design.
- 4-E Support affordable housing development beyond the minimum requirements through County, State, federal, and other funding sources.

Policies

- 4-2 Locate the primary commercial uses around the Central Green, including eating and drinking establishments, retail, and other local- and visitor-serving commercial uses, in order to reinforce the Central Green as the heart of the site. Give attention to ground floor activation and transparency of final designs to ensure a permeable edge between building interiors and the public realm. Smaller commercial uses may be located in other areas of the campus to the extent that they directly serve the surrounding land uses.
- 4-3 Require completion of at least 10,000 square feet of retail and eating and drinking establishments and of at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive.
- 4-4 Promote a mix of commercial uses that provides neighborhood services for residents, such as a market, bakery, coffee shop, to reduce the need for driving for everyday needs.
- 4-11 Allow for a flexible mix of uses within the Employment Center and Flex Zone designations, allowing development to respond to market conditions and the needs of potential users, in order to facilitate an economically feasible development scenario, and vibrant, synergistic business operating environment.

- 4-12 Prohibit auto-oriented establishments such as service and repair uses and drive-through establishments in the Planning Area.
- 4-14 At least 25% of both single family and multifamily rental and for-sale units must be deed-restricted, in perpetuity, as inclusionary income-restricted units.
- 4-15 Require that all required inclusionary housing must be built at the SDC site. all required inclusionary housing be built at the SDC campus. The project sponsor shall either provide inclusionary housing at site or otherwise equivalently dedicate land and pay any needed additional in-lieu fee for affordable housing to be developed on campus.
- 4-19 Utilize partnerships between Sonoma County and local affordable hHousing developers to develop at least one 100 percent affordable housing project of around 100 income-restricted units at SDC.
- 4-22 Require that the developer project sponsor prepare a historic preservation plan, based on desired development and suitability of buildings for adaptive reuse, with the overarching objective of preserving a set of buildings that reflect the diversity of building types and the continuum of life at the former SDC. For instance, retain and reuse buildings that represent various architectural styles that are character-defining to the Historic District, including French Eclectic, Spanish Eclectic, and Tudor Revival, as well as character-defining materials such as tile roofs, stucco and brick cladding, and wood windows.
- 4-23 Preserve and reuse the contributing resources identified in Figure 4.3-1, to the greatest extent feasible.
 - a. If all of the contributing resources identified in Figure 4.3-1 cannot be retained, the following buildings should be considered as least significant of those 28 contributors and studied for removal: (i) Acacia 2; (ii) Goddard; (iii) Workshop.
 - b. If all 28 contributing resources identified in the Sonoma Developmental Center Land Use Diagram cannot be retained, in addition to those listed above as least significant contributors, the following buildings should be considered less significant of those 28 contributors and studied for removal: (i) Walnut (significant damage); (ii) Firehouse; (iii) Main Store Room; (iv) Maintenance Shop; (v) Acacia I.
- 4-27 Preserve and reuse houses along Arnold Drive within the core campus, reconstructing as necessary. Require that the developer hire a preservation

architect to undertake a conditions assessment and reconstruction plan prior to demolishing and reconstructing houses on Arnold Drive that are in poor condition. Reconstruction should adhere to the Secretary of the Interior's Standards for Reconstruction.

Mobility and Access

Goals

- 3-A Street network: Enhance the existing street network to create a walkable and pedestrian-friendly environment that provides connections both within the core campus and to surrounding communities and regional trail systems.
- 3-B Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.
- 3-C Complete Streets: Ensure the street network balances the needs of pedestrians, bicyclists, transit users, and drivers, prioritizing safety, comfort, and car-free transportation connections.
- 3-F Transit Connections: Connect the site to the greater region through existing and future transit networks, with reliable, comfortable and safe public transit service that is responsive to the diverse needs of the residents, employees and visitors of the SDC area.
- 3-J Transportation Demand Management: Reduce reliance on single-occupant vehicles (SOV) and limit the number of SOV trips made by residents and visitors by supporting alternative modes of transportation, ridesharing, and on-site services.

Policies

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network. Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destinations on the site such as the main lawn, baseball fields, community centers, and recreational amenities.
- 3-4 Establish new pedestrian and bicycle corridors within the SDC to facilitate connectivity throughout the site and link to neighboring communities.

- 3-5 Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.
- 3-6 Prohibit new cul-de-sacs and interruptions of the street grid within the Planning Area to maximize multi-modal connectivity within SDC site.
- 3-11 Implement the National Association of City and Transportation Officials (NACTO) Urban Street Design Guide to design streets and incorporate traffic calming measures like textured crosswalks, curb bulb-outs, pedestrian-oriented lighting, and high-visibility striping and signage.
- 3-18 Ensure tree coverage along pedestrian routes for shade and comfort. Preserve existing mature trees wherever possible.
- 3-22 Work with Sonoma County Transit for expansion of transit service and transit pass subsidy for new residents and employees.
 - a. Work with Sonoma County Transit to establish an express bus service to and from the cities of Sonoma and Santa Rosa that would utilize a new connector road between the SDC Core Campus and Highway 12; or
 - b. Work with Sonoma County Transit to extend the fare-free Route 32 shuttle from the City of Sonoma to the SDC site, maintaining the regular intercity Route 30 bus service as well.
- 3-27 Provide no free parking within campus.
- 3-28 Establish minimum parking requirements that do not exceed average peak parking demand rates observed in the Institute for Transportation Engineers Parking Generation manual. Plan for shared parking facilities to serve multiple uses and destinations.
- 3-41 Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. Potential strategies may include subsidies for not driving alone, transit passes, parking cash-out, rideshare matching, telecommute or alternative work scheduling, upgraded bicycle facilities, and other measures proven to reduce vehicle trips and VMT.

- 3-42 Establish a Transportation Management Association (TMA) for the entire SDC to create a cost-effective and coordinated approach to reducing single-occupancy vehicle travel. The TMA can implement a variety of programs to assist individual developments in meeting their vehicle trip reduction goals. Potential TMA programs could include the overseeing of a subsidized transit pass program, carpool or vanpool ride-matching services, marketing and education to residents and businesses, and other measures.

Open Space and Resources, and Hazards

Goals

- 2-A Open Space: Preserve the open space surrounding the core campus in public ownership in perpetuity, preventing further development in undeveloped areas and ensuring ongoing stewardship in partnership with neighboring State and regional parks and other institutions and organizations.
- 2-D Biological Resources: Promote conservation of existing habitat, including lakes, creeks, groundwater recharge areas, and open spaces, through intentional water and energy conservation, water reuse, sustainable food production, top-tier sustainable building practices, and aggressive waste reduction strategies in order to protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship.
- 2-F Wildfire Hazards: Provide protections at the site against the growing risk of climate change exacerbated wildfire hazards and limit the potential impacts of wildfire to development through intelligent site and building design, and open space management.

Policies

- 2-19 Select a planting palette of native and/or low-water plant species that are climate appropriate, drought-resistant, non-invasive, support local insects and animals, and that require minimal irrigation and maintenance.
- 2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.

- 2-34 Within the managed landscape buffer, one of the following fuel management methods must be implemented. Combinations of the methods may be acceptable as long as the intent of the policy is met.
- a. Fuel Separation. Minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically. Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content, etc.). Properties with greater fire hazards will require greater separation between fuels. Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of 8 feet can be “grouped” and considered as one plant.
 - b. Defensible Space with Continuous Tree Canopy. To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy, apply the following treatments:
 - Generally, remove all surface fuels greater than 4 inches in height. Single specimens of trees or other vegetation may be retained, provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
 - Remove lower limbs of trees (prune) to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.
 - c. Irrigated Agriculture. Irrigated agricultural plantings, such as row crops, berries, or small orchard trees may be planted in the ground or in raised beds, with the following conditions:
 - Raised beds or planter areas may not be constructed of wood.
 - Orchard trees should be spaced in accordance with the Fuel Separation guidance above.

- Agricultural plantings must be actively managed and regularly harvested or pruned, as appropriate, in order to avoid becoming overgrown.
 - Irrigation must be regularly applied during months with little or no rainfall.
- 2-42 Ensure that all property owners are informed about wildfire resiliency requirements at the site at the time of purchase. Ensure that all property owners and tenants have access to educational resources on wildfire prevention and site requirements including posted materials, and regular training and information sessions.
- 2-43 Maintain and enhance the existing tree canopy by preserving existing trees wherever possible and planting new trees throughout the site to cool the site and improve air quality.
- 2-45 Require that development projects incorporate all applicable Bay Area Air Quality Management District (BAAQMD) Construction Mitigation Measures to reduce construction and operational emissions for criteria air pollutants, toxic air contaminants, and greenhouse gases.

Public Facilities, Services, and Infrastructure

Goals

- 6-C Transformative Climate-Forward Community: Promote a climate-resilient community that models the future of the Sonoma Valley by generating its own energy, reducing waste, and designing for resiliency in a changing climate.
- 6-D Utilities and Infrastructure: Ensure that infrastructure, including water, wastewater, stormwater, power, and telecommunications, can adequately, sustainably, and resiliently accommodate the needs of future residents and businesses.

Policies

- 6-8 Install dedicated irrigation meters for both new and existing commercial, industrial, and institutional landscaping.
- 6-9 Work with Sonoma Valley County Sanitation District (SVCS D) to explore the feasibility of establishing a recycled water facility on-site to offset the use of potable water on the site and to provide recycled water for non-potable uses such as landscape irrigation and firefighting.

- 6-10 Implement greywater systems in new residential and commercial facilities to reduce potable water use for irrigation, toilet flushing, and other appropriate uses, in order to conserve potable water and reduce water waste. Meet landscape irrigation, groundwater recharge, and other water supply needs with on-site treated wastewater to the maximum extent feasible.
- 6-11 Apply for state, federal, and private grants to assist in expanding the recycled water and greywater infrastructure. Explore opportunities to partner with other agencies and the feasibility of issuing bonds for this purpose.
- 6-15 Ensure that indoor plumbing fixtures in all new and retrofitted buildings meet or exceed CALGreen Tier 2 standards.
- 6-16 Minimize impervious surfaces and use pervious pavements where possible, retaining and providing new pervious surfaces such as landscape areas, crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt. At least 50 percent of new ground floor private parking spaces and non-primary access paving are required to be surfaced with permeable paving to encourage stormwater infiltration and disperse runoff from roofs, rainwater catchment system overflow, or pavement to vegetated areas where possible.
- 6-17 Maintain high water quality in lakes and streams by creating opportunities for rainwater capture such as roof drainage capture systems, installing trash screens in stormwater inlets, prohibiting use of pesticides in landscaping, and using bioretention facilities to clean stormwater before it reaches lakes and creeks in order to remove pollutants and enhance water quality through natural processes.
- 6-18 Incorporate site design measures and Low Impact Development (LID) features such as bioretention facilities in accordance with the Bay Area Stormwater Management Agencies Association (BASMAA) Manual or otherwise required by the Grading and Stormwater Division of Permit Sonoma. The bioretention facilities should have a surface area of at least 4 percent of the tributary impervious area.
- 6-19 Connect each building within the Core Campus to a microgrid:
 - a. Work with local distributed energy resources (DERs) installation groups and advocates to build enough on-site energy generation, such as solar, wind, geothermal, and methane gas cogeneration, to power the Planning Area in case of emergency;

- b. Connect to PG&E's grid through the Community Microgrid Enablement Program or an equivalent, with isolation devices that allow SDC to fully connect or disconnect from PG&E's system;
 - c. Until the microgrid can be fully powered by on-site energy, promote purchase of 100 percent renewable or clean power from Sonoma Clean Power or PG&E.
- 6-20 Prohibit new natural gas lines to all new buildings and require new and adaptively reused buildings to be fully powered by electricity.
- 6-22 Work with local farming groups to start an on-site composting program for food, landscape trimmings, and farm waste to provide on-site jobs, sequester carbon, and provide valuable soil compost for SDC properties, or for agricultural production.
- 6-25 Connect all new and adaptively reused buildings to broadband internet.
- 6-23 Explore opportunities and partnerships to collect off-gassing methane from on-site solid, farm, and food waste to be utilized as an energy resource, using technologies such as anaerobic digestion, aerobic digestion, and combined heat and power (CHP) cogeneration.
- 6-28 Use water from SVCSD's Recycled Water Trucking Program for construction site activities, including dust control, cement mixing, soil compaction, to the greatest extent feasible.

3.6.3.4 Impacts

Impact 3.6-1 Implementation of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (*Less than Significant*)

As noted in the Methodology and Assumptions section, buildout of the Proposed Plan could ultimately result in a net new development of up to 1,000 residential units; 410,000 s.f. of non-residential uses; 2,400 residents; and 940 jobs. The Proposed Plan is not linked to a specific development project or timeframe, but this buildout is assumed to occur incrementally over a 20-year horizon.

Development facilitated by the Proposed Plan would involve the use of energy during construction and operation. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and

generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment. Long-term operation of development projects would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems. In addition, a slight increase in VMT due to population growth and operation of the regional transportation system associated with potential development could increase fuel consumption.

Construction

Construction of future development envisioned under the Proposed Plan would result in short-term consumption of energy resulting from the use of construction equipment and processes. CALGreen includes specific requirements related to recycling, construction materials, and energy efficiency standards that would apply to construction of future development envisioned by the Proposed Plan and would minimize wasteful, inefficient, and unnecessary energy consumption. Construction of projects facilitated by the Proposed Plan would be required to comply with relevant provisions of CALGreen and Title 24 of the California Energy Code, which would further avoid wasteful, inefficient, and unnecessary energy consumption.

Operation

Operation of the development facilitated by the Proposed Plan would consume natural gas and electricity for building heating and power, lighting, and water conveyance, among other operational requirements. It is noted that other energy sources such as on-site renewable sources may also be consumed under the Proposed Plan (as promoted by Policy 6-19) but are not quantifiable in CalEEMod. Additionally, the increase in VMT associated with potential development, primarily a combined function of population and employment growth, and daily operation of the regional transportation system would use energy in the form of fuel consumed by propulsion of passenger vehicles, including automobiles, vans and trucks, and transit vehicles, including buses and trains.

Energy consumption under the Proposed Plan is based on the net change in energy consumption. Electricity and natural gas would be consumed by residences and commercial buildings. Gasoline and diesel⁶⁶ would be consumed by vehicles traveling to

⁶⁶ CalEEMod does not account for electricity consumption by EVs at this time, and mobile source energy consumption is attributed to only gasoline and diesel. Electricity consumption by EVs

and from the Proposed Plan's land uses and are based on an annual VMT of 18,368,761.⁶⁷ The resulting net decrease in consumption is based on energy consumption associated with future development under the Proposed Plan, as shown in **Table 3.6-2**. Existing land uses within the Planning Area that are to remain (i.e., outside the Core Campus) were not evaluated, but given that the area outside the Core Campus is largely open space, they would have minimal impacts on energy consumption. This assumption is consistent with the air quality, GHG, and transportation analyses.

Table. 3.6-2: Estimated Operational Energy Consumption

Source	Million BTU/yr
Existing (2019)	
Electricity	—
Natural Gas	—
Mobile (Gasoline and Diesel)	176,922
Total	176,922
Million BTU per capita	— ¹
Million BTU per service population	— ¹
Future with Proposed Plan² (2040)	
Electricity	27,596
Natural Gas	29,679
Mobile (Gasoline and Diesel)	67,872
Total	125,147
Million BTU per capita	52.1
Million BTU per service population	37.5

would add to the operational energy estimates shown in Table 3.6-2 but given that the use of EVs is dependent on personal preferences and individual behavior, cannot be quantified.

⁶⁷ Based on the scaled traffic inputs provided by W-Trans and including the Proposed Plan's mitigating policies that could be quantified in CalEEMod. (See Appendix B: Air Quality and GHG Data for full detail.) This VMT is discussed due to its direct relationship to the quantified estimates analyzed in this section of the EIR and may not necessarily match the VMT shown in Section 3.14: Transportation.

Source	Million BTU/yr
Net Change with Proposed Plan	-51,775

1. Value cannot be calculated because the population for existing conditions is zero.
2. Includes policies that could be quantified and modeled by CalEEMod.

Source: Dyett & Bhatia, 2022.

As shown in **Table 3.6-2**, operation of development associated with implementation of the Proposed Plan would increase the consumption of electricity and natural gas but decrease consumption of transportation fuels. As discussed in the Methodology and Assumptions section, existing conditions reflect the closed SDC facility, so future electricity and natural gas consumption under the Proposed Plan represents the entirety of the increase in those sources. Meanwhile, direct transportation energy demand through the consumption of gasoline and diesel fueled vehicles would decrease by 109,050 BTU per year. This would primarily be a product of increased land use diversity allowed by the Proposed Plan (Goal 4-A and Policy 4-4), which would decrease daily vehicle trips as well as influence the mix of vehicles (in favor of passenger cars) contributing to those trips. This change is evident in **Table 3.6-3**, which shows the estimated vehicle trips and energy consumption describing the Proposed Plan's projected transportation energy use requirements compared with existing conditions by mode. In addition, increasingly stringent State standards for fuel economy (as described in the Regulatory Setting) would also significantly decrease gasoline and diesel consumption. As a result, total energy consumption in the Planning Area would decrease by 51,775 million BTU per year in 2040, which represents a decrease of 21.6 million BTU per capita and 15.5 million BTU per service population⁶⁸. Given that the Planning Area is designed to have a mix of residential and non-residential uses that will provide local jobs and services for future residents and the surrounding community, the per service population metric is most applicable.

Table 3.6-3: Transportation Energy Consumption by Mode

	Existing (2019)	Proposed Plan (2040)
--	-----------------	----------------------

⁶⁸ As noted in Table 3.6-2, the existing energy consumption per capita and per service population cannot be calculated because the existing population is zero. The change in BTU per capita/service population is calculated based on the change in total energy consumption, divided by the change in population (2,400 residents and 3,340 service population).

<i>Vehicle Type</i>	<i>Daily Vehicle Trips</i>	<i>Million BTU/yr</i>	<i>Daily Vehicle Trips</i>	<i>Million BTU/yr</i>
Passenger Cars	5,893	86,287	3,001	41,261
Light-Duty Trucks	3,020	44,217	1,026	14,112
Medium-Duty Trucks	1,743	25,525	521	7,162
Heavy-Duty Trucks	923	13,515	243	3,339
Buses	37	537	12	168
Motorcycles	400	5,858	121	1,659
Motor Homes	67	983	13	172
Total	12,083	176,922	4,937	67,873

1. Calculated based on CalEEMod default vehicle fleet mix and average daily trip rate (see Appendix B).

Source: Dyett & Bhatia, 2022

The Proposed Plan contains multiple goals and policies that would help minimize the occurrence of inefficient, wasteful, and unnecessary consumption of operational energy. Several Proposed Plan policies support water efficiency and conservation and waste reduction, which would reduce energy consumed via water delivery and waste management (goals 6-C, 6-D, and 2-D and policies 5-48, 5-60, 2-19, 6-10, 6-15 and 6-18). Multiple policies in the Proposed Plan Mobility and Access Chapter would improve the availability of alternative transportation modes by coordinating with regional transit providers, improving pedestrian and bicycle infrastructure, and promoting Transportation Demand Management measures, therefore helping to reduce congestion and overall demand for transportation fuels (goals 3-A, 3-B, 3-C, 3-F, 3-G, and 3-J and policies 3-1, 3-5, 3-11, 3-22, 3-41, and 3-42). Additionally, policies 6-19, 6-20, and 6-23 would provide on-site energy, with a focus on renewable and clean power sources, and reduce dependence on natural gas by requiring new development and adaptive reuse to be fully electric. Future development in the Planning Area would also need to comply with the latest Title 24 and CALGreen requirements such as meeting building energy efficiency standards and providing EV charging stations.

The Proposed Plan also identifies compact development patterns and creative reuse and redevelopment of existing sites as the primary means for sustainable future growth. By placing services and amenities close to where people live and work, the land use scenario envisioned by the Proposed Plan would minimize the need to drive and reduce per capita

energy consumption and GHGs, which is especially clear through the reduction in energy consumption from mobile sources (**Table 3.6-3**).

Implementation of the Proposed Plan policies listed above, as well as other policies and implementation programs contained in the Sonoma County General Plan that would result in indirect energy conservation, such as the promotion of alternative transportation, water conservation, and waste reduction, would promote greater energy efficiency in community operations and development. Furthermore, the Proposed Plan contains a land-use strategy that actively promotes compact mixed-use and non-automobile-oriented development, which would result in greater energy efficiency overall for Planning Area residents, businesses, and operations. Given that energy consumption in the Planning Area would decrease with the operation of development under the Proposed Plan, the Proposed Plan would not result in wasteful, inefficient, or unnecessary consumption of energy. Therefore, this impact would be less than significant, and no mitigation measures are required.

Mitigation Measures

None required.

Impact 3.6-2 Implementation of the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. (*Less than Significant*)

State and local renewable energy and energy efficiency plans that apply to the Proposed Plan are discussed above under Regulatory Setting. State plans include the AB 1493 Pavley Rules, California Title 24 energy efficiency standards, EO B-16-12, SB 350, and SB 100. Each of these plans contain required standards related to energy efficiency and renewable energy development. Local plans that address energy efficiency and are designed to achieve the State's RPS mandates include PG&E's and SCP's 2020 IRPs. The Sonoma County General Plan also includes goals and policies that relate to energy use and reduction.

As discussed under Impact 3.6-1, implementation of the Proposed Plan would decrease energy consumption relative to existing conditions. The Proposed Plan includes multiple policies that support sustainability through water conservation, waste reduction, promotion of alternative transportation, on-site energy production, prioritized use of renewable energy sources, and electrification of new development. Future development under the Proposed Project would be subject to increasingly robust regulations to meet the State's

renewable energy mandates and would be required to comply with Title 24 standards and CALGreen requirements.

Development under the Proposed Plan would be required to comply with State and local renewable energy and energy efficiency plans. As a result, it would benefit from renewable energy development and increases in energy efficiency. Specifically, vehicles and energy use from the slightly increased VMT within the area is expected to become increasingly more efficient as a result of the regulations included in Pavley Rules and EO B-16-12, which address average fuel economy and commercialization of ZEVs, respectively. Building energy efficiency is also anticipated to increase as a result of compliance with Title 24 building codes, which are expected to move toward zero net energy for newly constructed buildings, and shift toward 100-percent renewable energy under SB 350 and SB 100 regulations. With implementation of the Proposed Plan, PG&E and SCP would continue to pursue procurement of renewable energy sources to meet their RPS goals and to comply with State regulations. As noted in its 2020 IRP, PG&E will continue to meet its RPS requirements and does not have incremental need for RPS resources to meet the 2030 targets. SCP also anticipates that its portfolio will fulfill resource adequacy and meet State-assigned loads. Goal 6-C promotes on-site energy generation, waste reduction, and climate-resilient design. Policy 6-19, for example, seeks to connect the Core Campus to a microgrid under PG&E's Community Microgrid Enablement Program (or equivalent) and potentially fully disconnect from PG&E's system, with purchase of 100 percent renewable or clean power until the microgrid can be fully realized. Additionally, the policy calls for working with local distributed energy resources installation groups and advocates to provide energy via on-site generation or clean energy sources in the event of an emergency. Such efforts would complement rather than conflict with or obstruct State and local plans for renewable energy or energy efficiency. Therefore, this impact would be less than significant, and no mitigation measures are required.

Mitigation Measures

None required.

Impact 3.6-3 Implementation of the Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. *(Less than Significant)*

Relative to regional, statewide, or even global GHG emissions, emissions resulting from implementation of the Proposed Plan are on a minimal scale that would not significantly impact global climate change when considered alone; however, the discussion below

assesses whether GHG emissions from construction and operation of the Proposed Plan have the potential to result in a cumulatively considerable incremental contribution to a significant cumulative impact on the environment.

As described in the Environmental Setting section, the environmental impacts of GHGs are not local by nature, and as a result, the effort to combat global climate change by reducing GHG emissions is coordinated from global to regional scales. California has identified statewide targets that achieve GHG emissions reductions in line with these efforts – namely, to achieve 40 percent reductions below 1990 levels by 2030 (SB 32) and 80 percent below 1990 levels by 2050 (EO S-3-05). Though not legislatively adopted, the State has recently reaffirmed its goal to achieve the more ambitious goal of carbon neutrality by 2045 in CARB’s recently published Draft 2022 Scoping Plan, which is also supported by BAAQMD’s recently updated CEQA Significance Thresholds for GHGs. Guided by these two documents, local plans are recommended to demonstrate that they will not conflict with these objectives. However, as noted in the Environmental Setting and Methodology and Assumptions sections, the NOP and beginning of environmental analysis for this EIR predate the adoption of BAAQMD’s updated thresholds, and the 2022 Scoping Plan has not yet been adopted. Furthermore, information about GHG emissions levels in 1990 are not available for the Planning Area, and therefore, the percent reductions achieved by the Proposed Plan cannot be determined using this performance-based threshold. Instead, the following analysis uses recommended GHG emissions efficiency metrics established by the State and BAAQMD in their 2017 Scoping Plan and 2017 CEQA Guidelines (respectively) to assess whether the Proposed Plan would generate GHG emissions that would have a significant impact on the environment. Construction is excluded from quantitative assessment due to lack of information but is discussed qualitatively.

Construction

Construction associated with the Proposed Plan would result in temporary generation of CO₂, CH₄, and N₂O. Emissions sources include exhaust from mobile and stationary construction equipment and employee and haul truck vehicles, as well as construction-related electricity consumption and tree removal. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, and number of personnel.

As described in the Methodology and Assumptions section, the Proposed Plan does not propose any specific development projects, but construction of land use developments allowable under the Project would occur intermittently over the course of the 20-year

buildout period; it is anticipated that in any given year, multiple land use development projects would be constructed within the Planning Area. Phased development of the Proposed Plan is also supported by Policy 4-3. As the timing and intensity of future development projects is not known at this time, the precise effects of construction activities associated with buildout of the Proposed Plan cannot be quantified at this time. Project-specific details of future development within the Planning Area is currently unknown because development would be driven by market conditions and site and regulatory constraints.

Future development would be required to comply with policies proposed as part of the Proposed Plan that would reduce GHG emissions from construction, including policy 2-45, which would require contractors to use best management practices (BMPs) to reduce emissions associated with construction activities, and Policy OSRC-14g of the Sonoma County General Plan that would further serve to reduce GHG emissions from construction of future development. Additionally, Proposed Plan Goal 2-D and policies 5-59 and 5-60 call for green building practices, high-performance building standards, and construction debris/waste diversion by prioritizing reuse/salvaged materials.

Current BAAQMD CEQA guidance does not define thresholds of significance for construction-related GHG emissions, but rather, recommends that agencies follow BMPs to reduce the impact of short-term construction-related emissions. Given that the Project policies would require future development to comply with BMPs and that other policies would further reduce construction-related emissions, the Proposed Plan's impact due to short-term construction emissions would be less than significant.

Operation

Operation of land uses supported by the Proposed Plan would generate direct and indirect GHG emissions. Sources of direct emissions include mobile vehicle trips, natural gas combustion, and landscaping activities. Indirect emissions would be generated by electricity generation and consumption, waste and wastewater generation, solid waste, and water use. Operational emissions for existing baseline and 2040 buildout conditions (including quantifiable policies, as noted in the Methodology and Assumptions section) are summarized in **Table 3.6-4**. The modeled emissions for the Proposed Plan are a conservative estimate of the Proposed Plan's impact on GHGs because they do not account for Proposed Plan policies such as the Planning Area's extensive vegetation (i.e., tree canopy and carbon sequestration capacity of the 750 acres of preserved open space). Nevertheless, operational emissions generated by the Project would still result in a net decrease in annual emissions by 5,586 MTCO₂e compared to existing conditions. As seen

in **Table 3.6-4**, these reductions primarily come from mobile sources. This change is primarily attributed to the increasingly stringent regulations on vehicle emissions (see Regulatory Setting) and the decrease in VMT as a result of diversification of land uses due to new mixed uses (Goal 4-A and Policy 4-4), as also evidenced by the major reduction in energy consumption due to mobile sources discussed under Impact 3.6-1 and demonstrated by **Table 3.6-3**. There is a substantial increase in emissions from energy sources due to greater natural gas and electricity consumption (see Impact 3.6-1), a slight increase in emissions from water and waste sources, and minimal increase from area sources. These increases reflect the increase from existing conditions (i.e., the closed SDC facility) in population and density/intensity of development enabled by the Proposed Plan.

Table 3.6-4 shows that implementation of proposed policies, including those that would achieve reductions by electrifying buildings and reducing use of natural gas; prohibiting pesticides; improving street network, non-automotive mobility, and land use diversity; supply on-site energy and using renewable sources; exceeding Title 24/CALGreen standards; recycling and conserving water; and reducing solid waste would result in a net reduction in annual emissions by 5,586 MTCO₂e compared to existing conditions. Policies such as preserving and expanding the tree canopy, using native and/or drought-tolerant planting, and transit connectivity (e.g., providing transit passes, increased frequency of service, and ridesharing) cannot be quantified by CalEEMod due to lack of information or dependence on individual behavior, but the effects of such policies would reasonably have additional mitigating potential that would further reduce GHG emissions. It is noted, however, that these reductions would not likely be on the scale needed to completely offset mass emissions. Additionally, Proposed Plan operational emissions quantified by CalEEMod include GHG emissions from water sources, but the Planning Area would be served by Sonoma Water, which is powered entirely by non-fossil sources and would have a carbon intensity of zero; estimates shown in **Table 3.6-4** are therefore a conservative estimate of Proposed Plan conditions.

Table 3.6-4: Estimated Proposed Plan Operational GHG Emissions

		<i>Emissions (metric tons)</i>			
<i>Condition</i>	<i>Source</i>	<i>CO₂</i>	<i>CH₄</i>	<i>N₂O</i>	<i>CO₂e</i>

Existing	Area	-	-	-	-
	Energy	-	-	-	-
	Mobile	12,623	1.0	0.7	12,867
	Waste	-	-	-	-
	Water	-	-	-	-
	Total	12,623	1.0	0.7	12,867
Proposed Plan¹	Area	12	0.0	-	12
	Energy	2,332	0.2	0.0	2,349
	Mobile	4,396	0.2	0.2	4,465
	Waste	79	4.6	-	195
	Water	123	4.3	0.1	260
	Total	6,941	9.3	0.4	7,280
	Net Change from Existing				-5,5

3. 1. Includes quantifiable proposed policies that mitigate operational emissions.

Source: Dyett & Bhatia, 2022

Table 3.6-5 compares the annual GHG emissions efficiency metrics achieved under the Proposed Plan in comparison to the GHG emissions efficiency metrics established by CARB and BAAQMD. In line with SB 32, CARB recommends an efficiency metric of no more than 6.0 MTCO₂e per capita by 2030. As discussed in the Methodology and Assumptions section, the project-level threshold of 4.6 MTCO₂e per service population (residents plus employees) recommended for specific plans by BAAQMD's 2017 CEQA Guidelines was designed to meet the AB 32 goal of achieving 1990 emissions level by 2020, so a revised target of 2.8 MTCO₂e per service population is used to account for post-2020 regulations including the SB 32 goal of 40 percent reductions below 1990 levels. As seen in **Table 3.6-5**, buildout of the Proposed Plan in 2040 would result in 3.0 MTCO₂e per capita per year and 2.2 MTCO₂e per service population per year, both of which are below their respective thresholds.

Table 3.6-5: Comparison of GHG Emissions Efficiency Metrics

Source	Efficiency Metric (MTCO ₂ e)	
	per capita	per SP ¹
State Target ²	6.0	-
BAAQMD Significance Threshold ³	-	2.8
Proposed Plan ⁴	3.0	2.2
Less than target/threshold?	Yes	Yes

Notes:

1. Service population (SP) includes residents and employees.
2. Based on the 2030 target established in the 2017 Scoping Plan.
3. Based on the threshold established for specific plans in BAAQMD's 2017 CEQA Guidelines, adapted to meet the State's target for 2030.
4. Based on emissions quantified in CalEEMod, representing buildout of the Proposed Plan in 2040.

Sources: California Air Resources Board, 2017; Bay Area Air Quality Management District, 2017; Dyett & Bhatia, 2022.

It is noted that the Proposed Plan has a horizon year of 2040, which is technically beyond the 2030 target used to determine the State-recommended efficiency metric of 6.0 MTCO₂e per capita. Considering the State's goal to achieve carbon neutrality by 2045, it can be reasoned that GHG emissions efficiency metrics for 2040 would be substantially lower than for 2030. Yet, as noted in the Environmental and Regulatory settings, achieving carbon neutrality will be a coordinated statewide effort involving multiple sectors and factors outside of the Proposed Plan's scope. As such, a quantitative target for 2040 based on the 2045 goal cannot feasibly be determined at this time. However, the Proposed Plan would achieve a net reduction (5,586 MTCO₂e, or 43 percent) in GHG emissions over existing conditions, which shows a decline consistent with the State's GHG reduction objectives. In addition, the Proposed Plan includes policies that support all of BAAQMD's project design elements identified in their updated CEQA Significance Thresholds for GHG (which reflect the State's 2030 and 2045 GHG reduction targets) such as prohibiting natural gas in new developments (policy 6-20), facilitating sustainable energy usage (see Impact 3.6-1), reducing VMT 15 percent below existing levels (policy 3-41), and supplying EV parking as required by CALGreen Tier 2 (policy 5-60 and development standard DS-24).

Given the absence of a local GHG reduction strategy that meets the criteria under CEQA Guidelines Section 15183.5(b) and that the Proposed Plan meets BAAQMD-recommended thresholds (2022) at both the plan- and project-level for reducing GHG emissions and meeting GHG reduction targets, as quantitatively and qualitatively discussed above, this impact is considered less than significant, and no mitigation measures are required.

Mitigation Measures

None required.

Impact 3.6-4 Implementation of the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. *(Less than Significant)*

As discussed in the Regulatory Setting, there is no qualified GHG reduction plan applicable to the Planning Area. The following analysis shows consistency of the Proposed Plan with the statewide Scoping Plan (both adopted 2017 and draft 2022 discussed), Plan Bay Area 2050, BAAQMD-recommended significance thresholds for GHG, the Sonoma County General Plan, Climate Change Action Resolution, and Climate Emergency Resolution, and RCPA's Sonoma Climate Mobilization Strategy.

CARB Climate Change Scoping Plan

The State's current Climate Change Scoping Plan is the 2017 Scoping Plan, which outlines the State's strategy for achieving the statewide GHG reduction targets for 2030, as mandated by SB 32, and includes targets for 2050, as established but not legislatively adopted by EO S-03-05. Based on the 2017 Scoping Plan, many of the reductions needed to meet the 2030 target will come from State regulations, including Cap-and-Trade, RPS mandates, updates to Title 24 (including the 2022 Energy Code, which will take effect in 2023), and increased emission reduction requirements for mobile sources. The 2017 Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and State and local plans, policies, or regulations that will lower GHG emissions relative to business-as-usual conditions. The 2017 Scoping Plan carries forward previous and introduces new GHG reduction measures to help achieve the State's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

In May 2022, CARB released the Draft 2022 Scoping Plan, which assesses progress toward the statutory 2030 target, while laying out the path to achieving carbon neutrality by 2045 (EO B-55-18). The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

As discussed in Impact 3.6-3 and **Table 3.6-6**, policies included in the Proposed Plan would support State reduction goals and strategies established in the Scoping Plan (both 2017 and 2022) through VMT reductions enabled by sustainable development strategies,

including mixed-use and compact development, as well as transportation improvements to the street network and sustainable modes of transportation (i.e., bicycle, pedestrian, and transit connectivity). Additionally, energy reduction policies, including green building design and sustainability strategies such as passive heating/cooling, on-site/renewable energy generation, and building electrification will complement existing and forthcoming building standards around all-electric design. Management of known emissions sources and emissions sources and implementation of sustainable design standards and practices will also contribute to GHG emissions reductions that will implement State regulations. Moreover, the 750 acres of Planning Area that will be preserved as open space will help offset some of the emissions generated by development under the Proposed Plan, though not necessarily on a magnitude sufficient to achieve carbon neutrality for the Planning Area. Nevertheless, this significant source of carbon sequestration supports the 2022 Scoping Plan's emphasis on natural and working lands.

Table 3.6-6: Proposed Plan Implementation of Plan Bay Area 2050 Strategies

No.	Plan Bay Area 2050 Strategy	Supporting Proposed General Plan Policies
Housing Strategies		
H1	Further strengthen renter protections beyond state law.	<p>Strategies H1, H2, H4, and H5 relate to provision and protection of housing affordable to lower-income populations, which is supported by proposed goals 4-D and 4-E and policies 4-14, 4-15, and 4-19 that call for affordable housing, particularly with a diverse range of units and housing types to accommodate various household needs (H3).</p> <p>The Land Use Chapter creates new land use designations focused within the Core Campus that allow up to medium-density residential and ensure mixed-use development, both of which will result in greater housing opportunities, including mixed-income housing, in walkable neighborhoods near community-serving retail and transit, as outlined in strategies H3, H6, and H8 of Plan Bay Area.</p> <p>There are no Equity Priority Communities in the Planning Area, so H7 is not applicable to the Proposed Plan. However, policy 4-5 helps support local businesses by holding regular farmers markets.</p>
H2	Preserve existing affordable housing.	
H3	Allow a greater mix of housing densities and types in Growth Geographies (Priority Development Areas, select Transit-Rich Areas, and select High-Resource Areas).	
H4	Build adequate affordable housing to ensure homes for all.	
H5	Integrate affordable housing into all major housing projects.	
H6	Transform aging malls and office parks into neighborhoods.	
H7	Provide targeted mortgage, rental, and small business assistance to Equity Priority Communities (low-income communities and communities of color).	
H8	Accelerate reuse of public and community-owned land for mixed-income housing and essential services.	
Economic Strategies		
EC1	Implement a statewide universal basic income.	The Proposed Plan has limited to no ability to impact statewide
EC2	Expand job training and incubator programs.	

Table 3.6-6: Proposed Plan Implementation of Plan Bay Area 2050 Strategies

No.	Plan Bay Area 2050 Strategy	Supporting Proposed General Plan Policies
EC3	Invest in high-speed internet in underserved low-income communities.	universal basic income, so EC1 is not considered applicable.
EC4	Allow greater commercial densities in Growth Geographies.	Proposed policies 4-2, 4-4, and 4-11 and support strategies EC2, EC4, and EC5 by supporting a mix of uses and the Employment Center and Flex Zone land use designations that are intended to provide a vibrant jobs center for the broader Sonoma Valley. New office and lab buildings mixed with reused/adaptively-reused buildings and shared parking facilities are envisioned as anchoring a walkable and bikeable environment. Proposed Policy 6-25 supports Strategy EC3 by connecting all new and adaptively reused buildings to broadband internet. Strategy EC6 does not apply to the Planning Area since there are no industrial lands.
EC5	Provide incentives to employers to shift jobs to housing-rich areas well served by transit.	
EC6	Retain and invest in key industrial lands.	
Transportation Strategies		
T1	Restore, operate, and maintain the existing system.	Proposed Policy 3-5 supports Strategy T1 by ensuring the reuse and maintenance of the existing street network to the greatest extent possible. There are no Equity Priority Communities in the Planning Area, so T2 is not applicable to the Proposed Plan. Strategies T3, T6, T7, T8, and T9 relate to street network
T2	Support community-led transportation enhancements in Equity Priority Communities.	
T3	Enable a seamless mobility experience.	
T6	Improve interchanges and address highway bottlenecks.	

Table 3.6-6: Proposed Plan Implementation of Plan Bay Area 2050 Strategies

No.	Plan Bay Area 2050 Strategy	Supporting Proposed General Plan Policies
T7	Advance other regional programs and local priorities.	improvements. Traffic-calming and development of Complete Streets support safe and efficient multi-modal environments that are the focus of proposed goals 3-A and 3-C which also support the objectives of Vision Zero.
T8	Build a Complete Streets network.	
T9	Advance regional Vision Zero policy through street design and reduced speeds.	
T10	Enhance local transit frequency, capacity, and reliability.	Proposed goal 3-F supports strategies T10 and T12 by connecting the site to the greater region through existing and future transit networks and providing reliable, comfortable, and safe public transit service throughout the Planning Area.
T12	Build and integrated regional express lands and express bus network.	
Environmental Strategies		
EN1	Adapt to sea level rise.	Strategy EN1 does not apply to the Planning Area since no flooding may occur to sea level rise.
EN2	Provide means-based financial support to retrofit existing residential buildings.	
EN3	Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings.	Proposed policies 4-22, 4-23, and 4-27 require the preservation and adaptive reuse of existing buildings, particularly those that are historically contributing (EN2).
EN4	Maintain urban growth boundaries.	Proposed Policy 5-60 would incorporate green building strategies that conserve energy for all new development (EN3).
EN5	Protect and manage high-value conservation lands (including but not limited to Priority Conservation Areas and wildland-urban interface areas).	
EN6	Modernize and expand parks, trails, and recreation facilities.	In accordance with Strategy EN4, Proposed Goal 2-A would preserve the open space around the Core Campus in perpetuity. Further, proposed goals 2-D and 2-E promote

Table 3.6-6: Proposed Plan Implementation of Plan Bay Area 2050 Strategies

No.	Plan Bay Area 2050 Strategy	Supporting Proposed General Plan Policies
EN7	Expand commute trip reduction programs at major employers.	<p>strategies that protect natural resources and critical wildlife habitat, maintain wildlife linkages, and foster environmental stewardship (EN5).</p> <p>Proposed goals 6-A and 6-B provide high-quality community facilities and maintain and increase the park spaces and recreational facilities within the Planning Area (EN6).</p> <p>Proposed Policy 5-60 and development standard DS-24 require compliance with CALGreen Tier 2, which include newly expanded standards for EV parking spaces and/or charging stations for multifamily developments; such standards would support EN8.</p> <p>Proposed Policy 3-41 requires all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. Proposed Policy 3-42 establishes a Transportation Management Association (TMA) for the entire SDC that can implement a variety of programs to assist individual developments in meeting their vehicle trip reduction goals (EN7, EN9).</p>
EN8	Expand clean vehicle initiatives.	
EN9	Expand transportation demand management initiatives.	

Sources: Metropolitan Transportation Commission/Association of Bay Area Governments 2021

Plan Bay Area 2050

Plan Bay Area 2050 provides a long-range framework to minimize transportation impacts on the environment, improve regional air quality, protect natural resources, and reduce GHG emissions. The plan supports smart growth principles, promotes infill development, and proactively links land use, air quality and transportation needs in the nine-county San Francisco Bay Area region. Plan Bay Area implements SB 375, which requires MTC/ABAG to adopt an SCS that outlines policies to reduce GHG emissions from automobiles and light trucks per service population. The SCS policies include a mix of 35 strategies that encourage compact growth patterns, mixed-use design, alternative transportation, transit, mobility and access, network expansion, and transportation investment. **Table 3.6-6** demonstrates the Proposed Plan's consistency with Plan Bay Area 2050 strategies that are applicable to the Planning Area.

BAAQMD Guidance

As specified in its 2017 CEQA Guidelines, BAAQMD has established project- and plan-level significance thresholds for GHG. As discussed under Impact 3.6-3, BAAQMD guidance provides a project-level threshold of 4.6 MTCO₂e per service population per year for specific plans. However, this threshold is adjusted to 2.8 MTCO₂e per service population per year to match State-mandated reduction levels for 2030 because the original threshold was derived for the 2020 goal under AB 32. As shown under Impact 3.6-3, development under the Proposed Plan would result in 7,280 MTCO₂e per year. Buildout of the Proposed Plan would result in a service population of 3,340 (based on a population of 2,400, and 940 jobs), translating to a GHG emissions efficiency metric of 2.2 MTCO₂e per service population per year. As seen in **Table 3.6-5**, the Proposed Plan would therefore be below the adapted significance threshold of 2.8. Impact 3.6-3 also discusses how the Proposed Plan meets BAAQMD's updated CEQA significance thresholds (2022) for GHG impacts at both a plan- and project-level.

Construction emissions are not included in the significance threshold, as provided by BAAQMD. However, BAAQMD recommends Basic Construction Mitigation Measures for all projects, which are required by proposed Policy 2-45. This policy would help ensure that construction related GHG emissions are below the significance threshold recommended by BAAQMD.

Sonoma County Plans and Resolutions

The existing Sonoma County General Plan includes goals, policies, and actions that reduce GHG emissions that the Proposed Plan would be consistent with and rely on. However, it is noted that an update to the General Plan is currently underway, and the current General Plan would be amended concurrently with the Proposed Plan to ensure land use consistency between the two documents. Nevertheless, the Proposed Plan supports existing goals, objectives, and policies such as by promoting compact, mixed-use development land use strategies, developing a centrally-located community hub with locally-serving retail and services, providing affordable and special needs housing, improving the non-automotive transportation network, and maintaining and enhancing the Planning Area’s and surrounding park, open space, and natural resources. The Proposed Plan would also include transportation demand management and reduction in vehicle trips by 15 percent below existing levels and reduce negative impacts of parking by imposing parking fees and reducing parking minimums. By doing so, the Proposed Plan would help reduce GHG emissions, consistent with the goals, objectives, and policies contained within the current Sonoma County General Plan, including those that protect air quality, minimize air pollution and GHG emissions, encourage reduced motor vehicle use, and facilitate increased opportunities for non-automotive travel.

As described in the Regulatory Setting, the Climate Change Action Resolution was adopted to support findings of RCPA’s CAP (which is not adopted) to coordinate implementation of countywide GHG reductions. In 2019, the Climate Emergency Resolution declared a climate emergency and solidified the County’s intentions to commit to GHG reductions that meet State objectives by developing and implementing RCPA’s Sonoma Climate Mobilization Strategy. However, the Climate Mobilization Strategy goal is more ambitious than the State and seeks to achieve carbon neutrality by 2030 by reducing GHG emissions to 80 percent below 1990 levels while simultaneously achieving carbon sequestration sufficient to offset the remaining amount. **Table 3.6-7** shows how the Proposed Plan would support the strategy – and thereby also help achieve statewide goals for 2030, 2045, and 2050.

Table 3.6-7: Support of Sonoma Climate Mobilization Strategy

<i>Strategy/Goal</i>	<i>Supporting Proposed Plan Policies</i>
1. All-Electric Buildings Campaign: Accelerate the electrification of existing buildings and electrify all new buildings.	Policy 6-20 accelerates electrification by prohibiting new natural gas lines and requiring full electrification of new and adaptively reused buildings.

<i>Strategy/Goal</i>	<i>Supporting Proposed Plan Policies</i>
2. Carbon-Free Electricity: Accelerate the transition to 100 percent carbon-free electricity.	Policy 6-19 would establish a microgrid that uses on-site energy or clean sources for emergency power and would promote purchase of 100 percent renewable or clean power from Sonoma Clean Power or PG&E until the microgrid can be fully powered by on-site energy.
3. Drive Less Sonoma County Campaign: Make it easier to get around Sonoma County without a car.	Goal 4-A and policies 4-4, 3-4, and 3-22 would improve pedestrian, bicycle, and transit connectivity throughout the Planning Area and beyond to reduce reliance on driving.
4. EV Access for All Partnership: Accelerate the transition to 100 percent EVs for all transportation needs not otherwise met by biking or walking.	Policy 5-60 and development standard DS-24 require CALGreen standards (at a minimum, or Tier 2), which includes increasing requirements for providing EV parking spaces and charging stations to support EV use.
5. Sonoma County VMT Mitigation Bank: Develop new funding sources for transportation projects that reduce VMT.	In addition to land use policies listed for Strategy 3 above, Goal 3-J and policies 3-41 and 3-42 support VMT reduction through transportation demand management.
6. Zero Waste by 2030: Develop policies, programs, and education campaigns to eliminate waste sent to landfills.	Policies 6-22 and 6-23 would help divert solid waste by composting and potentially using biomass for on-site energy.
7. Protect Existing Carbon Stocks: Maintain the carbon that is currently held in soil and plants.	Goals 2-A and 2-D and Policy 2-43 outline how most of the Planning Area will be preserved as open space and how natural/biological resources, including existing tree canopy, will be protected or expanded to help sequester carbon.
8. Increase Carbon Stocks: Capture more carbon in soils and plants.	As addressed in Strategy 7 above, the Proposed Plan would preserve existing resources that sequester carbon in addition to expanding those resources such as by adding new trees.
9. Scale Up the Infrastructure for Sequestration: Build the physical, social, and economic capacity for successful carbon sequestration.	The Proposed Plan's Agrihood district and the Buffer and Preserved open space designations as well as goals 2-A, 2-D, and 6-C build a comprehensive environmental stewardship framework that supports capacity

<i>Strategy/Goal</i>	<i>Supporting Proposed Plan Policies</i>
	for successful carbon sequestration, as also addressed above in strategies 7 and 8.
10. Energy Grid for the Future: Increase resilience of the electrical grid and prepare for electrification of buildings and transportation systems.	As noted in strategies 1, 2, 3, 4, and 5, the Proposed Plan would support electrification of buildings and transportation systems by providing the appropriate infrastructure and network.
11. Climate Resilient Sonoma County: Address the economic, social, and environmental impacts of future wildfires, floods, extreme heat, drought, sea level rise, and other climate change risks.	Goals/policies described in regard to strategies 7, 8, and 9 would help mitigate extreme heat, while Goal 6-D and policies 6-9, 6-10, 6-11, and 6-15 help reduce water use to increase resilience for drought. Wildfire resiliency is addressed by Goal 2-F and policies 2-34 and 2-42.
12. Engage, Educate, and Empower for Equitable Climate Action: Coordinate with local leaders and develop a campaign to engage residents from frontline communities and key stakeholders in the Sonoma Climate Mobilization.	While frontline communities have not been identified within the Planning Area, the Proposed Plan supports general education and engagement efforts to build capacity for climate action, as noted in Strategy 9.
13. Equity and Climate in All Policies: Develop processes and tools to support the inclusion of equity and climate in all policies.	As noted above for strategies 9 and 12, the Proposed Plan is centered on climate resilience and sustainability and includes community-wide efforts to achieve these goals across all chapters of the Proposed Plan, as listed under Section 3.6.3.3: Relevant Proposed Plan Goals and Policies.

Conclusion

Based on the above analysis, the Proposed Plan would support all applicable GHG emissions reductions plans, policies and regulations including CARB's Climate Change Scoping Plan, MTC/ABAG's Plan Bay Area 2050, BAAQMD CEQA guidance, the Sonoma County General Plan, the Climate Change Action and Climate Emergency resolutions, and RCPA's Climate Mobilization Strategy. Given that the Proposed Plan would not conflict or hinder any of these, this impact is less than significant, and no mitigation measures are required.

Mitigation Measures

None required.

3.7

Geology, Soils and Mineral Resources

3.7 Geology, Soils, and Mineral Resources

This section describes the environmental and regulatory setting and outlines impacts related to geology, soils, and mineral resources including those related to seismic hazards and soil stability, in the Sonoma Developmental Center (SDC) Specific Plan Planning Area. There were no comments in response to the Notice of Preparation (NOP) pertaining to topics discussed in this section.

3.7.1 Regulatory Setting

3.7.1.1 Federal Regulations

Earthquake Hazards Reduction Act of 1977

Federal laws codified in U.S. Code Title 42, Chapter 86, were enacted to reduce risks to life and property from earthquakes in the U.S. through the establishment and maintenance of an effective earthquake hazards reduction program. Implementation of these requirements are regulated, monitored, and enforced at the State and local levels. Key regulations and standards applicable to the Proposed Plan are summarized below.

U.S. Geological Survey Landslide Hazard Program

The U.S. Geological Survey (USGS) created the Landslide Hazard Program in the mid-1970s; the primary objective of the program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies. The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify

specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan (HMP) that incorporates specific program elements of the DMA2K law. The County of Sonoma has prepared a HMP, as described under Local Regulations, below.

3.7.1.2 State Regulations

California Multi-Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Plan (SHMP), was approved by the Federal Emergency Management Agency (FEMA) in 2013. The SHMP outlines present and planned activities to address natural hazards. The adoption of the SHMP qualifies the State of California for federal funds in the event of a disaster. The State is required under DMA2K, described above, to review and update its SHMP and resubmit for FEMA approval at least once every five years to ensure the continued eligibility for federal funding. The SHMP provides goals and strategies which address minimization of risks associated with natural hazards and response to disaster situations. The SHMP notes that the primary sources of losses in California are fire and flooding.

California Building Standards Code

The California Building Code (CBC) is Part 2 of Title 24 of the California Code of Regulations. The CBC incorporates the International Building Code, a model building code adopted across the U.S., with additions related specifically to the State of California. The CBC is updated every three years, and the current 2019 version took effect January 1, 2020. With the exception of certain additions, deletions, and amendments, the County adopted the CBC by reference as Chapter 7 Section 7-13. Through the CBC, the State provides a minimum standard for building design and construction. Of particular relevance, Chapter 16 of the CBC contains specific requirements for structural (building) design, including seismic loads. Chapter 18 of the CBC includes requirements for soil testing, excavation and grading, and foundation design.

The 2019 CBC (based on the 2018 International Building Code) has been amended and adopted as the Building Code of the County of Sonoma, regulating the erection, installation, alteration, repair, relocation replacement, addition to, use, or maintenance of buildings within the County.

California Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on top of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as ground shaking or landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist–Priolo Zones) around the surface traces of active faults, and to issue appropriate maps. The maps are then distributed to all affected cities, counties and state agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

As discussed below under Environmental Setting, there are no known active faults in the Planning Area. The Rodgers Creek Fault, zoned under the Alquist-Priolo Earthquake Fault Zoning Act, is approximately 4.5 miles southwest of the Planning Area. The West Napa fault, also zoned under the Act, is located 9.5 miles to the east.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted, and appropriate mitigation measures incorporated into the project design. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by the California Geological Survey (CGS) Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards. There are no Seismic Hazard Zones delineated by the State within the Planning Area. Seismic Hazard Zone mapping of the Planning Area may be done at a future time.

State Minerals Classification System

As required by the California Surface Mining and Reclamation Act (SMARA), which was enacted in 1975 by the State Legislature (Pub. Resources Code, section 2710 et seq.), CGS has established a classification system to denote both the location and significance

of key extractive resources. SMARA provides for a mineral lands inventory process termed “classification-designation.” The State Geologist is responsible for preparing a geological inventory of selected mineral commodities within a defined study region by classifying areas into various Mineral Resource Zones (MRZs) based on their mineral resource potential. By statute, classifications are made based on geologic factors without regard to existing land use and economic factors. Once the classification process is complete, the SMBG may choose to identify deposits that are potentially available from a land-use perspective and are of prime importance in meeting future needs of the region or state. Designation is the formal recognition by the State Mining and Geology Board (SMGB) of lands containing mineral resources of regional or statewide economic significance that are needed to meet the demands of the future. In some cases, the SMGB will terminate existing designations in areas where the development of land uses is incompatible with mining.

3.7.1.3 Local Regulations

Sonoma County General Plan 2020

The Sonoma County General Plan 2020 includes the following goals and policies associated with geology, soils, seismicity, and mineral resources:

Policy PS-1a: Continue to use all available data on geologic hazards and related risks from the appropriate agencies.

Policy PS-1b: Continue to use studies of geologic hazards prepared during the development review process.

Policy PS-1c: Consider amendments of this Element to incorporate new data which significantly change the hazard assessments contained herein.

Policy PS-1d: Support and integrate research on geologic hazards, their probabilities, and their effects within Sonoma County.

Policy PS-1e: Continue to implement the "Geologic Hazard Area" combining district which establishes regulations for permissible types of uses and their intensities and appropriate development standards.

Policy PS-1f: Require and review geologic reports prior to decisions on any project which would subject property or persons to significant risks from the geologic hazards areas shown on Public Safety Element hazard maps and related

file maps and source documents. Geologic reports shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, require an engineer's or geologist's certification that risks have been mitigated to an acceptable level and, if indicated, obtain indemnification or insurance from the engineer, geologist, or developer to minimize County exposure to liability.

Policy PS-1g: Prohibit structures intended for human occupancy (or defined as a "project" in the Alquist-Priolo Special Studies Zones Act and related Administrative Code provisions) within 50 feet of the surface trace of any fault.

Policy PS-1h: Adopt, upon approval by the International Code Council (ICC) and the State of California, revisions to the Uniform (currently the International and California) Building Code which increase resistance of structures to ground shaking and other geologic hazards.

Policy PS-1i: Require dynamic analysis of structural response to earthquake forces prior to County approval of building permits for structures whose irregularity or other factors prevent reasonable load determination and distribution by static analysis.

Policy PS-1j: Encourage strong enforcement of State seismic safety requirements for design and construction of buildings and facilities subject to State and Federal standards such as bridges, dams, power plants, hospitals and schools.

Policy PS-1k: Incorporate measures to mitigate identified geologic hazards for all County roads, public facilities, and other County projects to an acceptable level.

Policy PS-1l: Use the following criteria in siting and design of essential service buildings and facilities, particularly those of high public occupancy: (1) To the extent feasible, avoid siting such buildings and facilities in areas subject to a Modified Mercalli Index (MMI) Groundshaking Intensity Level of Very Violent (X), Violent (IX), or Very Strong (VIII) as shown on Figures PS-1a. (2) Where such buildings and facilities must be located in the above areas, design and construct them to the highest feasible safety standard.

Policy PS-1m: Make readily available to property owners and the public all maps identifying geologic hazards in Sonoma County, particularly the MMI Groundshaking Intensity Level maps noted above.

Policy PS-1n: Develop a Strategic Plan for damage assessment and recovery of essential service buildings and facilities, particularly those of high public occupancy, as part of the County's emergency response planning, focused in areas subject to an MMI Groundshaking Intensity level of Very Violent (X), Violent (IX), or Very Strong (IIX).

Policy PS-1o: Adopt an ordinance requiring strengthening and/or reinforcement of Unreinforced Masonry Buildings, except residential structures, considering the cost of the work and the value, frequency of use, and level of occupancy of the buildings.

Policy OSRC-13a: Consider lands designated in the ARM Plan as priority sites for aggregate production and mineral extraction and review requests for additional designations for conformity with the General Plan and the ARM Plan.

Policy OSRC-13b: Review projects for environmental impact and land use conflicts and consider the following minimum factors when approving mining permits: topsoil salvage, vegetation, fisheries and wildlife impacts, noise, erosion control, roadway conditions and capacities, reclamation and bonding, air quality, energy consumption, engineering and geological surveys, aggregate supply and replenishment, drainage, and the need for economical aggregate materials.

Policy OSRC-13c: Review projects that are on or near sites designated "Mineral Resources" in the ARM Plan for compatibility with future mineral extraction.

Public Safety Element

The intent of the Public Safety Element is to protect the community from geologic hazards, flooding, and fires, and enacts policies to minimize property damage and human injury. The Sonoma County HMP is incorporated into this element. Geologic hazards considered by the Public Safety Element include seismic hazards, fault movement, ground shaking, ground failure, and ground displacement along fault traces, tsunamis, secondary effects of earthquakes, landslides, and expansive soils. The goal of the General Plan in regard to geologic hazards is to prevent unnecessary exposure of people and property to risks of damage or injury from earthquakes, landslides, and other geologic hazards. Objectives derived from this goal include the continuation of developing and utilizing geologic data, the regulation of new development to reduce risks involving geologic hazards, and the use of the Sonoma County HMP to help reduce further damage from geologic hazards.

Policies include utilizing known geologic data and new findings to inform new developments and mitigations, requiring geologic reports that outline hazards and mitigation procedures on any projects that pose involve geologic risks, restricting buildings within Alquist-Priolo defined active faults, designing buildings to resist ground shaking using uniform building codes and State seismic safety requirements, publically publishing maps identifying geologic hazards, developing a strategic plan for damage assessment, and adopting an ordinance requiring retrofitting of unreinforced masonry buildings.

Sonoma County Aggregate Resources Management (ARM) Plan

Sonoma County has adopted the Aggregate Resources Management (ARM) Plan to set forth the State mandated mineral management policy for the County. The goal of the ARM Plan is to meet the County's need for aggregate while minimizing environmental impacts and land use conflicts in a manner consistent with the requirements of CEQA, SMARA and State Mineral Resource Management policies. Within this context, and to the maximum extent feasible, the ARM Plan's specific objectives are the following:

1. Assist existing quarry operations to increase production for high-quality uses in an environmentally sound manner.
2. Facilitate new or expanded quarry operations at designated sites or at other locations with resources which can meet the needs for aggregate in an environmentally sound manner.
3. Provide for terrace resources to meet the needs for high quality uses for a ten-year period and terminate terrace mining at the end of that period.
4. Manage instream resources on a sustained yield basis for high quality uses in a manner which reduces bank erosion, maintains flood flow capacities, protects adjacent uses, and minimizes impacts on fisheries, vegetation and wildlife.
5. Continue and expand monitoring programs so that more information is available for future decisions about terrace and instream impacts and alternative management policies and approaches.
6. Reevaluate gravel extraction methods and production periodically to assess options which would further reduce environmental impacts and land use conflicts or better meet the County's aggregate needs.
7. Change specifications, standards and practices where possible so that quarry rock will be more competitive with instream and terrace sources.
8. Reduce the need for additional aggregate through utilization of recycled and substitute materials, changes in development standards, and other means possible.

9. Encourage the retention of locally produced aggregate for use within Sonoma County.

Sonoma County Code

Chapter 11 of the Sonoma County Code regulates construction grading and drainage of the unincorporated parts of Sonoma County. It establishes administrative procedures, applicability, interpretations, best management practices, and legislative intent regarding construction that relates to geology, and water resources.

Chapter 26A, Surface Mining, of the Sonoma County Code regulates mineral resource extraction. Mineral resource areas that have been classified by the State Department of Conservation's Division of Mines and Geology, designated by the State Mining and Geology Board, or designated in the Sonoma County ARM plan, as well as existing surface mining operations that remain in compliance with the provisions of this chapter, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction or processing, to the extent possible for consistency with the General Plan. Conservation and potential development of identified mineral resource areas will be considered and encouraged.

3.7.2 Environmental Setting

Geology and soils in the Planning Area and surrounding Sonoma County area are mainly a consequence of the long history of active tectonics near the margin between the Pacific and North American Tectonic Plates, patterns of climate change, and changing land use and vegetation patterns. Typical geologic and soils related constraints on development within the Planning Area are strong seismic shaking; slope instability that may cause landslides, mudflows, debris flows and other types of slope failure; and basic soil instability, including settlement, shrinking and swelling of soil, and fissuring or cracking of the ground. Secondary seismic effects such as soil liquefaction, seismic induced landsliding, lurch cracking and fissuring and damage to existing structures can also be a constraint to development. These constraints are interrelated and may be exacerbated by wildfires and/or periodic heavy rains causing soil erosion, saturation of the ground, flooding and landsliding. Rainfall and runoff can also result in the formation of sinkholes and failure of drainage structures, roads, and utilities resulting in soil erosion, slope or stream bank destabilization and landslides as secondary affects.

3.7.2.1 Geology and Soils

Regional Geology

The Geologic Map of the Glen Ellen 7.5' quadrangle, Sonoma County, California, shows the Planning Area is underlain by bedrock of the Sonoma Volcanics and sedimentary units of the Glen Ellen formation. Quaternary units associated with Sonoma Creek and landslides are also present (**Figure 3.7-1**).

The Miocene to Pliocene Sonoma Volcanics present within the area of the site plan mainly consists of mafic flows and breccias (basalt to andesite) and rhyolite tuffs. Volcanics are dated to 2.5 to 8 million years old and are a result of the migrating triple junction as the North American-Farallon subduction plate boundary transitioned into the present day North American-Pacific plate transform boundary. The Pliocene to Pleistocene Glen Ellen Formation within the site area is composed of gravel, sand, silt, and reworked tuff sourced mainly from the Sonoma Volcanics. Interbedded sands, gravels, diatomaceous earth, and reworked tuffs show evidence for fluvial to lacustrine environments during emplacement of extrusive volcanics.^{1,2}

Overlying Quaternary geologic units consist of alluvial fans, stream terraces, and landslide deposits. The sediments are derived primarily of Sonoma Volcanic rocks. Alluvial fan deposits range in age from Early Pleistocene to Holocene and consist of gravel, sand, silt, and clay. Topography within the alluvial fans is gently rolling hills to gently sloping and is deeply to weakly dissected depending on fan age. Associated with Sonoma Creek, there are stream terraces that are late Pleistocene to latest Holocene in age and consist of coarser point bar deposits of gravels and sands to finer over bank deposits of silts and clays. There are two large Quaternary landslide deposits within and adjacent to the Planning Area whose movements indicate they mobilized from units of the Sonoma

¹ David L. Wagner, George J. Saucedo, Kevin B. Clahan, Robert J. Fleck, Victoria E. Langenheim, Robert J. McLaughlin, Andrei M. Sarna-Wojcicki, James R. Allen, Alan L. Deino; Geology, geochronology, and paleogeography of the southern Sonoma volcanic field and adjacent areas, northern San Francisco Bay region, California. *Geosphere* 2011; 7 (3): 658–683. doi: <https://doi.org/10.1130/GES00626.1>

² Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsd.com. Retrieved June 14, 2022, from <https://transformsd.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

Volcanics. Within the Planning Area there are also smaller landslide deposits originating from other landslide deposits, the Sonoma Volcanics, and the Glen Ellen Formation.

Soil Properties

According to the U.S. Department of Agriculture (USDA) Soil Conservation Service, Soil Survey of Sonoma County (1972) and USDA online Soil Survey of Sonoma County (2019)³, the SDC site is underlain by several different soils of gravelly/cobbly clay loams, clay loams, and loams (**Table 3.7-1**).

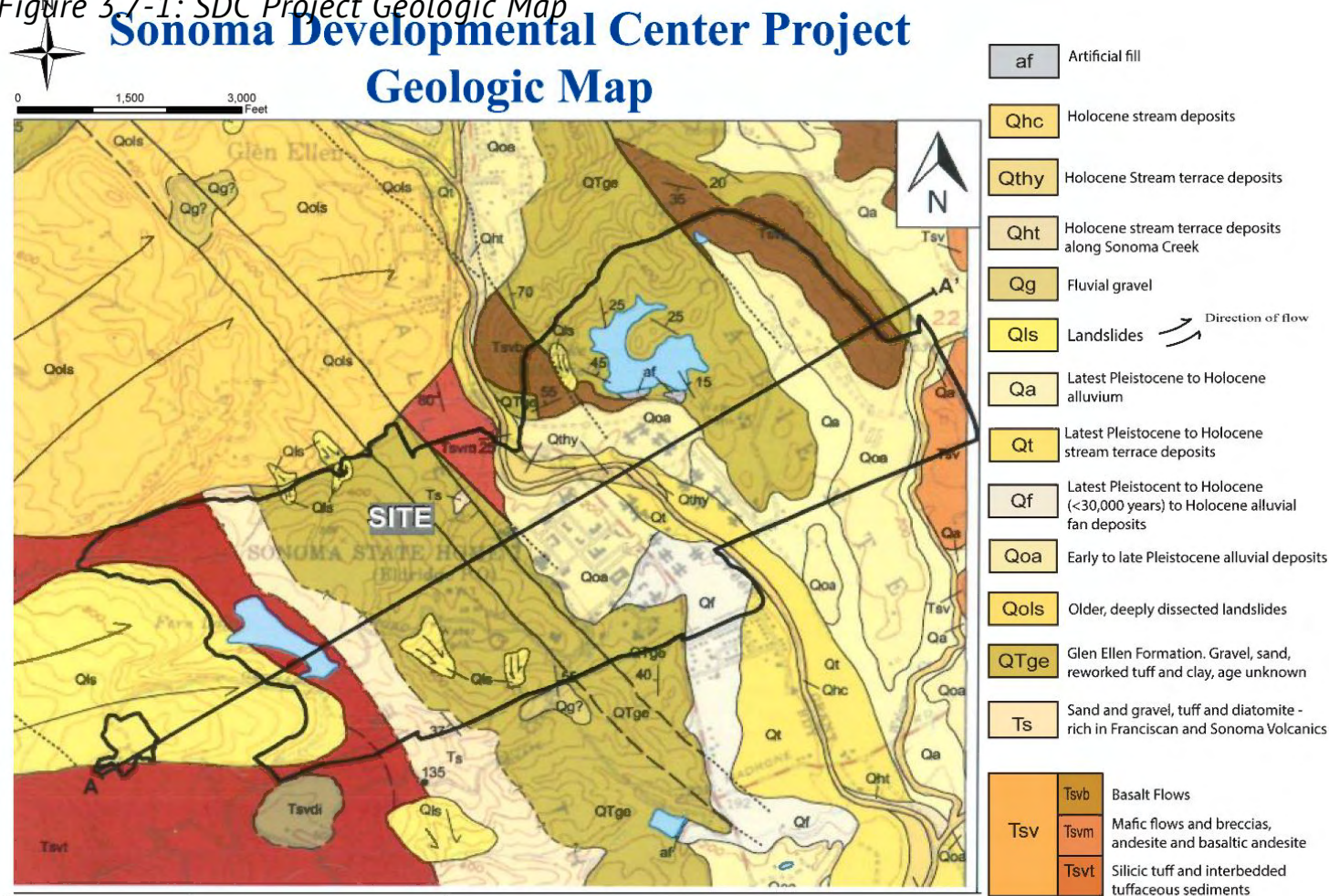
Seismicity

The SDC Planning Area lies within Sonoma Valley east of the Sonoma Mountains and west of the Mayacamas Mountains which are part of the tectonically active Coast Ranges Geomorphic Province of Northern California. Northwest- to southeast-oriented ridges and valleys are common in the area and are generally parallel to sub-parallel to the structural trend controlled by faults of the San Andreas Fault system. The San Andreas Fault system represents the boundary between the North American and Pacific tectonic plates. Active deformation is expressed along this boundary margin by active seismicity which includes earthquakes and fault displacement on the active faults of the region. Numerous moderate to strong historic earthquakes have been generated in northern California by the San Andreas Fault system. This level of active seismicity results in a relatively high seismic risk in the San Francisco Bay Area.

Within Sonoma County, faults are characterized largely by strike-slip, or horizontal displacement, with some auxiliary compression or tension across the fault that causes uplift of mountain ranges or down-dropping of valleys, respectively. Most active faults strike

³ Soil Survey for Sonoma County, California (USDA, 1972; online version 2019)

Figure 3.7-1: SDC Project Geologic Map



**FIGURE
3.7-1**



Sonoma Developmental Center Site
Glen Ellen, Sonoma Valley, California
Source: California Geological Society, 2003, Geologic Map of the Glen Ellen
7.5' Quadrangle, Sonoma County, California

northwest to southeast, and may include many fault strands in a broad zone, or a single actively creeping identifiable fault. Horizontal and vertical movement is distributed on the various fault traces within a fault zone. Over long periods of time the fault traces accommodating movement and active deformation within a fault zone may change, with some traces becoming inactive while other traces are developing. However, over the short period of human history the activity of certain fault traces may be constrained by ascertaining the date of historic and prehistoric ruptures to predict the probability of future earthquakes.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 identifies earthquake fault zones determined to be active based on fault movement within the last 11,000 years (Holocene time) as shown in Figure 3.7-2. There are no active faults within the Planning Area. The nearest faults in the vicinity that are considered active in accordance with the Alquist-Priolo Earthquake Fault Zoning Act are the Rodgers Creek Fault located, at its closest, approximately 4.5 miles southwest of the main campus of the Planning Area, the West Napa fault located approximately 9.5 miles to the southeast, the Concord/Green Valley fault located approximately 18 miles to the southeast, the Maacama fault located approximately 19 miles to the northwest, the Hayward fault located approximately 25 miles south, and the San Andreas Fault located approximately 24 miles to the southwest of the Planning Area. An earthquake on the Rodgers Creek Fault could result in severe to very strong ground shaking, and the remaining proximal faults could result in very strong to strong shaking in the Planning Area.

A number of Quaternary faults considered inactive by the State of California cross the Planning Area. Inactive faults are not expected to experience active seismicity or surface ground rupture during earthquake events.

Major seismic events in the region that have resulted in moderate to strong ground shaking of the Planning Area include the 1868 Hayward earthquake of estimated magnitude 7.0, the great 1906 San Francisco earthquake of approximate magnitude 7.9, and the 1989 Loma Prieta Earthquake of magnitude 6.9. On October 2, 1969, two earthquakes of magnitude 5.6 and 5.7 struck in the vicinity of Santa Rosa along the Healdsburg fault segment of the Rodgers Creek-Healdsburg fault zone. One fatality occurred due to the earthquake as well as 8.35 million dollars in damages. An earthquake of magnitude 5.2 on the nearby West Napa fault on September 3, 2000, near the town of Yountville, reportedly caused between 15 and 70 million dollars in losses, mostly in Napa. Another seismic event to affect the area was the South Napa earthquake of August 24, 2014, resulting in one fatality and over 200 injuries. Property damage from this earthquake is estimated at 350 million dollars to over one billion dollars. This magnitude 6.0 earthquake

occurred along the southern portion of the West Napa fault and exposed fault segments which had not been previously recognized.

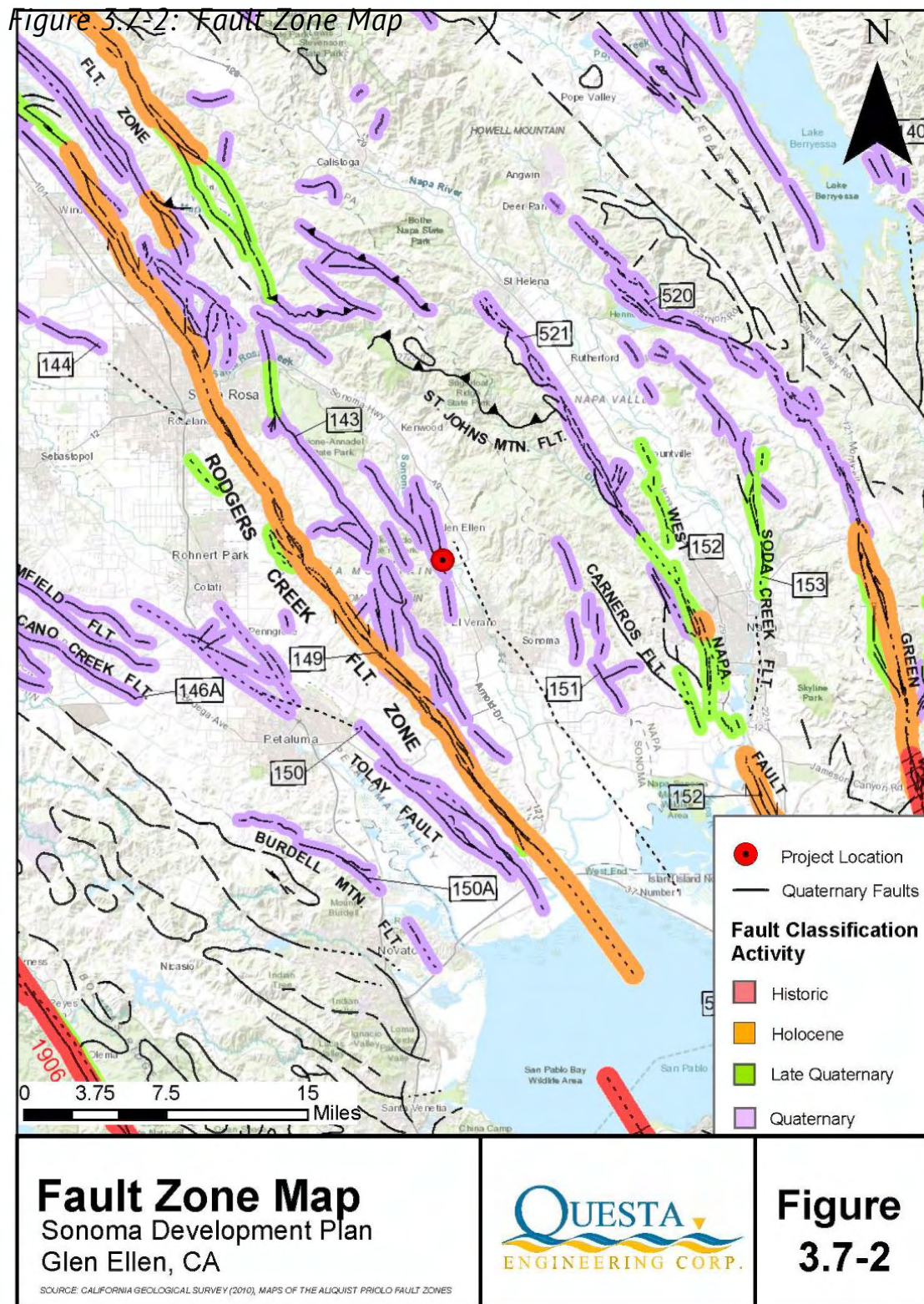
The USGS Working Group on California Earthquake Probabilities study completed in 2014 estimates that there is a 72-percent probability between 2014 and 2044 that a magnitude 6.7 or greater earthquake will occur in the San Francisco Bay region. The combined Hayward-Rodgers Creek fault is considered to have an elevated probability of an earthquake during the study period of 2014 to 2044.

There are several small-scale faults mapped by the CGS and USGS that cross through the Planning Area but have not been shown to be active since Quaternary times. Although these may not be historically active, they represent zones of weakness that could potentially accommodate offset during an earthquake rupture on the main regional faults that are zoned as active by the State.

Planning-Area-Specific Seismicity

A number of active and potentially active faults are present in the region. According to criteria of CGS, active faults have experienced surface rupture within the last 11,000 years, in the Holocene Epoch. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 initiated a program of mapping active and potentially active faults (faults with displacement within Quaternary time to the last 1.6 million years). According to the program, active faults must be zoned and development projects within the Earthquake Fault Zones investigated to establish the location and age of any faulting across the development site. Active and potentially active faults in Sonoma County have undergone extensive investigation in the past. The CGS (formerly the California Division of Mines and Geology) has established Alquist-Priolo Earthquake Fault Zone boundaries and has published maps showing the areas that require investigation, including the Glen Ellen Quadrangle (State of California, 1983, Earthquake Fault Zones Map of the Glen Ellen Quadrangle⁴, Revised Official Map). According to the Earthquake Fault Zones Map of the Glen Ellen Quadrangle, the SDC Planning Area is not located within an active Earthquake Fault Zone.

⁴ Earthquake Fault Zones Map of the Glen Ellen Quadrangle. ArcGIS web application. (n.d.). Retrieved May 16, 2022, from <https://maps.conservation.ca.gov/cgs/EQZApp/app/>



3.7.2.2 Seismic and Geological Hazards

Seismic Shaking

The San Francisco Bay Area is a seismically active region and experts consider it likely that the Planning Area will be subjected to at least strong seismically induced ground shaking in the near future. The intensity of ground shaking will vary with the distance and magnitude of the earthquake causing the ground shaking. A major earthquake, such as magnitude 6.7 or greater along the nearby Rodgers Creek Fault is predicted to generate severe to very strong shaking equivalent to a Modified Mercalli Intensity (MMI) level of VII or VIII. An earthquake of MMI VII would result in negligible damage to buildings of good design or construction, but would cause slight to moderate damage in ordinarily constructed buildings to considerable damage in poorly constructed buildings. An earthquake of MMI VIII would cause considerable to partial collapse in ordinary buildings. A major earthquake on the other nearby regional faults such as West Napa, Concord/Green Valley, Maacamas, Hayward, and San Andreas faults could result in at least strong ground shaking equivalent to MMI of VI to VII. Historic buildings at the site could be subject to damage due to earthquake induced ground shaking.

Peak ground acceleration for the Planning Area is expected to be approximately 73 percent of the acceleration due to gravity (0.73 g) for the maximum credible earthquake⁶. Actual ground motions resulting from ground acceleration may be amplified or dampened depending on the underlying geologic materials, the specific location of the seismic event, and the site location.

Liquefaction

Liquefaction is the temporary transformation of saturated, cohesionless soil into a viscous liquid as a result of ground shaking. According to the Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region map of liquefaction susceptibility, the majority of soils within the Planning Area are considered to have very low susceptibility to liquefaction (**Figure 3.7-3**)⁷. The exceptions lie in proximity to Sonoma Creek, where the center channel of the creek has very high susceptibility, the point bars of the creek have high susceptibility, and old stream deposits adjacent to the creek have

⁶ U.S. Seismic Design Maps. (n.d.). Retrieved May 16, 2022, from <https://seismicmaps.org/>

⁷ Witter, R.C. et al, 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California: U.S. Geological Survey Open-File Report 26-1037

moderate susceptibility to liquefaction. Portions of the southeastern part of the Planning Area also have moderate potential for liquefaction in areas underlain by alluvial and older alluvial deposits.

Lateral Spreading

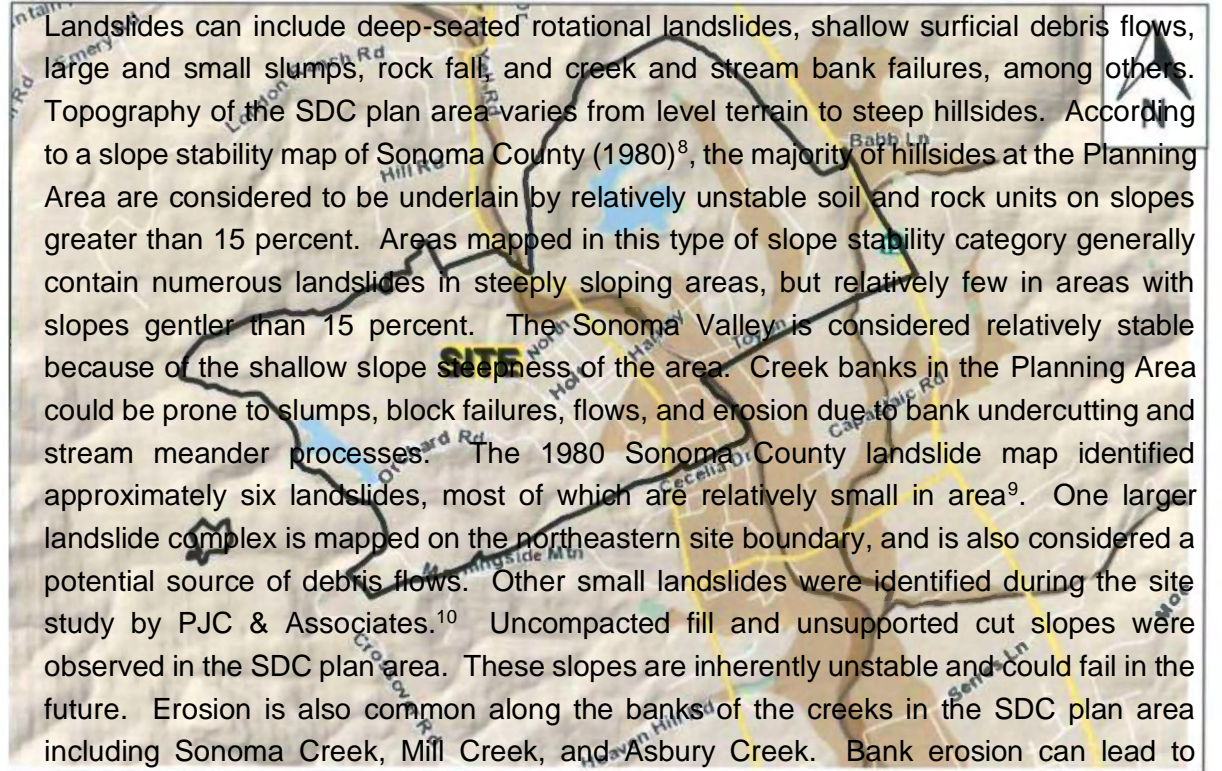
Lateral Spreading occurs when liquefiable soils are exposed at a free face such as a creek bank or road cut. During seismic ground shaking, the soil spread in the direction of the free face and can flow or slump and block a creek or road, or result in damage to structures constructed above or adjacent to the area of lateral spreading. Lurching is the sudden swaying, rolling, or spreading of the ground during a strong earthquake. Lurch cracking is the development of fissures or cracks on slopes overlain by weak soils. The potential areas of lurch cracking and lateral spreading would be in the areas adjacent to stream banks, especially along portions of Sonoma Creek.

The banks along Sonoma Creek could be prone to lateral spreading and lurch cracking. Cuts abutting failing retaining walls or basement walls could also be prone to lateral spreading and lurching.

Landslides

Slope steepness is generally the dominant factor governing slope stability, along with drainage, and soil and bedrock conditions. Steep slopes (greater than 26.5 degrees) that exceed 50 percent are especially prone to landslides in areas of weak soil and/or bedrock. Debris flows and shallow slope failures are known to occur on very steep slopes with shallow soils. The majority of the Planning Area has slopes less than 50 percent. In the west half of the Planning Area and a portion in the east, there are low-lying hills that range in slope up to approximately 40 degrees. The steepest slopes exceeding 45 degrees are within drainages among the hills and along stream banks. These areas are of greater concern for slope instability, where hill slopes may generate debris flows or slumps, and steep stream banks may collapse. The main campus area, where redevelopment would be focused, generally has very gentle slopes, except along creek banks where steeper slopes can occur.

Figure 3.7-3: Regional Liquefaction Map



undercutting of creek banks and result in slope failure, especially around the outside bends of the stream.

Wildfires can exacerbate slope instability by removing vegetative cover, damaging root systems, and creating a hydrophobic coating on the topsoil which promotes increased runoff and mobilization of sediment. The recent wildfires in proximity to the Planning Area have been on the eastern edge where slopes are shallower, but there is potential for the western, steeper slopes to burn which may further promote landslides in the future.

Figure

3.7-3

Landscape and Relative Slope Stability, Sonoma County, prepared by the California Division of Mines and Geology, Compiled by Charles F. Armstrong, dated 1980

QUESTA
Civil
Environmental
Water Resources
(510) 236-6114
P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

Regional Liquefaction Map

Adapted from: Association of Bay Area Governments. (2009, June). Liquefaction Susceptibility. Mtc.maps.arcgis.com. Retrieved June 15, 2022, from

⁹ Davies, R. I., & Spittler, T. E. (n.d.). Index to published landslide maps. Retrieved May 16, 2022, from https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Publications/SP_120.pdf

¹⁰ PJC & Associates, Preliminary Geologic Hazard Report, Sonoma Developmental Center, (Oct 5, 2017)

Seismically induced ground shaking can also result in landslides during strong ground motion shaking events. This can result in the failure or movement of slopes and the failure of existing creek banks. Road cuts in sloping areas can also fail resulting in blocking of roads and limiting access to remote sites. Failed creek banks can potentially block the flow of water and substantially alter the flow of surface water in the creek channel.

Soil Erosion

Soil erosion is the process by which soil materials are worn away and transported to another area, either by wind or water. As discussed in the Landslide section, erosion is possible along the banks of Sonoma, Mill, and Ashbury creeks. Erosion of slopes is also possible if proper grading procedures and erosion control measures are not followed.²

Expansive Soils

Soils with moderate to high expansion potential are susceptible to shrinking and swelling due to seasonal fluctuations in moisture content, and are a common cause of foundation deterioration, cracking of concrete slabs, retaining wall damage, concrete sidewalk cracking and movement, asphalt pavement damage and other damage to site improvements. Expansive soils also typically behave like a plastic when moistened, which means that they will deform constantly under a constant stress resulting in long term settlement of fills and overlying improvements. The range of moisture content for which a soil material behaves as a plastic is called the plasticity index (PI), which is the difference in moisture content between the plastic limit and liquid limit. The higher the PI, the more plastic, and more expansive and compressive, the soil material can be. An important component of any geotechnical investigation is to determine the plasticity index of soils to determine if the soils are expansive or compressible. Soils that are moderately to highly plastic or have high shrink-swell potential may require mitigation in order to reduce the potential for damage to man-made structures.

Soils derived from dominantly mafic and intermediate volcanic rocks, such as those in the Planning Area, are generally expansive due to the presence of magnesium in the volcanic materials. High magnesium volcanic soils will weather to soils high in bentonite and other

² Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

magnesium rich clay content which have high plasticity and are prone to shrinking and swelling during seasonal moisture fluctuations.

The Soil Survey of Sonoma County (1972) estimated typical depth to bedrock or hardpan, USDA texture or Unified Soil Classification, PI, shrink-swell potential, and permeability for soils within the plan area. These are summarized on **Table 3.7-1**. While soils were not specifically evaluated for foundations, since the intent of the survey was primarily agricultural, this information may be used as a general indicator of suitability.¹¹

Table 3.7-1: Soils Survey Characteristics

<i>Soil Series</i>	<i>Depth to bedrock or hardpan (ft)</i>	<i>Dominant USDA texture</i>	<i>Unified Soil Classification</i>	<i>PI</i>	<i>Shrink-swell potential</i>	<i>Permeability (in./hr)</i>
Clough	1-3	Gravelly loam	SM	0-10	Low	0.63-2.0
Goulding	1-2	Clay loam Cobbly clay loam	CL CL	15-30 15-30	Moderate Moderate	0.63-2.0 0.63-2.0
Huichica	2-3.5	Loam	CL/ML	5-15	Moderate	0.63-2.0
Laniger	1.5-4	Loam	CL/ML	10-20	Moderate	0.63-2.0
Los Robles	>5	Gravelly clay loam	SC	15-30	Moderate	0.2-0.63
Red Hill	2.5-5	Clay loam	CL	20-30	Moderate	0.63-2.0
Spreckels	2-5	Loam	CL/ML	10-25	Moderate	0.2-0.63
Tuscan	1-2	Cobbly clay loam	SC	15-30	Moderate	0.2-0.63

Source: Sonoma County Soils Survey, 1972, USDA Soils Conservation Service

The soils in the Planning Area are typically fine-grained, silt and clay rich, and moderately plastic. Shrink-swell potential is moderate for the majority of the soils. A site-specific geotechnical evaluation would be needed to establish the actual severity of these hazards based on sampling and laboratory testing on a case-by-case basis during future development activities.

¹¹ Soil Survey of Sonoma County, California (1972). (1972, May). Retrieved May 16, 2022, from https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/sonomaCA1972/sonomaCA1972.pdf

Settlement caused by subsidence is generally related to groundwater extraction from agricultural and municipal wells. Settlement of soils is a primary consideration for the stability of any foundation or structure. Settlement may be due to removal of groundwater trapped in pore spaces within soils. This type of settlement generally occurs in sand and silty sand soils. The reduction in pore pressure would cause the load to compress the pore space causing settlement. Settlement may also occur due to compressibility of dry soils. Fine-grained soils such as silts and clays may also settle. Settlement of fine-grained soils is generally related to density and moisture content of the soils. Low density, high moisture content soils commonly settle during loading. Deep, fine-grained soils are present within the Planning Area and may be subject to compression and settlement during loading with fill soils or structural foundations. The Planning Area is located in the Sonoma Valley Groundwater Sub-basin where groundwater levels have been shown to be declining due to groundwater extraction. There is no current evidence for subsidence in the Sonoma Valley.

In general, soils conditions are suitable for development and may be engineered in accordance with the CBC and other geotechnical requirements to provide sufficient foundation for structures. Requirements include removal of any unsuitable soils consisting of native subgrade or fill soils, and replacement with compacted and moisture conditioned engineered fill in accordance with accepted geotechnical standards. Testing will be required to verify that specified foundation conditions are met.

Seismically Induced Densification

Dynamic densification or ground subsidence can occur when dry cohesionless sand soils collapse as a result of seismic shaking. This may be particularly true of unconsolidated sandy fill, or ground overlying hollow areas due to caves, mines, or areas with excessive groundwater removal. Since soils described within the plan area are considered to have significant quantity of fines and at least low to moderate plasticity soils they may have enough cohesion to produce only a slight risk of seismically induced densification, however site specific geotechnical investigations should establish the severity of this hazard when specific development is proposed in the future.

Mineral Deposits

The Surface Mining and Reclamation Act (SMARA) (California Public Resources Code 2710 et seq.) was passed in 1975 to prevent loss of significant mineral resources due to urban expansion, provide current information concerning the location and quantity of essential mineral deposits, and ensure adequate reclamation of mined lands. SMARA

requires the State Geologist to classify specified areas into Mineral Resource Zones (MRZs), determined solely on geologic factors and without regard to existing land use, that reflect varying degrees of mineral resource potential, as described below:

- **MRZ-1.** Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- **MRZ-2.** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.
- **MRZ-3.** Areas containing mineral occurrences of undetermined mineral resource significance.
- **MRZ-4.** Areas where available information is inadequate for assignment to any other MRZ category.

To be considered significant for the purpose of mineral land classification, a mineral deposit (or group of mineral deposits) must meet marketability and threshold value criteria adopted by the California State Mining and Geology Board (SMGB). SMGB designated construction aggregate (sand, gravel, and crushed rock) resource areas of regional significance in the North San Francisco Bay Production-Consumption (P-C) Region, as published in the original classification study in 1987 as Special Report (SR) 146, Part III. In 2013, the California Geological Survey (CGS) published an updated classification report, SR 205, which updates the mineral land classification of aggregate resources in the region but does not change its original 1987 designation. SR 205 expands on SR 146, Part III by classifying all lands within the North San Francisco Bay P-C Region instead of only areas delineated by the State Office of Planning and Research (OPR) as urbanized or urbanizing in 1984. SR 205 also incorporates findings from mineral land classification in Sonoma County completed in 2004 (SR 175).

Pursuant to SMARA, the Classification-Designation process identifies sectors, which are MRZ-2-classified lands that are currently permitted for mining and areas found to have land uses compatible with possible mining. The total amount of resources (all aggregate materials identified in sectors, including permitted reserves) are calculated for each sector and used to determine whether the region's needs are met for the next 50 years.

A Mineral Land Classification Map for Aggregate Resources for Sonoma County is presented as part of CGS Special Report 175, Mineral Land Classification of Aggregate

Materials in Sonoma County, California¹². The 2013 updated classification report by CGS identifies areas along Sonoma Creek, including the stretch within the Planning Area, as MRZ-2 where geologic data indicate that significant inferred mineral resources (aggregates) are present within Sonoma Creek for Portland cement, Asphalt pavement, and Class 2 aggregate base. Also present are areas of known and inferred mineral resources. **Figure 3.7-4** presents an excerpt of the Mineral Resources map showing the Planning Area and the location of identified resources within Sonoma Creek. Remaining portions of the Planning Area are classified as either MRZ-1 or MRZ-3. However, there are no sectors designated by SMGB within the Planning Area that currently permit mining or that were found to have land uses compatible with possible mining. Surface mining for gravels is incompatible with existing land uses located adjacent to Sonoma Creek in the Core Planning Area.

3.7.2.3 Paleontological Resources

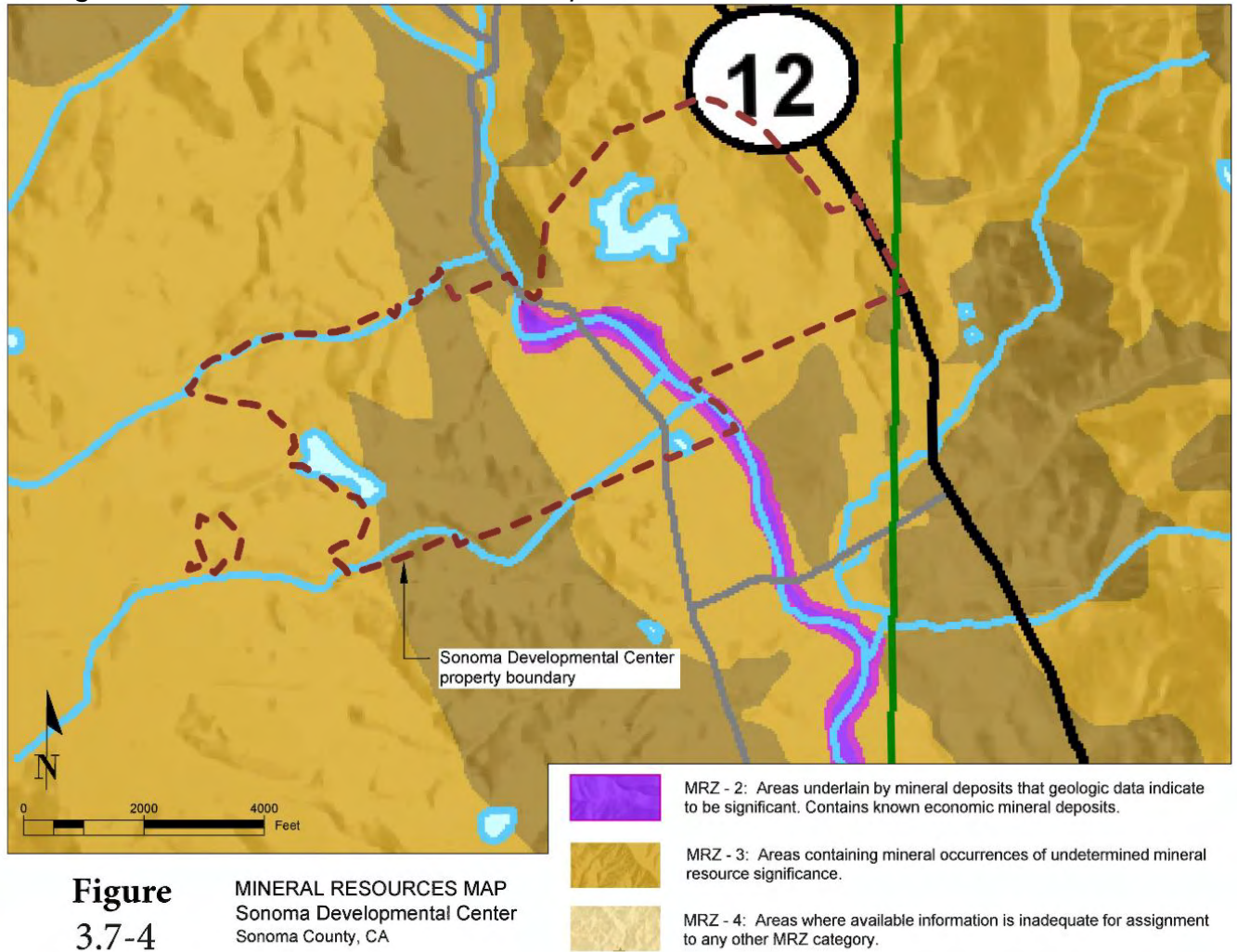
Paleontological resources are the fossil remains or traces of past life forms. Paleontological resources are considered significant if they are identifiable vertebrate fossils; uncommon invertebrate, plant, and trace fossils; or other data that provide information important to the scientific record. Paleontological resources are older than the middle Holocene.

According to a records search of the University of California Museum of Paleontology specimen search, Pliocene-age deposits in Sonoma County have yielded numerous plant fossils, one reptile, and one mammal fossil. Therefore, paleontological resources could be discovered at the site during ground disturbance.¹³

¹² California Geological Survey, 2005, Map of Sonoma County Showing Mine Locations and Generalized Areas Classified MRZ- 2 for Portland Cement Concrete, Asphaltic Concrete, and Class II Base Aggregate, Special Report 175.

¹³ University of California Museum of Paleontology, 2021.

Figure 3.7-4: Mineral Resources Map



3.7.3 Impact Analysis

3.7.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

Criterion 1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42),
- ii. Strong seismic ground shaking,
- iii. Seismically related ground failure, including liquefaction, or
- iv. Landslides;

Criterion 2: Result in substantial soil erosion or the loss of topsoil;

Criterion 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;

Criterion 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

Criterion 5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;

Criterion 6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

Criterion 7: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

Criterion 8: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

3.7.3.2 Methodology and Assumptions

Geology, Soils, Seismicity, and Mineral Resources

This evaluation of geologic, soils, seismic hazard conditions, and mineral resources was completed using published geologic, soils, seismic, and mineral land classification maps and studies from USGS, CGS, and USDA. Implementation would be governed by existing regulations at the federal, State, and local levels, including the existing Sonoma County General Plan 2020. These provisions ensure that development will continue to be completed in compliance with local and State regulations.

Paleontological Resources

The evaluation of impacts on paleontological resources was completed using a database query at the University Of California Museum Of Paleontology.¹³ Standard Guidelines prescribe the following steps for assessment of Paleontological Resources:¹⁴

- Identify the geologic units that would be affected by the project, based on the project's depth of excavation – either at ground surface or below ground surface, defined as at least five feet below ground surface.
- Evaluate the potential of the identified geologic units to contain significant fossils (paleontological sensitivity).
- Identify impacts on paleontologically sensitive geologic units as a result of near-term and longer-term construction and operation that involve ground disturbance.
- Evaluate impact significance.

¹³ University of California, Museum of Paleontology, 2021.

¹⁴ Society of Vertebrate Paleontology, 2010.

3.7.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address geology, soils, and mineral Resources:

Open Space and Resources and Hazards

Policies

- 2-25 Include protective buffers of at least 50 feet along Sonoma and Mill creeks, as measured from the top-of-bank and as shown on Figure 2.2-1: Open Space Framework, to protect wildlife habitat and species diversity, facilitate movement of stream flows and ground water recharge, improve water quality, and maintain the integrity and permeability of the Sonoma Valley Wildlife Corridor, and the ability of wildlife to use and disperse through the SDC site. Manage protective buffers so that they support continuous stands of healthy native plant communities.
- 2-46 Require geotechnical investigations for new development within the planning area to establish appropriate designs and structural details.

Standard Conditions of Approval

Policies

GEO-1 Geotechnical investigations shall be performed in areas of existing structures to be rehabilitated or new proposed structures to establish appropriate mitigation techniques. A geotechnical investigation shall be used to evaluate the presence of liquefiable soils, lateral spreading, expansive soils, seismic hazards or landslide hazards. Possible mitigation measures for the geotechnical investigation may include removal of liquefiable or expansive soils, installing retaining structures, or the construction of deep foundations. Expansive soils may also be mitigated with lime-treatment of expansive clay soils, excavation and replacement of expansive soils with non-expansive engineered fill, or other acceptable measures. Additionally, areas with greater than 15 percent slope will require a geotechnical investigation. Potential landslide mitigations include the creation of buttress fills, retaining

structures, or reducing slope steepness. Avoidance of potential landslide areas would also be done where feasible.

- a) A geotechnical investigation shall also be performed to determine the presence of an unstable geologic unit. Potential geotechnical design measures include recompaction as engineered fills, constructing buttress fills to stabilize unstable slopes, installation of reinforced fills, construction of retaining walls, and other acceptable methods of stabilization. Geotechnical investigations performed by a registered civil or geotechnical engineer will identify potential impacts which will allow mitigation measures to be accurately applied to an extent that the risk to life or property be reduced to a less-than-significant level.
- b) A geotechnical investigation shall be performed for any new development to be constructed at the site. The geotechnical investigation should evaluate the hazards of expansive clay soils, liquefaction and lateral spreading, creek bank stability, slope stability, landslides, existing fill and cut slope stability, and seismic shaking. The report shall provide design recommendations for mitigation of expansive soils and unstable geologic units to an acceptable level. Mitigations for expansive soils may include measures such as lime-treatment of expansive clay soils, excavation and replacement of expansive soils with non-expansive engineered fill, or other acceptable measures. Mitigation measures for unstable geologic units may include removal of unstable geologic fills, recompaction as engineered fills, constructing buttress fills to stabilize unstable slopes, installation of reinforced fills, construction of retaining walls, and other acceptable methods of stabilization. Geotechnical investigations will identify potential impacts which will allow mitigation measures to be accurately applied.

GEO-2 Both Fern and Suttonfield lakes are currently under the responsibility of the State/SDC. Since both reservoirs at the Planning Area are classified as at least a high hazard; an

Emergency Action Plan (EAP) must be implemented in accordance with the requirements from the California Water Code Sections 6160 and 6161 and Government Code Section 8589.5. When the property is transferred a new EAP will need to be developed to reduce the risk of loss of human life or injury, and to minimize property damage in the event of a potential or actual emergency.

GEO-3 Halt Construction Activity in Case of Finding Paleontological Resources, Evaluate Find, and Excavate Find. In the event that previously unidentified paleontological resources are uncovered during site preparation, excavation, or other construction activity, applicants proposing development of projects within the Planning Area shall cease all such activity within 25 feet of the discovery or ensure that all such activity within 25 feet of the discovery ceases until the resources have been evaluated by a qualified professional and specific measures can be implemented to protect these resources in accordance with Sections 21083.2 and 21084.1 of the California Public Resources Code. If the qualified paleontologist determines the find is potentially significant, the project applicant shall ensure a qualified paleontologist shall excavate the find in compliance with state law, document the find, and arrange for curation at a depository, keeping project delays to a minimum. If the qualified paleontologist determines the find is not significant, then the project will continue without delay.

3.7.3.4 Impacts

Impact 3.7-1 Implementation of the Proposed Plan would not expose residents, visitors and employees, as well as public and private structures, to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismically related ground failure, including liquefaction; or landslides. (*Less than Significant*)

Fault Rupture

The nearest faults in the vicinity that are considered active in accordance with the Alquist-Priolo Earthquake Fault Zoning Act are the Rodgers Creek Fault located, at its closest, approximately 4.5 miles southwest/west of the Core Campus of the Planning Area, the

West Napa Fault located approximately nine miles to the southeast, the Concord/Green Valley Fault located approximately 18 miles to the southeast, the Mayacamas Fault located approximately 19 miles to the northwest, the Hayward Fault located approximately 25 miles south, and the San Andreas Fault located approximately 24 miles to the southwest/west of the Planning Area. Older Quaternary faults cross the Planning Area but are not considered active and are not expected to rupture in an earthquake event.

Compliance with existing requirements, policies, and implementing actions would reduce potential impacts from surface fault rupture to the maximum extent practicable. Thus, the construction would have a less-than-significant impact with regards to adverse effects from surface fault rupture.

Since no active earthquake faults are present in the Planning Area there would be no construction, operation, or cumulative impacts.

Ground Shaking

The intensity of ground shaking will vary with the distance and magnitude of the earthquake causing the ground shaking. A major earthquake, such as magnitude 6.7 or greater along the nearby Rodgers Creek Fault is predicted to generate severe to very-strong shaking equivalent to a MMI level of VII or VIII. An earthquake of MMI VII would result in negligible damage to buildings of good design or construction but would cause slight to moderate damage in ordinarily constructed buildings to considerable damage in poorly constructed buildings. Historic buildings may be subject to damage during ground shaking events. An earthquake of MMI VIII would cause considerable to partial collapse in ordinary buildings. A major earthquake on the other nearby regional faults such South Napa, Concord/Green Valley, Maacama, Hayward, and San Andreas faults could result in at least strong ground shaking equivalent to MMI of VI to VII.

The CBC regulates structures intended for human occupancy. Before construction, each structure, including existing structures, would be examined for seismic performance and structural improvement recommendations to determine compliance with seismic elements of the CBC. After completing necessary geotechnical and structural improvements, the structures should comply with the CBC. Compliance with existing requirements and the recommendations from the geotechnical and structural engineering analyses would thereby reduce potential impacts from ground shaking to the maximum extent practicable. Thus, the impact is less than significant.

Historical buildings are subject to the State Historical Building Code (HBC) which provides alternative regulations and standards for the rehabilitation, preservation, and restoration of qualified historical buildings or structures.

Liquefaction

According to the Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region¹⁵ map of liquefaction susceptibility, the majority of soils within the Planning Area are considered to have very low susceptibility to liquefaction. The exceptions lie in proximity to Sonoma Creek, where the central channel of the creek has very high susceptibility to liquefaction, the point bars in the creek channel have high susceptibility to liquefaction, and old stream deposits adjacent to the creek have moderate susceptibility to liquefaction. The areas at the southeastern portion of the Planning Area underlain by alluvium and older alluvium also have a moderate potential for liquefaction, but no development is currently planned for those areas. Areas located within or adjacent to the creek channels and alluvial deposits would require a site-specific geotechnical analysis in order to assess the liquefaction potential in more detail. The Proposed Plan includes a 50-foot creek setback where there would be no future development and any existing building within this area would be removed. Additionally, no new bridges are included in the Proposed Plan; however, a site-specific geotechnical analysis would be required for any improvements to any existing bridge structure crossing Sonoma Creek.

Geotechnical Investigations are also necessary to evaluate the existing conditions of the existing earth fill dams at Fern Lake and Lake Suttonfield. Geotechnical investigations would also be necessary for development in the southeastern portion of the Planning Area to evaluate for the potential for liquefaction in the alluvial deposits of the area; no development is currently planned for this area. The geotechnical investigation should identify mitigation measures to reduce the potential for liquefaction or to mitigate for any post-earthquake liquefaction settlement or lateral spreading that may occur. Mitigation measures to reduce or eliminate the potential for liquefaction include construction of deep foundations to penetrate through liquefiable layers and support structures below sediments prone to liquefaction settlement, ground stabilization measures to prevent liquefaction such as pressure grouting of sand lenses, thickened mat slab foundations to allow for uniform structure settlement, and other measures to be identified during the

¹⁵ Witter, R.C. et al, 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California: U.S. Geological Survey Open-File Report 26-1037

investigation. Standard Conditions of Approval GEO-1 shall be implemented and as such geotechnical investigation shall be performed in areas of existing structures to be rehabilitated or new proposed structures to establish appropriate mitigation techniques. Upon compliance with GEO-1, the impact of liquefaction is considered less than significant.

Landslides

As discussed in the Environmental Setting, the Planning Area varies from level terrain to steep hillsides. The majority of hillsides are underlain by relatively unstable soil and rock units on slopes greater than 15 percent. Areas within The Planning Area have been subject to landslides in the past, with most of the landslides having occurred in the hilly areas located in the western portion of the Planning Area outside of the Core Campus area. One large landslide is also mapped at the northeastern site boundary. Creek banks in the Core Campus of the Planning Area could be prone to slumps, block failures, flows, and erosion due to bank undercutting and stream meander processes. A 50-foot setback from existing stream banks would reduce the potential for damage to structures in the Core Campus area. There is no planned development in areas with known or suspected landslides or adjacent to stream banks. However, any future development in those areas will require a geotechnical investigation to identify and evaluate landslides or unstable stream banks and provide mitigation measures to stabilize potentially unstable areas. Thus, implementation of GEO-1, would reduce the impacts related to strong ground shaking, seismic related ground failure including liquefaction and lateral spreading, and landslides to a level of less than significant.

Mitigation Measures

None required.

Impact 3.7-2 Implementation of the Proposed Plan would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant*)

Construction and development activities, such as the development of the SR 12 connector, could expose soils to the effects of erosion which may also affect drainage and storm water management. Erosion control will be necessary during grading, removal of vegetation, asphalt or stockpiles to reduce downstream sedimentation.

Sonoma County Code Section 11.14.120 establishes standards for controlling soil and soil erosion during construction. The code states that erosion rates, and pollutant runoff be below predevelopment rates.

Compliance with the Sonoma County Code would minimize impacts related to erosion. In addition, construction that disturbs more than one acre would be subject to compliance with a NPDES permit which requires an erosion and sediment control plan. The plan would include engineering analysis to show that the control measures related to surface runoff, grading, and erosion are acceptable. Construction activity subject to NPDES permitting requirements also must include a post-construction erosion and sediment control plan.

The NPDES permitting requirements also requires a Stormwater Pollution Prevention Plan (SWPPP) be included to fulfill requirements of the SWRCB. The SWPPP will include Best Management Practices (BMPs) to reduce soil erosion and protect ground water quality. In addition, the Planning Area is partially located in the Phase II MS4 boundary which also requires BMPs and regulates stormwater management. Compliance with applicable codes, regulations, and General Plan policies would reduce the risk of substantial soil erosion or topsoil loss to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.7-3 Implementation of the Proposed Plan would potentially locate structures on expansive soils or on a geologic unit or soil that is unstable, or that would become unstable as a result of new development under the Proposed Plan, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, or create substantial risks to life or property. (*Less than Significant*)

Expansive clay soils with moderate shrink-swell potential are present throughout the Planning Area. Development on these soils without proper construction measures could result in damage to shallow foundations, concrete slabs, retaining walls, concrete walkways, asphalt paved roads and other site improvements.

Existing creek banks located adjacent to or overlying liquefiable soils could result in lateral spreading towards the free face of the creek bank resulting in damage to facilities located adjacent to or nearby creek banks. Soils could also fail into the creek resulting in blocking or partial blocking of surface water flow.

Existing landslide areas, steep slopes, and creek banks could be susceptible to seismically induced landsliding resulting in damage to facilities located on or adjacent to steep slopes, landslides and creek banks.

In general, soils conditions are suitable for development and may be engineered in accordance with the CBC, Sonoma County Building Code, and other geotechnical requirements to provide stable structures. Requirements include removal of any non-suitable soils consisting of native sub-grade or fill soils, and replacement with compacted and moisture conditioned engineered fill or lime-treated soil in accordance with accepted geotechnical standards. Testing during construction activities will be required to verify that specified foundation conditions are met.

Standard Conditions of Approval GEO-1 shall be implemented and as such Geotechnical Investigation shall be performed in areas of existing structures to be rehabilitated or new proposed structures to establish appropriate mitigation techniques. Implementation of GEO-1 will reduce the potential for hazards associated with development on expansive soils or unstable geologic units/soils to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.7-4 Implementation of the Proposed Plan would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (*No Impact*)

There is a functioning sewer system in the Planning Area; however, it is beyond its useful life. The Proposed Plan would require infrastructure upgrades that include construction of a new/upgraded sewer system, and as such, there will be no need for septic tanks. Therefore, there is no impact in regard to soil capability to support septic tanks.

Mitigation Measures

None required.

Impact 3.7-5 Implementation of the Proposed Plan would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (*Less than Significant*)

Ground disturbance such as excavating, grading, and resurfacing has the potential to affect any paleontological resources present. Several plant fossils have been found in Sonoma County, as well as one reptile and one mammal. There have not been any unique paleontological resources found in the Planning Area, and the geologic units comprising the Planning Area are not known to have significant paleontological resources. It is

therefore very unlikely that redevelopment of the Planning Area will unearth a unique geologic feature or paleontological resource, given the limited fossil discoveries in Sonoma County. Standard Conditions of Approval policy GEO-3 would halt construction activity in case of finding paleontological resources, as well as evaluate and excavate the find. As such, compliance with GEO-3 would reduce this impact to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.7-6 Implementation of the Proposed Plan would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (*Less than Significant*)

The Open Space and Resource Conservation Element of the Sonoma County General Plan addresses mineral resources. The goal, objectives, and policies related to mineral resources are designed to work with the adopted Aggregate Resources Management (ARM) Plan to set forth the State-mandated mineral management policy for the County. The ARM Plan identifies approximately 1,500 feet of Sonoma Creek approximately one mile south of the Planning Area as a designated instream location for aggregate extraction and resource protection. However, this occurs outside of the Planning Area. Furthermore, the Mineral Resource overlay zone, as defined in the Sonoma County Code, does not apply to the Planning Area.

Proposed Plan Policy 2-25 establishes a 50-foot minimum setback from Sonoma Creek that ensures that new development would not occur in the vicinity of the area that is classified as MRZ-2 along Sonoma Creek. Therefore, the Proposed Plan would not result in the loss of availability of either a known mineral resource deposit or a locally important mineral resource recovery site. As such, the Proposed Plan would have a less-than-significant impact on the availability of mineral resources within the Planning Area.

Mitigation Measures

None required.

This page is intentionally left blank.

3.8

Hazards and Hazardous Materials

3.8 Hazards and Hazardous Materials

This section evaluates the potential adverse impacts on human health and the environment due to exposure to hazards and hazardous materials that could be encountered as a result of implementation of the project. The evaluation is based on review of existing environmental documentation available for the project site and adjacent properties, site reconnaissance and conversations. The analysis also takes into account current laws and regulations on transportation, storage, and use of hazardous materials used during demolition, construction, and the proposed development.

There were four comments in response to the Notice of Preparation (NOP) pertaining to topics covered in this section. Specifically, the Sierra Club, Valley of the Moon Alliance, and two community members voiced concerns regarding impacts from hazardous facilities as well as legacy environmental hazards and hazardous waste materials within the Planning Area. Impacts pertaining to hazards and hazardous waste materials are addressed in the Impact Analysis below.

3.8.1 Regulatory Setting

3.8.1.1 Federal Regulations

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act (RCRA) established a U.S. Environmental Protection Agency (EPA) administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as “Superfund,” was enacted by Congress on December 11, 1980. This law (42 United States Code 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may

endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan. This plan (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation Hazardous Materials regulations cover all aspects of hazardous materials packaging, handling, and transport. Some of the topics covered include Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance).

Emergency Planning and Community Right-To-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 was included under Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of

Extremely Hazardous Substances (40 CFR Appendix B). The Community Right-to-Know provisions help increase the public's knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment. In Sonoma County, the Fire Prevention and Hazardous Materials Division manages the Hazardous Materials Unit and CUPA programs.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 was created to provide adequate protection from the risks to life and property related to the transportation of hazardous materials in commerce by improving regulatory enforcement authority of the Secretary of Transportation.

3.8.1.2 State Regulations

California Environmental Protection Agency (CalEPA)

The California Environmental Protection Agency (CalEPA) was created in 1991. It unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board, SWRCB, RWQCB, Department of Resources Recycling and Recovery (CalRecycle), DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed under the CalEPA "umbrella" for the protection of human health and the environment to ensure the coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment and ensure public health, environmental quality, and economic vitality. CalEPA also manages the Unified Program and has certified the Fire Prevention and Hazardous Materials Division, which manages the Hazardous Materials Unit as the Certified Unified Program Agency (CUPA) to implement state hazardous materials requirements within the jurisdiction.

Accidental Release Prevention Law/California Accidental Release Prevention Program (CalARP)

SB 1889 established the merging of federal and State of California programs governing the accidental airborne release of chemicals listed under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program (RMPP) and incorporated the mandatory federal requirements. CalARP addresses facilities containing specified hazardous materials that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment

because they are highly toxic, flammable, or explosive. In Sonoma County, the Fire Prevention and Hazardous Materials Division administers the CalARP program in the unincorporated areas of the County.

Hazardous Materials Worker Safety Requirements

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. In California, Cal OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal OSHA standards are generally more stringent than federal regulations.

California Labor Code (Division 5, Parts 1, 6, 7, and 7.5)

The California Labor Code is a collection of regulations that include regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and operation of equipment and machines that use hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who are in charge of handling hazardous materials are appropriately trained and informed with respect to the materials they handle. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

Department of Toxic Substances Control

DTSC, a department of CalEPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transport, disposal, treatment, reduction, cleanup, and emergency planning.

California Government Code 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by SWRCB as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

Those requesting a copy of the Cortese list are now referred directly to the appropriate information resources contained on the Internet web sites of the boards or departments that are referenced in the statute, including the State Water Resources Control Board (SWRCB), Department of Toxic Substances Control (DTSC), and State Department of Health Services (DHS).

State of California Emergency Plan, 2017

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol, California Department of Fish and Wildlife (CDFW), and RWQCB.

Office of Environmental Health Hazard Assessment

The State of California Office of Environmental Health Hazard Assessment (OEHHA) is the lead state agency for the assessment of health risks posed by environmental contaminants. The OEHHA implements provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. The proposition protects California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and informs the public about potential exposures to such chemicals.

California Department of Transportation

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and inter-city rail services.

State Water Resources Control Board

The Porter-Cologne Water Quality Control Act of 1969 established the SWRCB and divided the state into nine regional basins, each with a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, while the regional boards are responsible for developing and

enforcing water quality objectives and implementation plans. The Planning Area is within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

The act authorizes the SWRCB to enact state policies regarding water quality in accordance with the U.S. EPA Clean Water Act (CWA) section 303. The SWRCB regulates the handling, storage, and disposal of hazardous substances in construction projects. Permits and/or other action by the SWRCB may be required if contamination of water or soils occurs during the construction associated with the Proposed Plan. In addition, the act authorizes the SWRCB to issue Waste Discharge Requirements (WDRs) for projects that would discharge to State waters.

Regional Water Quality Control Board- San Francisco Bay Region

The San Francisco Bay Regional Water Quality Control Board regulates cleanup activities at Leaking Underground Storage Tank (LUST) sites in areas where surface runoff would eventually drain to San Francisco Bay and the bay system including San Pablo Bay. In Sonoma County, the San Francisco Bay Regional Water Quality Control Board has delegated authority for most LUST cleanup oversight to the Sonoma County (LOP). LUST sites are those undergoing cleanup due to an unauthorized release from an underground storage tank (UST) system. A UST System is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. UST regulations apply to underground tanks and piping storing any type of hazardous substance, with some exemptions.

As part of Government Code Section 65962.5 requirements, the SWRCB also tracks the following types of sites:

- Solid waste disposal facilities from which there is a migration of hazardous waste and for which a California regional water quality control board has notified the DTSC.
- Cease and desist orders issued after January 1, 1986 and all cleanup or abatement orders issued after January 1, 1986 that concern the discharge of wastes that are hazardous materials.

California Public Resources Code Section 21151.4

Public Resources Code Section 21151.4 regulates hazardous materials near schools. Public Resources Code Section 21151.4 prohibits the certification of a Draft Environmental Impact Report (EIR) for a project involving the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions or handle

extremely hazardous air emissions in a quantity greater than a certain threshold, within one-quarter mile of a school.

3.8.1.3 Local Regulations

California EPA's Certified Unified Program Agency (CUPA)

In 1993, Senate Bill 1082 gave CalEPA the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Certified Unified Program. The purpose of this program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. CalEPA oversees the Unified Program with support from the DTSC, SWRCB, the CalOES, and the Office of the State Fire Marshal.

State law requires counties, and allows local agencies, to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency or CUPA. The Sonoma County Fire Prevention and HazMat Division, Hazardous Materials Unit is the designated CUPA for Sonoma County. The Hazardous Materials (HazMat) Unit implements hazardous materials and hazardous wastes regulations in Sonoma County through the California Environmental Reporting System (CERS), Department of Toxic Substances Control (DTSC).

As the Certified Unified Program Agency, the Fire Prevention and HazMat Division administers the following Unified Programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan) Program
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Hazardous Waste Generator Program
- Hazardous Waste On-Site Treatment Programs
- Aboveground Petroleum Storage Act Program

Bay Area Air Quality Management District (BAAQMD)

Regulates the stationary sources of air pollution such as residential wood burning and agricultural and industry emissions. BAAQMD regulates renovation and demolition

activities that may result in pollutants such as asbestos and lead being released to the environment.

Sonoma County Emergency Operations Plan (EOP)

The Sonoma County Operational Area Emergency Operations Plan (EOP) is a guidebook for the Sonoma County Operational Area (OA) to utilize during phases of an all-hazards emergency management process which include preparedness, response, recovery, and mitigation.

The Department of Fire and Emergency Services is the lead agency in charge of the creation of a hazardous materials management plan. In the event of an emergency The Department of Emergency Management is responsible for the mitigation, preparedness, planning, coordination response, and recovery activities related to county emergencies and disasters. The Hazardous Materials Unit is the county's Certified Unified Program Agency (CUPA) which inspects businesses in the county on a routine basis.

The Sonoma County Local Oversight Program (LOP)

In Sonoma County, the San Francisco Bay Regional Water Quality Control Board has delegated authority for most LUST cleanup oversight to the Sonoma County (LOP). LUST sites are those undergoing cleanup due to an unauthorized release from an underground storage tank (UST) system. A UST System is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. UST regulations apply to underground tanks and piping storing any type of hazardous substance, with some exemptions.

The LOP oversees the investigation and clean up of fuel releases from underground storage tanks in all areas of the county except Santa Rosa and Healdsburg. Once entered into the LOP program, the site is investigated and cleaned up in accordance with the California Underground Storage Tank Regulations, Sonoma County Program Guidelines for Site Investigations, and the San Francisco Bay Regional Water Quality Control Board.

Sonoma Water

Sonoma Water, Environmental Services Division implements Pollution Prevention and Source Control Programs for Sonoma County. The Division aims to prevent pollutants from reaching water ways by conducting inspections, reviewing building plans and requiring pretreatment at industrial and commercial plants.

Sonoma County General Plan (2020)

The Sonoma County General Plan (2020) includes the following goals and policies associated with hazards and hazardous materials:

GOAL PS-4: Prevent unnecessary exposure of people and property to risks of damage or injury from hazardous materials.

Policy PS-4a: While maintaining the autonomy granted to it pursuant to State zoning laws, implement Federal, State, and County requirements for the storage, handling, disposal, and use of hazardous materials, including requirements for management plans, security precautions, and contingency plans.

Policy PS-4b: Prepare and maintain an inventory of sites with storage or use of hazardous materials in threshold planning quantities as determined by Federal and State laws.

Policy PS-4c: Require a use permit for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by Federal and State laws. Hazardous materials management plans shall be required as a condition of approval for such permits.

Policy PS-4d: Work with applicable regulatory agencies to regulate the transportation of hazardous materials consistent with adopted County policies.

Policy PS-4e: Continue to design and operate County owned solid waste disposal facilities to prevent disposal of and contamination by hazardous materials.

Policy PS-4f: Continue as needed the hazardous materials business advisory group, and consider adding an agricultural representative.

Policy PS-4g: Maintain the Sonoma County Operational Area Hazardous Materials Incident Response Plan, which provides for effective responses to releases of hazardous materials, the safe disposal of hazardous wastes, and a public information program.

Policy PS-4h: Avoid siting of hazardous waste repositories, incinerators, facilities that use a substantial quantity of hazardous materials, or other similar facilities intended primarily for hazardous waste disposal in any area subject to a very strong ground shaking hazard identified on Figures PS-1a through PS-1i or within one quarter mile of schools.

Policy PS-4i: Avoid siting of hazardous waste repositories, incinerators, or similar facilities intended primarily for hazardous waste disposal in any area designated for urban residential or rural residential use or on agricultural lands or at County approved solid waste disposal facilities.

Policy PS-4j: Site hazardous waste facilities which have the primary purpose of reuse, recycling, or source reduction of hazardous wastes in areas designated for industrial use in close proximity to users of hazardous materials and/or generators of hazardous wastes.

Policy PS-4k: Continue to educate the public about and promote the Sonoma County Waste Management Authority's Household Hazardous Waste Program. Encourage free drop-off and reuse of computers and similar equipment containing hazardous materials.

Policy PS-4l: Continue to educate the public about green business opportunities and expand and promote the County Department of Fire and Emergency Services Sonoma Green Business Program.

Policy PS-4m: Continue to educate the public about, encourage, and promote the reduction in use of hazardous materials and the use of safe alternatives to hazardous materials in County operations and private businesses.

Policy PS-4n: Encourage the private sector to reduce the use of potentially hazardous pesticides and to use alternatives such as best management practices.

Policy PS-4o: Encourage reduction in the use of potentially hazardous pesticides and increased use of alternatives, such as best management practices, in County operations, including but not limited to maintenance of roads, parks, and facility grounds. Emphasize the use of alternatives to potentially hazardous pesticides in areas likely to drain to waterways. Coordinate with the cities in this effort.

3.8.2 Environmental Setting

3.8.2.1 Physical Setting

Hazardous Materials

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health or the environment. Under California Code of Regulations (CCR) Title 22, the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosivity, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is :

[a] substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

CCR Title 22 defines hazardous material by reference to the definition in Health and Safety Code Section 25501, which provides in part:

Hazardous material means a material ... that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.... (CCR Title 22 Section 66260.10)

Hazardous materials can result in adverse effects to humans, buildings, homes, or other properties. Hazards can affect human health or the environment during the production, use, storage, or disposal. Hazardous materials are released as results of accidents such as unlawful release from underground storage tanks which has occurred at the Sonoma Developmental Center. These substances have the potential to leach into soils, surface water, and ground water. However, residential use of hazardous materials is not usually considered a significant impact with normal use. Industrial and commercial land use generally has higher likelihoods of hazardous materials impact.

Industrial facilities store hazardous materials in underground and above ground storage tanks. The Planning Area has several aboveground diesel storage tanks which may contaminate soil if there is improper maintenance. Improper handling and storage of hazardous materials can also create a hazardous material emergency. Fleet management facilities, like the Motor Pool location at the Planning Area, included vehicle repair and a gasoline fueling station which also store hazardous materials. Hazardous materials spills and leaks in vehicle repair and fueling locations can lead to hydrocarbon-impacted soil and groundwater.

History

Hazardous materials within the Planning Area reflect the land use history of the Sonoma Developmental Center. The SDC has been in its current location since 1891 and has undergone several expansions since its inception. Many hazardous materials have been generated at the site from the medical program, farm, vocational program, landscaping,

and waste management. Further investigations may also be warranted for the underground storage tanks, historical buildings, incinerator, hazardous materials storage shed, fruit drying facility, Sunrise Industries, pesticide storage area, landscape maintenance area, and PCB storage shed.⁶⁹ Hazardous building materials such as lead-based paint, lead piping, asbestos containing building materials, polychlorinated biphenyls (PCBs) and others are associated with housing and structures located at the site due to their age of construction.

Review of Documents and Records

Phase I Environmental Site Assessment (URS)

A Phase One Environmental Site Assessment (Phase I ESA) was prepared for the site by URS Corporation, and is included in Appendix G. The Phase I ESA identified recognized environmental conditions (RECs), Historical RECs and Controlled RECs which were detailed in the Phase I Environmental Site Assessment (October 2016). The RECs included: (1) Motor Pool and UST area including current underground storage tanks, former hydraulic lifts, and former leaking underground storage tank (LUST) case location; (2) former solid waste disposal sites; (3) former Wastewater Treatment Plant (WTP), an unauthorized release of aluminum sulfate from a containment pond at the WTP into Sonoma Creek, an unauthorized release of aluminum sulfate sludge from the WTP, and an unauthorized release of sewage from the WTP; (4) an unauthorized pipe leak at the Main Generator UST System; and an unauthorized release of radiological waste to the municipal sanitary sewer from an unknown location. The Phase I ESA also discussed Historical RECs including: (5) leaking from an electrical transformer storage area including PCB-containing transformers at a location near the Water Treatment Plant and leaking PCB-containing light ballasts that were found throughout the subject property in 1980 in a Department of Health Services inspection. Detailed information on the findings and recommendations for each of the RECs is contained in the Phase I ESA report. Figure 3.8-1 shows general location of these RECs and Historical RECs.

The Phase I ESA presented a list of areas that could potentially include additional Phase II Environmental Site Assessments. These included sites with known contamination and also sites with the potential for contamination. Most of these sites would likely have very

⁶⁹ URS Corporation. (2016). Phase I Environmental Site Assessment.

limited areas of contaminated soil. During future site development and redevelopment, areas of soil contamination may be identified.

Limited Phase II Environmental Site Assessment (EBA Engineering)

A limited Phase II Site Investigation was conducted by EBA Engineering to address portions of the findings in the URS Phase I ESA. This included sampling soils for laboratory analyses. The Limited Phase II Site Investigation Report from EBA Engineering identified several constituents of potential concern (COPCs). The COPCs identified for investigation include Arsenic, Organochlorine Pesticides (CPCs), Lead (from paint), polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), dioxins and furans, CAM 17 (Title 22) Metals, total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), heavy range organics (DRO), and (10) nitrate (Nitrogen).⁷⁰

The Limited Phase II investigation revealed that further investigation is needed to determine where COPCs are located and the extent that they have spread. Figure 3.8-2 identifies locations of areas as discussed in the Phase II. Lead and arsenic was detected throughout the majority of the Planning Area. Concentrations of lead were above the residential screening levels (RSLs) at eight historical buildings (Walnut, Chamberlain/CPS, Blue Rose, Manzanita/Powerhouse, Paxton-Goddard). Several work areas also had lead levels above the residential screening level (Hazardous Materials Shed, Sunrise Industries, Pesticide Storage area and Landscape Maintenance area). Lead concentrations were found above the Federal Resource Conservation and Recovery Act (RCRA) screening levels at the Sonoma HSC building and Fruit Drying shed, indicating Hazardous Waste levels of lead. Arsenic levels from soil samples exceeded the US EPA Residential Screening Level at all historical buildings. Arsenic also occurs at high natural background levels throughout the region. The Walnut building had a sample that was one order of magnitude higher than the RSL. Some arsenic levels may be within background concentrations, and some levels exceed background concentrations which can be as high as 8-11 mg/kg.²

⁷⁰ EBA Engineering. (2017). Draft Report of Limited Phase II Site Investigation Report.

Organochlorine pesticides, PCBs, VOCs, SCOCs, total petroleum hydrocarbons and CAM 17 Metals may also require further investigation. These COPCs were detected under RSLs, however testing may be needed to determine requirements for future reuse or disposal. The safety of construction workers, site workers, residential users, or commercial users should be considered in planning scenarios due to the presence of COPCs.

Hazardous Materials Clarification (VBA)

In 2017, Van Brunt Associates (VBA) performed a rapid assessment of hazardous materials within the buildings and prepared the letter report “Hazardous Materials Clarification”, included in Appendix G. This guidance document outlines the Federal and State building codes and worker safety codes that are applicable to hazardous materials within the buildings at the site that are regulated in existing buildings, and potential hazardous materials that become regulated when the buildings are disturbed during construction or demolition and disposal. The letter also summarized a preliminary –level survey of the condition of the buildings. The report states that most buildings are in good condition. Water and sewer line leaks are common in basements and under floors areas. The report identified seven of the SDC buildings of high level concern due to historical considerations, extreme deterioration or damage, or high remediation costs due to hazardous building materials (Asbestos containing building materials). The Activity Center has evidence of current and prolonged roof water leaks. The Walnut Building has mold and severe deterioration. The Oak Lodge also has severe deterioration, bad roofing, and differential settlement issues. The ornate exterior features of the Finnelly Building are deteriorating. The roof of the Professional Education Center has a severe leak intrusion, and partial collapse of roof and ceiling. The Central Steam Plant has large amounts of asbestos containing building materials in boilers. The Central Steam System has significant deterioration and requires asbestos containing building materials abatement. Fixtures in the building are also out of date and internal infrastructure will be needed according to the “Hazardous Materials Clarification report”. There is also the possibility that lead is present in the drinking water system due to most of SDC buildings being construction before the 1986 Safe Drinking water Act-Section 1417.⁷¹

⁷¹ Van Brunt Associates, 2017, Hazardous Materials Clarification, Sonoma Developmental Center

Regulated Building Materials Survey (AECOM)

In 2021, AECOM prepared a Regulated Building Materials (RBM) Survey of 37 buildings at the SDC for the State of California, and is included in Appendix G. The objective of the survey was to provide information regarding the presence of lead-containing coatings, PCB-containing light ballasts, PCB-containing caulking, miscellaneous universal wastes, and mercury-containing sources. 1,501 Bulk samples of suspect asbestos containing materials and 169 paint chip samples were taken. PCBs were also tested from 16 caulking samples. In the 37 buildings surveyed asbestos and lead paint was found in all of them. No PCBs were found in caulking at the Sonoma Developmental Center. At the authorization of the State, 186 potable water samples were collected and analyzed. Of the water samples detectable levels of copper or lead was found in 27 of the 37 buildings. One soil sample was also taken at the PVC drain of the water treatment plant at a depth of two to three inches. The sample was tested specifically for mercury and was found at a concentration of 87.2 mg/Kg in the soil. The primary purpose of the survey was to identify RBMs that may have an impact in decision making and does not meet the requirements of a complete EPA NESHAP survey. Additional testing can be done in the future to meet requirements.

Limited Background Soil Evaluation

In 2022, Questa Engineering performed a limited background soil evaluation of site soils from five locations in areas currently covered in grass adjacent to streets in the Core Planning Area. The Questa report is included in Appendix G. The purpose of the investigation was to evaluate the potential for low levels of contamination with metals or pesticides, and selected other chemicals, in the general site soils of the Core Area. Sample locations are presented on Figure 3.8-3. Samples were collected following EPA standard sampling protocol including decontamination of all sampling equipment prior to sampling, using pre-cleaned sample jars with lined lids, labeling samples with unique sample numbers, using chain of custody documentation, and transporting samples in a cooler on ice. Testing was performed at a state-Certified testing lab. Samples were collected at three sample depths at each sample location to a maximum depth of 4.5 feet below ground surface.

Samples collected from hand auger holes B-1 and B-2, contained metals concentrations consistent with background concentrations and had no detectable pesticides concentrations. Samples collected from B-3 at depths of 1.0 to 1.5 feet and 2.5 to 3.0 feet below ground surface (BGS) had levels of Arsenic and Lead which were generally above typical background levels. These samples also had trace levels of the pesticides DDE and

DDT. The soil sample collected from B-3 at a depth of 4.0 to 4.5 feet contained metals concentrations consistent with background levels and did not contain any detectable pesticides. Samples from B-3 were also tested for total petroleum hydrocarbons as gasoline and volatile organic compounds; none of these were detected. Samples collected from B-4 at a depth of 1.0 to 1.5 feet included Arsenic and Lead above background level concentrations and a trace of the pesticides DDE and DDT. Samples from B-4 at a depth of 2.5 to 3.0 feet and 4.0 to 4.5 feet BGS contained metals concentrations consistent with background levels, and pesticides were not detected. Samples collected from B-5 at a depth of 1.0 to 1.5 feet BGS contained total chromium levels at a level higher than typical background concentrations, but no pesticides were detected. Samples collected from B-5 at depths of 2.5 to 3.0 feet and 3.5 to 4.0 feet contained slightly elevated levels of Chromium just above typical background levels, and trace levels of the pesticides DDE, DDT and Chlordane. Samples from B-5 were also tested for total petroleum hydrocarbons as diesel and motor oil; none were detected. Testing also included semi-volatile organic compounds; none were detected.

The results were compared to the DTSC screening levels for residential soil⁷² and the San Francisco Bay Region RWQCB ESL residential screening levels⁷³. These screening levels are updated periodically by the two agencies and are useful in screening site soils for potentially harmful concentrations of chemical constituents and metals. These levels serve as a guideline and are not enforced by regulation. Concentrations of Arsenic in all samples exceed the DTSC and RWQCB screening levels for residential soil, both of which are very low, well below background concentrations. Arsenic concentrations ranged from 3.9 to 35 mg/kg. Arsenic is found in the soils of Northern California at background concentrations up to approximately 11 mg/kg. Three of the 15 samples collected exceeded the upper background level; none of the detected concentrations were found to exceed the hazardous waste level for Arsenic (TTLC = 500 mg/kg). Two of the 15 samples exceed the residential screening level for Lead (80 mg/kg); none were at hazardous waste levels (TTLC=1,000 mg/kg). Total Lead concentrations range from 7.4 to 140 mg/kg. Total chromium was detected in all of the samples, predominantly at levels consistent with background levels. The total Chromium concentrations ranged from 24 to 170 mg/kg.

⁷² Department of Toxic Substances Control, June 2020 – revised May 2022, Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels

⁷³ San Francisco Bay Region, Regional Water Quality Control Board, July 2019, Environmental Screening Levels, Summary of Soil ESLs, pg. 1-4

However, samples from sample location B-5 were consistently higher than in the other locations and may be due to a localized source of contamination. Additionally, testing to differentiate Chromium VI (hexavalent chromium) from Chromium III (trivalent chromium) was not performed during this testing. Chromium VI (TTLC=500 mg/kg) has a much lower hazardous waste concentration level than Chromium III (TTLC=2,500 mg/kg). None of the total concentrations detected are at a level that would be hazardous for Chromium VI or Chromium III. The other metals concentrations appear to be consistent with background concentrations or only slightly elevated. Six of the 15 samples analyzed contained low or trace levels of pesticides, including DDE, DDT and Chlordane. None of the pesticide levels found in this study exceeded the DTSC or RWQCB residential screening levels.

Based on results of the background soil testing, the primary constituents of concern for residential development in the Core Campus area are Arsenic, Lead, and Pesticides. Chromium could also be present at elevated levels above the background. Localized elevated levels above residential screening levels (DTSC and RWQCB) with any of these constituents may be present. Other constituents could be present but were not detected in this evaluation.

State Water Resources Control Board-Geotracker

According to the Sonoma County Department of Health Services, the SDC maintained three underground storage tanks (USTs) which have been removed under permit from SCEHD starting in 1988 and ending in 1999. The tanks included a 1,000 gallon waste oil tank and a 1,000 gallon gasoline tank, which were removed in 1988. A 10,000 gallon gasoline storage tank was removed in 1999. Four groundwater monitoring wells were installed at the site and monitored. The leaking underground storage tank (LUST) site at the SDC was located near the Smith/Brent residential hall. The LUST case received full case closure from the San Francisco Regional Water Quality Control Board on September 20, 2013.⁷⁴

⁷⁴ State Water Resources Control Board, Geotracker, Case File for the Sonoma Developmental Center, 15000 Arnold Drive, Glen Ellen, CA, Sonoma County, LUST Cleanup Site, (<https://geotracker.waterboards.ca.gov>)

Central Power Plant and Tank Farm

The Central Power Plant Facility contains four boilers which provide steam and heat. The boilers are fueled by natural gas provided by PG&E. The facility also uses diesel fuel for safety testing and as a backup supply. Diesel has been stored in four approximately 16,000 gallon aboveground storage tanks (ASTs) located between Eucalyptus and Manzanita Streets west of the Power Plant.⁷⁵

Land Disposal Areas

The SDC site operated two unpermitted solid waste disposal sites in the Planning Area (Figure 3.9-1). The Upper Disposal Area was operated from approximately 1891 to 1960 and was used for disposal of hazardous and nonhazardous materials. The Lower Disposal Area was used between 1950 to 1983 to dispose of construction materials. Cleanup of the two sites was performed under direction of the California Integrated Waste Management Board (CIWMB). The waste mitigation cleanup at the Upper Disposal Area was indicated as being successful in 2006. The Lower Disposal Area had a partial cleanup performed in 1996, which included removal of some of the inert debris, capping the remaining waste with soil, and construction of a barbed wire fence around the perimeter of the disposal area. The Sonoma County Department of Health Services has inspected the disposal sites since 1994, and no violations have been identified.⁵

California Hazardous Materials Incident Reporting

There have been two unauthorized releases listed on the California Hazardous Materials Incident Reporting System. The first occurred in 1998 when 15 gallons of asphalt emulsion was released. Due to the low volume of the release it was not considered a recognized environmental condition. The second release in 2011 was a release of approximately 55,000-60,000 gallons of aluminum sulfate solution, which was released from the Wastewater Treatment Plant. The spill flowed into Sonoma Creek and most of the material was unrecoverable.⁵

Hazardous Materials Constraints to Development and Redevelopment

Hazardous materials impacts within the Planning Area may be divided into two general categories. These are: (1) demolition and construction hazards related to hazards and hazardous materials exposure to be encountered during site redevelopment and

⁷⁵ URS Corporation. (2016). Phase I Environmental Site Assessment.

reconstruction; and (2) post development impacts to local residents, visitors and industrial users from hazards and hazardous materials due to site redevelopment, use and maintenance of buildings.

Construction and demolition hazards include inhalation of possible asbestos, lead-based paint associated with old structures and boilers; and general exposure associated with site redevelopment, including remediation. Dust control is a key factor in site redevelopment which includes demolition, site grading and excavation activities. Certain sites will require closure of existing facilities. These sites may contain lingering contamination that will need remediation before redevelopment. In order to protect the community and workers on these sites a Demolition Plan, Soil Management Plan, and Health and Safety Plan will likely need to be developed for each site with identified open hazardous materials issues. The plans will need to include provisions for community protection, methods of demolition and construction, management of soils and stockpiles including off-haul and routes of truck travel, and requirements for personal protective equipment such as respirators, impermeable clothing, and gloves. The level of exposure risk on these sites would be variable. Finally, sites with no hazards or hazardous materials outside of normal construction related risks would have a low exposure risk.

Post development impacts will depend upon the nature of the new development. Replacement of industrial areas with environmentally engineered commercial and residential development would likely lower public risk to hazardous materials exposure.

Hazardous Materials Transport

Within the Planning Area, hazardous materials may be transported by vehicle along roadways. Major transportation routes include Highway 12 east of the Planning Area and surface streets such as Arnold Drive within the Planning Area.

Soils containing low levels of contaminants below the hazardous waste level or asbestos containing materials would likely be transported to a Class II (Special Waste) facility such as Keller Canyon Landfill located in Pittsburg, Contra Costa County on Highway 4. RCRA Hazardous wastes would likely be transported to Kettleman Hills Landfill, a Class I (Hazardous Waste) facility located in Kettleman Hills located on Highway 41 near Interstate 5 in Central California.

Hazardous Materials Sites

Sites where hazardous chemical compounds have been released into the environment can pose threats to human and ecologic systems' health. Both historic and current activities may result in the release, leak, or disposal of toxic substances on or below the ground surface, where they can then contaminate soil and ground water. Disturbance of the ground through grading or excavation can result in exposure of these chemicals to the public. Improper handling of contaminated sites may result in further exposure via airborne dust, surface water runoff, or vapors.

The Hazardous Materials (HazMat) Unit is the Certified Unified Program Agency (CUPA) that implements hazardous materials and hazardous wastes regulations in Sonoma County through the California Environmental Reporting System (CERS), Department of Toxic Substances Control (DTSC).

One LUST cleanup site was listed on SWRCB's GeoTracker web site at the Planning Area. At the location located near the intersection of Sonoma Drive and Wilson Drive, there was a gasoline spill from a 1,000 gallon underground gasoline storage tank. The tank was removed and a subsurface investigation was performed and monitoring wells were installed. The site was monitored for several years and found to have very low levels of contamination in groundwater. An application was made to the regulatory agencies for case closure, which was granted on September 20, 2013.

Hazardous Materials in Building Materials

Hazardous materials such as lead in paint and asbestos were common in building materials up until the 1980's. Due to their prevalence in older buildings they have the potential to release hazardous materials into the environment during demolition or renovation. Demolition of buildings may release lead, asbestos fibers, PCBs, or other hazardous materials into the environment where they could infiltrate the ground or be inhaled by workers. Due to their hazardous nature there are Federal and State regulations that manage the demolition of structures with lead-based paint. They dictate what is classified as a hazardous waste and require that there are proper health and safety regulations.

Asbestos removal is also regulated by Federal, State, and local requirements. The Bay Area Air Quality Management District also requires permits prior to demolition or renovation. The Sonoma County Building Division enforces this requirement, which is intended to minimize the release of asbestos during demolition. Workers conducting

asbestos abatement must be trained in accordance with State and federal Occupational Safety and Health Administration (OSHA) regulations.

Fluorescent lighting tubes and ballasts, computer displays, and several other common items containing hazardous materials are regulated as “universal wastes” by the State of California. These wastes fall under Universal waste regulations which allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes.

Exposure Risk

The exposure risk during construction can be mitigated through proper worker training and decontamination, while final site remediation should reduce human exposure risk and environmental hazards both during and after construction to acceptable levels as dictated by regulatory agency oversight. Should newly identified contamination be found on a redevelopment site during construction, remedial efforts would need to be developed and to be implemented. This would include a demolition plan, soil management plan (SMP) or other site remediation plan. Shallow soil contamination may only require excavation and replacement with clean soils. Contaminated groundwater would likely require more sophisticated cleanup including installation of monitoring wells and quarterly sampling of water to determine the extent and concentration of contamination. Regional Water Quality Control Board (RWQCB) environmental screening levels or site-specific risk assessments would be used to identify remediation goals and cleanup standards protective of proposed land uses. The cost of remediation will depend upon the length and nature of work and would typically be borne by the property owner or responsible party as determined by the regulatory agency responsible for oversight. While hazards and hazardous materials would not preclude development of the project, the cost of remediation as part of site redevelopment would be a significant initial cost if the land purchase were for an “as-is” condition.

Schools

No schools are located within the Planning Area.

Airport Hazards

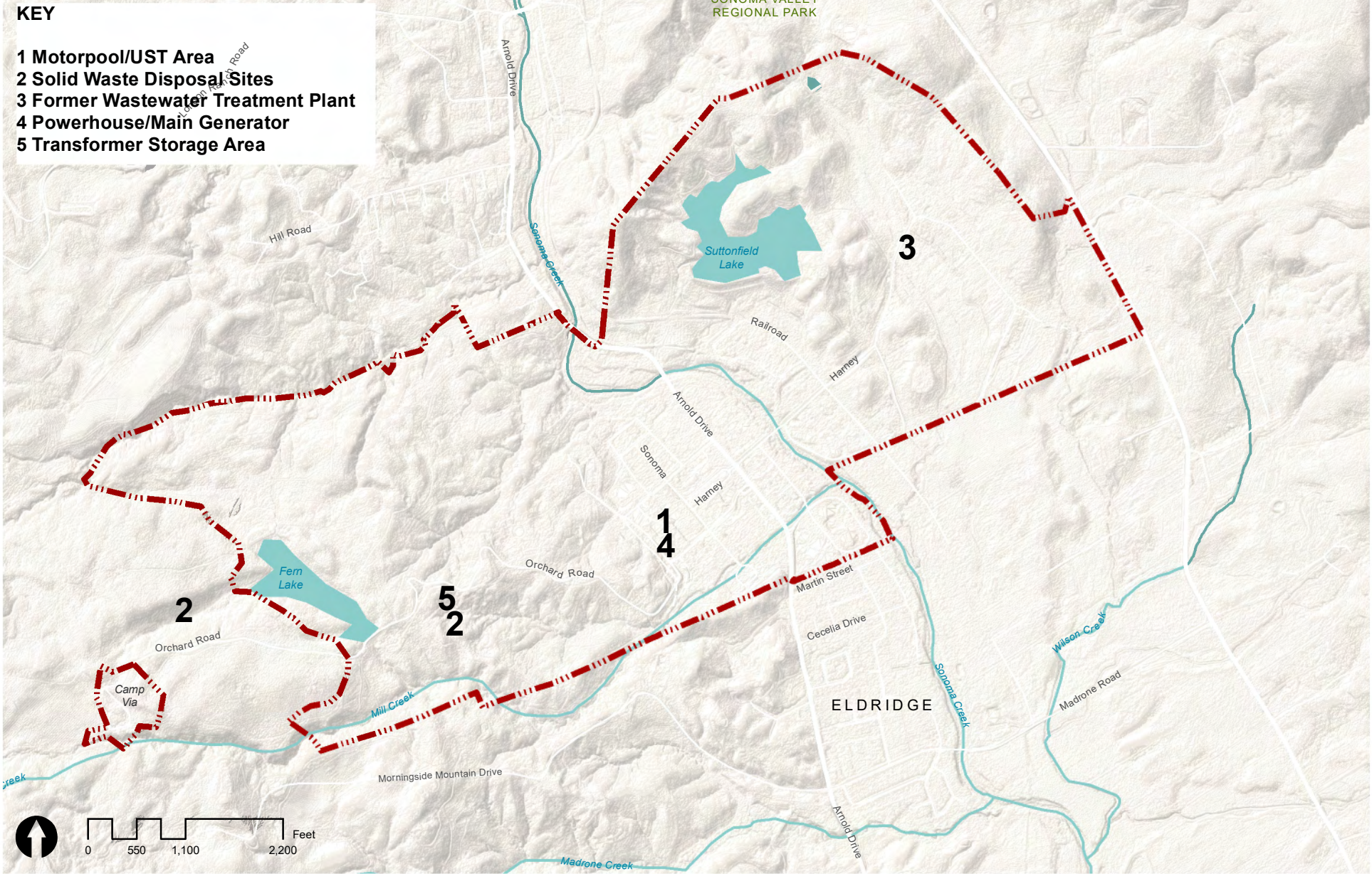
Risks associated with airport operations include those to people and property located in the vicinity of the airport in the event of an accident, and those to the safety of persons aboard an aircraft. The Planning Area does not have an airport and no public-use airports

or private airstrips are present within the site area. The nearest airport is the Sonoma Valley Airport, located approximately 9.7 miles southeast of the Planning Area.

Emergency Management and Response

Sonoma County Fire District (SCFD) provides fire and emergency response services to the county. In addition, the Sonoma County Sheriff's Department provides Sonoma with police support services during large events and emergencies. The Sonoma County Department of Emergency Management, which became an independent Public Agency in 2019, implements the County of Sonoma Emergency Operations Plan (EOP). The EOP identifies emergency response policies, describes the response and recovery organization, and assigns specific roles and responsibilities to County departments, agencies, and community partners.

Figure 3.8-1: Site Features Related to Phase I REC's



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2020

Figure 3.8-2: Site Features Related to Phase II Investigation

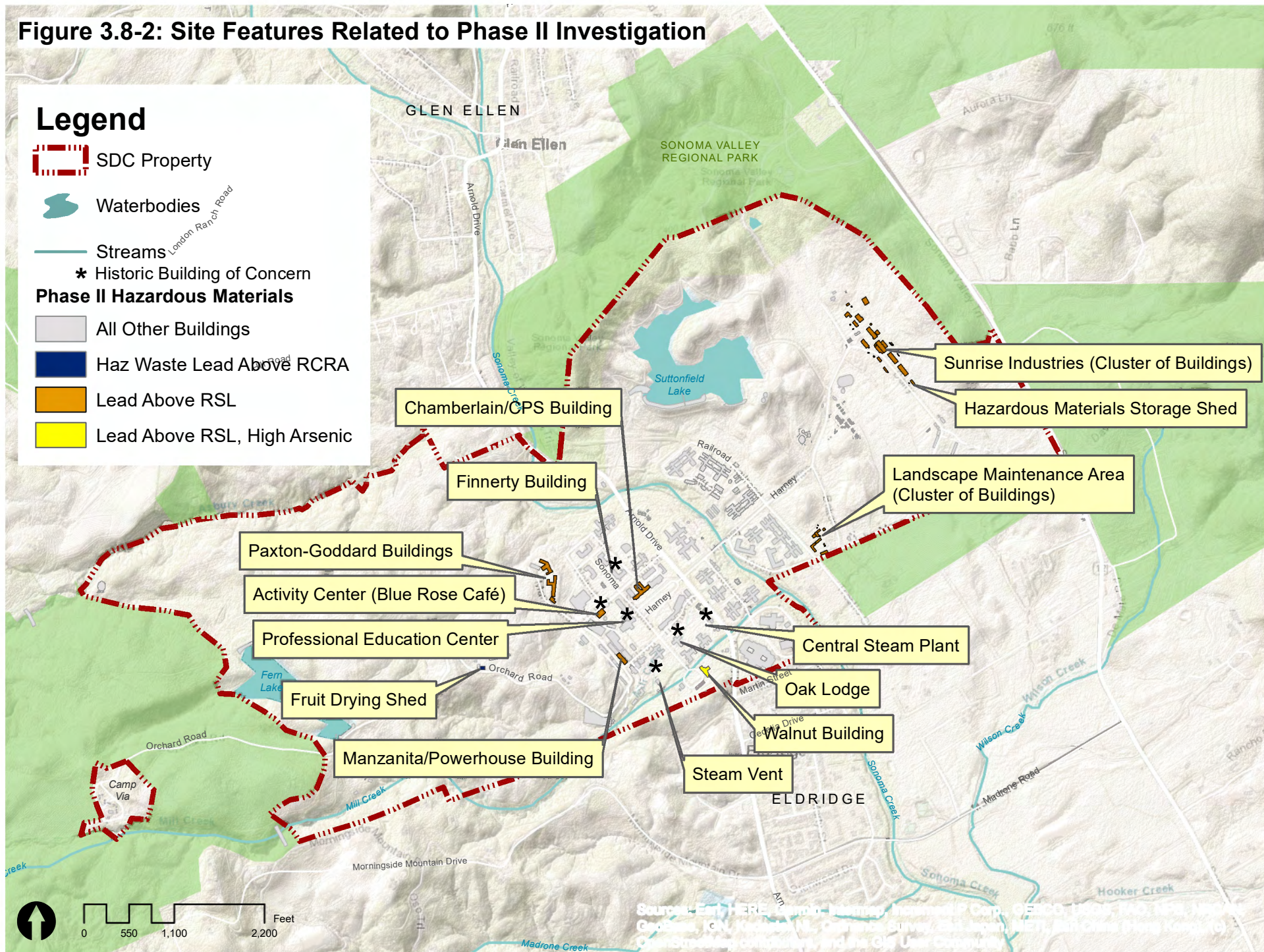
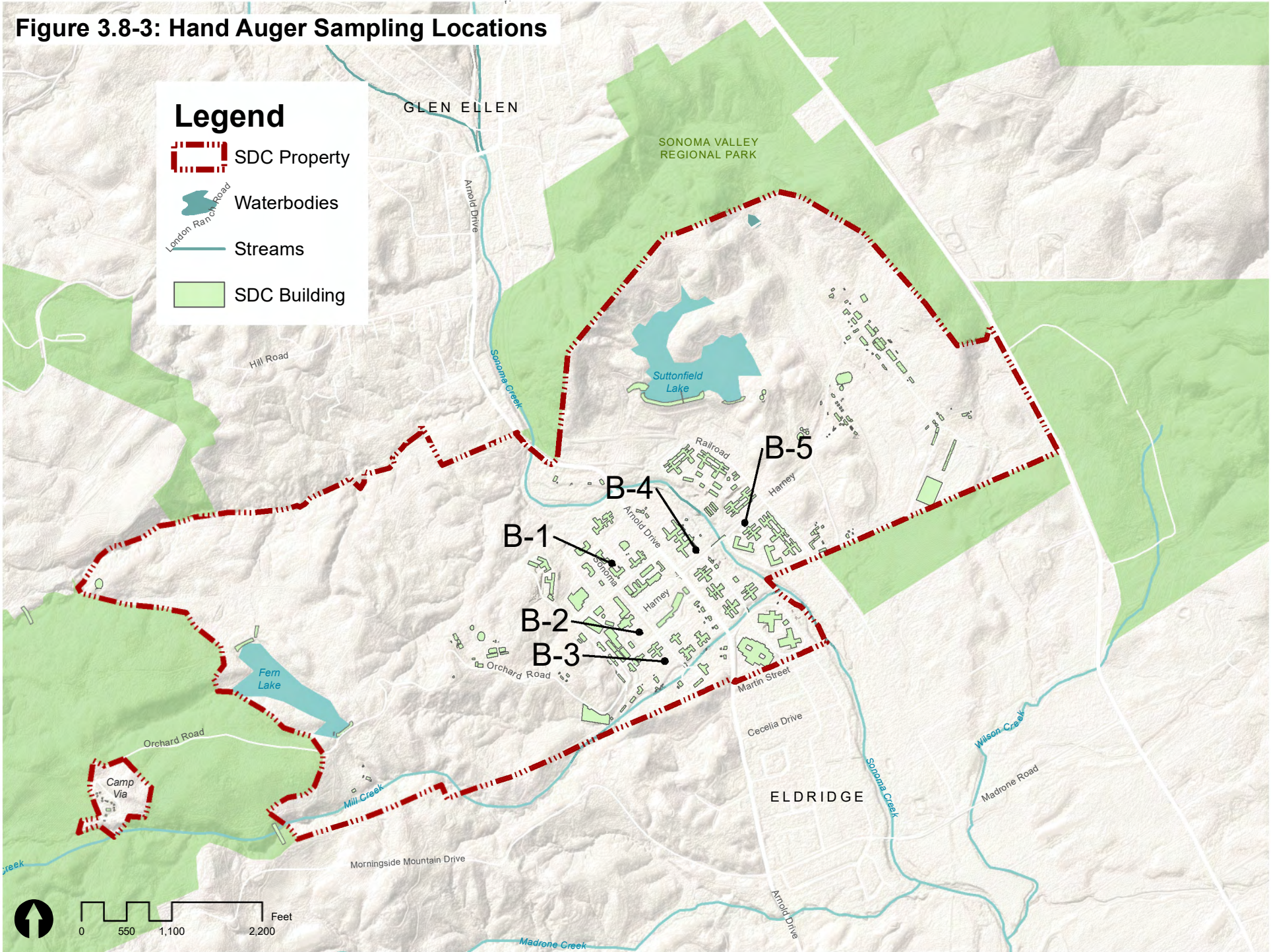


Figure 3.8-3: Hand Auger Sampling Locations



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2020

3.8.3 Impact Analysis

3.8.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;**
- Criterion 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;**
- Criterion 3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;**
- Criterion 4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;**
- Criterion 5: Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety hazard or excessive noise for people residing or working in the project area;**
- Criterion 6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or**
- Criterion 7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.**

3.8.3.2 Methodology and Assumptions

The analysis considers the nature of foreseeable hazardous materials use, storage and disposal resulting from the redevelopment of the Sonoma Developmental Center. It also identifies ways that hazardous materials could be exposed to the environment or

individuals. The analysis includes a qualitative evaluation of impacts associated with the presence or hazardous materials. The analysis is based on a review of materials ranging from online databases such as Envirostar and Geotracker, hazard maps, Phase I & II Site Assessments (see Appendix G), and relevant plans and regulations at the Federal, State, and local levels.

3.8.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address wildfire:

Open Space and Resources and Hazards

Goals

- 2-G Natural and Human-Caused Hazards: Minimize the potential impacts of hazards at the site and to the surrounding community, such as excessive noise, poor air quality, seismic activity, and flooding.

Policies

- 2-43 Maintain and enhance the existing tree canopy by preserving existing trees wherever possible and planting new trees throughout the site to cool the site and improve air quality.
- 2-45 Require that development projects incorporate all applicable Bay Area Air Quality Management District (BAAQMD) Construction Mitigation Measures to reduce construction and operational emissions for criteria air pollutants, toxic air contaminants, and greenhouse gases.
- 2-46 Require geotechnical investigations for new development within the planning area to establish appropriate designs and structural details.

The following relevant policies and implementing actions of the Proposed Plan prohibit use of pesticides:

Biological Resources and Wildlife Corridors

Policies

- 2-26 Prohibit the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area. This restriction should be included in all Declarations of Covenants, Conditions and Restrictions (CC&Rs) to ensure that future homeowners are aware of the requirements.

Utilities and Infrastructure

Policies

- 6-17 Maintain high water quality in lakes and streams by creating opportunities for rainwater capture such as roof drainage capture systems, installing trash screens in stormwater inlets, prohibiting use of pesticides in landscaping, and using bioretention facilities to clean stormwater before it reaches lakes and creeks in order to remove pollutants and enhance water quality through natural processes.

Standard Conditions of Approval

Policies

- HAZ-3 Implementation of Best Management Practices to reduce exposure of workers to contaminated materials during construction should be followed. Some BMPs include OSHA 40-Hour training, misting/wetting of soil before transportation, covering loads of soil or debris during transportation, covering stockpiles to protect them from inclement weather or high winds, continuous soil sampling, proper disposal practices, and prohibiting long term road closures or blocking of roadways that would impair or interfere with emergency response or evacuation.

A Soil Management Plan shall be prepared and used to provide procedures and protocols for excavating, handling, or storing soils with identified hazardous or potentially hazardous materials. The Soil Management Plan will: identify procedures for monitoring exposure during excavation and handling activities; specify dust control measures and monitoring activities during excavation activities; specify approved temporary stockpile locations and measures to protect the environment such as placement of temporary plastic liners and covers to prevent the spread of contamination;

specify methods of transportation from the site and locations of approved solid waste handling facilities or waste disposal sites; specify transportation routes from the site; specify the qualifications of the personnel to perform the waste characterization and removal activities; document that removed soils are characterized in accordance with hazardous waste rules and regulations and in accordance with disposal facility acceptance criteria; and identify procedures for documenting the proper disposition of the soils removed from the site including the sampling and testing of representative samples.

A Health and Safety Plan shall be developed for each specific sub-site or activity that would involve removal or exposure to hazardous or potentially hazardous materials. The Health and Safety Plan will identify the project location and background, health and safety considerations including the types of hazards present, project personnel and safety responsibilities, personal protective equipment, and emergency procedures. Abatement involving asbestos or lead-based paint should follow OSHA procedures and be performed by licensed Contractors and Certified workers to reduce risk to people and the environment.

3.8.3.4 Impacts

Impact 3.8-1 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

Construction activities during the redevelopment of the Core Campus and SR 12 connector may involve the transportation, use, or disposal of hazardous materials. Items such as paint, oil, or solvents used in construction would be subject to regulations from RCRA, OSHA, the US DOT, and others. These regulations cover matters pertaining to hazardous materials such as personal protective equipment, handling, recording keeping, and disposal of hazardous materials. Common construction materials such as paints, oils, greases, and fuels will likely be transported, used, and disposed of but these items do not pose a significant hazard. Any accidental spill of common construction materials would be contained and cleaned according to OSHA guidelines. Staff and construction workers should implement OSHA standards that require employee training for an emergency response.

If more than one (1) acre of soil is disturbed as part of the project, coverage under the National Pollutant Discharge Elimination System (NPDES) would be required under the NPDES General Construction Permit. The Construction General Permit requires a Stormwater Pollution Prevention Plan to be prepared and Best Management Practices for control of pollutant discharges to be implemented. Some BMP examples include maintenance of equipment, controls to reduce pollutant, and proper waste disposal procedures.

Development could also involve the transport, use, storage, generation, and disposal of hazardous materials, including lead and asbestos from building materials and chemicals from commercial and industrial uses. As described in the *Environmental Setting*, there are several sites within the Planning Area that previously stored hazardous materials, which require regulatory oversight to protect human health and the environment. Future site remediation activities in areas with underground storage tanks, aboveground storage tanks, equipment and facilities that may require removal in the future would also utilize the transportation corridors. Transportation of hazardous materials on major streets and highways is regulated by USDOT, Caltrans, and the California Highway Patrol. The requirements of existing regulatory programs would reduce the potential of an accidental release of hazardous materials to a less than significant level.

Upon implementation of the plan and regular Operations of the site, the regulations for hauling hazardous substances would continue to reduce the potential of an accidental release of hazardous materials to a less than significant level.

Mitigation Measures

None required.

Impact 3.8-2 Implementation of the Proposed Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less than Significant*)

There is the possibility that there is a future accident in which there is a release of hazardous materials into the environment. There have been numerous accidental releases of varying quantities in the past at the Planning Area. However, existing regulatory programs associated with handling hazardous materials during construction and operation of the site would decrease potential impacts. Following the correct procedures outlined by governing bodies would decrease the chance of an accidental

release to a less than significant level. Furthermore, proposed uses will likely have less likelihood of these larger accidental releases than the former institutional use of the site.

Hazardous materials at the Planning Area discussed above have the potential to be released into the environment. In such an occurrence several Federal, State, or local agencies such as the EPA, SF Bay Regional Water Quality Control Board, DTSC, or Sonoma County will provide oversight in remediation. Additionally, proper abatement procedures will be followed when renovating any of the structures that have lead-based paint or asbestos. Further testing as part of Phase II Environmental Site Assessments will also provide more information on the proper mitigation techniques in areas identified with historic contamination.

Compliance with the Standard Conditions of Approval Measure HAZ-3 and existing regulations would reduce impacts related to the release of hazardous materials due to foreseeable upset or accident conditions to less than significant.

Mitigation Measures

None required.

Impact 3.8-3 Implementation of the Proposed Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. *(No Impact)*

No schools are located or are proposed to be located within one-quarter mile of the Planning Area. While schools are a permitted use within the Institutional land use designation, the site (which falls within the Dunbar boundary of the Sonoma Valley Unified School District) is well-served by local public schools and it is anticipated that the needs of new residents will be accommodated in the existing system without the need for a new school on or near the campus. Thus, implementation of the Proposed Plan would have no impact regarding hazard emissions or materials in within one-quarter mile of an existing or proposed school.

Mitigation Measures

None required.

Impact 3.8-4 Implementation of the Proposed Plan would not result in development located on a site which is included on a list of hazardous materials sites

compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. (*Less than Significant*)

One Leaking Underground Storage Tank (LUST) site is located at the Planning Area which received Case Closure in 2013. Since the case is closed it is unlikely that there would be a significant hazard to the public or the environment. The Upper Disposal Area is listed as a land waste disposal site. The site was cleaned up under the regulatory guidance of the California Integrated Waste Management Board and is periodically inspected by CalRecycle. Inspection reports reviewed (by URS) revealed no significant violations. A variety of hazardous and potentially hazardous materials have historically been used and stored in the Planning Area. Redevelopment and development of the site will likely require continued evaluation of hazardous materials used, stored or disposed of at the Planning Area. These activities could result in future identification of hazardous materials and listing of areas within the Planning Area on a list of hazardous materials sites. Similar to the analysis in Impact 3.7-2, implementation of HAZ-3 prior to construction would reduce the potential risks associated with releases of contaminated media as a result of Proposed Plan to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.8-5 Implementation of the Proposed Plan would not result in development located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety hazard or excessive noise for people residing or working in the Planning Area. (*No Impact*)

The Planning Area does not include land within an airport land use compatibility plan. Furthermore, no public airports or public use airports are located within two miles. Thus, implementation of the Proposed Plan would have no impact on safety hazards or excessive noise due to aviation operations.

Mitigation Measures

None required.

Impact 3.8-6 Implementation of the Proposed Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

During construction, vehicles or equipment will not be allowed to remain stationary on a roadway for extended periods of time. Long term road closures or blocking of roadways that would impair or interfere with emergency response or evacuation would not be allowed under BMPs identified in HAZ-3. Policy PS-4g of the Sonoma County General Plan also requires that the Sonoma County Operation Area Hazardous Material Incident Response Plan be maintained.

In addition, see Impact 3.16-1 in Section 3.16: Wildfire for further analysis. The County's Emergency Operations Plan establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the county. Development facilitated by the Proposed Plan would be constructed in accordance with federal, state, regional, and local requirements, which are intended to ensure the safety of county residents and structures to the extent feasible. Compliance with these standard regulations would be consistent with the County's Emergency Operations Plan. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.8-7 Implementation of the Proposed Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (*Less than Significant*)

See Impacts 3.16-1 and 3.16-2 in Section 3.16: Wildfire for analysis on this impact. Compliance with existing State and local codes and regulations as well as proposed policies would reduce impacts to a less-than-significant level related to exacerbating wildfire risks during construction, operation, and implementation of the Proposed Plan.

Mitigation Measures

None required.

3.9

Hydrology and Water Quality

3.9 Hydrology and Water Quality

This section describes existing resources and assesses potential environmental impacts from future development under the Proposed Plan related to hydrology and water quality. Issues addressed include water quality, groundwater resources, drainage, and flood hazards related to rivers, sea level rise, dam failure, seiches, tsunamis, and mudflows. Relevant federal, State, and local regulations and programs are also described.

There were 46 comments in response to the Notice of Preparation (NOP) regarding hydrology and water quality, including from: Earth Care Alliance of Sonoma Valley, Sonoma County Regional Parks, Sonoma Land Trust, Sonoma Mountain Preservation, Sonoma Valley Citizens Advisory Commission, Sonoma Water, and several community members. The majority of comments are from organizations and individual community members expressing their concern of potential impacts to water quality, infiltration, runoff, and stormwater management as a result of implementing the Proposed Plan.

3.9.1 Regulatory Setting

3.9.1.1 Federal Regulations

Clean Water Act

Several sections of the Clean Water Act (CWA) pertain to regulating waters of the U.S. The CWA is not only the primary federal law for regulating water quality in the U.S. but also the basis for several state and local laws. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribes basic federal laws for regulating discharges of pollutants and sets minimum water quality standards for all waters of the U.S. Several mechanisms are used to control domestic, industrial, and agricultural pollution under the CWA.

The U.S. Environmental Protection Agency (EPA) is the overarching authority for protecting the quality of waters of the U.S. However, EPA has delegated administration and enforcement of the CWA in California to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs). The State has developed a number of water quality laws, rules, and regulations. It also adopts water quality standards to protect beneficial uses of waters of the State, as required by Section 303(d) of the CWA. CWA requirements are addressed through development of a

303(d)/305(b) integrated report, which provides both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The 2014/2016 California Integrated Report was approved by EPA on April 6, 2018.

Executive Order 11988

The Federal Emergency Management Agency (FEMA) is responsible for managing the 100-year floodplain, areas with a one-percent or greater chance of flooding in any given year. A Flood Insurance Rate Map, an official FEMA-prepared map, is used to delineate both the Special Flood Hazard Areas (the 100-year floodplain) and the flood-risk premium zones in a community. Under Executive Order 11988, FEMA requires local governments that are covered by the National Flood Insurance Program to pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain. FEMA administers the National Flood Insurance Program, which includes floodplain management and flood hazard mapping and provides subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established in 1974 to set federal minimum drinking standards and to protect public water supplies. This is the primary federal legislation protecting drinking water supplied by public water systems. As a result of the act, regulations for the protection of public health, as well as regulations relating to the taste, odor, and appearance of drinking water were established.

3.9.1.2 State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) was established and implemented by the SWRCB. The SWRCB is the primary State agency with responsibility for protecting the quality of the State's surface and groundwater supplies, or waters of the State. Waters of the State are defined more broadly than waters of the U.S. (i.e., any surface water or groundwater, including saline waters, within the boundaries of the state). This includes waters in both natural and artificial channels. It also includes all surface waters that are not waters of the U.S. or non-jurisdictional wetlands, which are essentially distinguished by whether they are navigable. If waters are not navigable, they are considered to be isolated and, therefore, under the jurisdiction of only the Porter-Cologne Act and not the CWA.

The Porter-Cologne Act authorizes the SWRCB to draft policies regarding water quality. The act requires projects that discharge or propose a discharge of wastes that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The Porter-Cologne Act also requires the SWRCB or a RWQCB to adopt basin plans for the protection of water quality.

National Pollutant Discharge Elimination System Permit Requirements

The 1972 amendments to the federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from any point source. The 1987 amendments to the CWA created a new section, which was devoted to stormwater permitting (Section 402). The Phase I NPDES stormwater program regulates stormwater discharges from industrial facilities, large and medium-sized municipal separate storm sewer systems (MS4s) (i.e., those serving more than 100,000 persons), and construction sites that disturb five or more acres of land. CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for MS4s. The discharge of stormwater runoff from the MS4 in Sonoma County is permitted under the San Francisco Bay Municipal Regional Permit (MRP) (Order No. R2-2015-0049; NPDES Permit No. CAS612008), which is discussed further below.

NPDES General Construction Stormwater Permit

Most construction activities that disturb one acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (Construction General Permit). The SWRCB issued a statewide Construction General Permit (Order No. 2009-0009-DWQ, NPDES No. CAR000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ), which was adopted on September 2, 2009. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least one acre to the total land area. The Construction General Permit requires the applicant to file a Notice of Intent to discharge stormwater and prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes a site map and a description of proposed construction activities, along with a demonstration of compliance with relevant local ordinances and regulations. Also included is an overview of the best management practices (BMPs) that would be implemented to prevent soil erosion and discharges of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants.

Waste Discharge Requirements for Dewatering and Other Low-threat Discharges to Surface Waters

CWA Section 402 includes waste discharge requirements for dewatering activities. Although small amounts of construction-related dewatering are covered under the Construction General Permit, the San Francisco Bay RWQCB has regulations specific to dewatering activities. These typically involve reporting and monitoring. If dewatering occurs as part of the project at storm drains that lead to San Francisco Bay, the contractor would be required to comply with San Francisco Bay RWQCB dewatering requirements. If contaminated groundwater is encountered during construction (e.g., contamination from chlorinated volatile organic compounds [VOCs]), the project sponsor would be required to comply with the San Francisco Bay RWQCB's general requirements (i.e., Order No. R2-2017-0048, Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds, Fuel Leaks, Fuel Additives, and Other Related Wastes [VOC and Fuel General Permit]).

Water Quality Control Plan

San Francisco Bay Region is under the jurisdiction of the San Francisco Bay RWQCB, which established regulatory standards and objectives for water quality in its Water Quality Control Plan for the San Francisco Bay Basin, commonly referred to as the Basin Plan. Basin plans are updated and reviewed every three years. They provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. Each RWQCB, which has region-wide and water-body-specific beneficial uses, sets numeric and narrative water quality objectives for several substances and parameters in numerous surface waters in its region. A basin plan must include (1) a statement of beneficial water uses that the RWQCB will protect, (2) the water quality objectives needed to protect the designated beneficial water uses, and (3) strategies to be implemented, with time schedules for achieving the water quality objectives. The Basin Plan was last updated in 2017.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention only if necessary to protect the resource. SGMA is intended to ensure a reliable groundwater water supply for California for years to come.

SGMA requires the formation of local Groundwater Sustainability Agencies, which are required to adopt Groundwater Sustainability Plans (GSPs) to manage the sustainability

of groundwater basins. Adoption of a GSP is required for all high- and medium-priority basins, as identified by the Department of Water Resources (DWR); otherwise, the agencies must submit an alternative to a GSP. GSPs are long-term planning documents that articulate a sustainability goal for the basin to avoid “undesirable results” and define sustainable management criteria for the six sustainability indicators required by SGMA: chronic lowering of groundwater levels; reduction of the amount of storage available for groundwater; seawater seeping into a basin, contaminating fresh water; degraded water quality; land subsidence; and depletion of surface water as a result of overuse of groundwater.. The GSPs also describe monitoring programs, studies to reduce data gaps, projects, and management actions that the GSA concludes are necessary to maintain and/or achieve sustainability within 20 years. GSPs are to be updated every five years.

State Water Resources Control Board-Division of Drinking Water

The Division of Drinking Water (DDW) regulates public drinking water systems. The DDW is composed of three sections; Quality Assurance, Environmental Laboratory Accreditation, and Technical Operations. The DDW supports compliance determinations and enforcement actions based upon water quality data. They also have the responsibility of managing public water system compliance with the California Safe Drinking Water Act and ensuring that water quality data are valid, legally defensible, and meets expected levels of precision and accuracy.

3.9.1.3 Local Regulations

Municipal Stormwater Permitting Program

The San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049 issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of over 70 municipalities, and local agencies in five Bay Area counties. Under the MRP, permittees are prohibited from non-stormwater discharges into storm drain systems and watercourses. Permitted discharges must not cause or contribute to a violation of any applicable water quality standard for receiving waters. Upon a determination by either the MRP permittee(s) or the RWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standard, the permittee(s) must notify, within no more than 30 days, and thereafter submit a report to the RWQCB. The report must describe controls or BMPs that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that

are causing or contributing to the exceedance of water quality standards. The MRP also sets forth requirements for monitoring water quality.

Provision C.3 of the MRP establishes discharge requirements for new development and redevelopment projects. The goal of Provision C.3 is for the MRP permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. According to the MRP, this goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Flood Control

The Flood Damage Prevention Ordinance (Chapter 7B) of the Sonoma County Code sets measures for the construction, location, alteration, conversion, or alteration of any structures or land contained within FEMA designated flood hazard zones in the county. A permit is required for development within a flood zone, and the development must adhere to the standards for fill placement and construction elevation set forth in the Ordinance. Sonoma County also has drainage review requirements that would be applicable to the project. Drainage improvements must be designed according to the Sonoma County Water Agency's Flood Management Design Manual and to Sonoma County Code §11.16.040 and §11.16.050. Drainage improvements must also demonstrate no adverse impacts to existing and proposed structures and to adjacent properties.

Sonoma County General Plan 2020

The Sonoma County General Plan 2020 is the blueprint for land use in unincorporated Sonoma County. It includes maps that show where agricultural, residential, commercial and other land uses will be located, and a series of policies that guide future decisions about growth, development and conservation of resources. The General Plan policies and plans relating to hydrology and water quality are listed below.

Policy C-WR-1e: Project features and mitigation measures to improve water quality in impaired surface waters shall be required as part of the approval of any development project located within 200 feet of such waters.

Policy C-WR-1f: Include as conditions or mitigation measures for new development all Regional Water Board permit requirements, TMDL implementation

measures, and discharge prohibitions to stormwater runoff, surface water and groundwater.

Policy C-WR-1g: Address runoff management early in Site Design planning and alternatives analysis, taking into account existing site characteristics that affect runoff in designing strategies that minimize post-development changes in the runoff flow regime, control pollutant sources, and where necessary, remove pollutants. Require new and redevelopment to incorporate storm water management, consistent with the County's low Impact Development Technical Design Manual to manage the quality and quantity of stormwater runoff from new development.

Policy C-WR-1h: Post-development peak stormwater runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak stormwater discharge rate will result in increased potential for downstream erosion.

Policy: C-WR-1i: New development, including single-family development on small subdivision lots shall be subject to the following siting and design requirements.

1. Preserve the existing hydrologic conditions and drainage system to the maximum extent feasible.
2. Preserve the existing stormwater runoff infiltration, filtration, and retention functions to the maximum extent feasible.
3. Maintain the volume and velocity of storm water and dry weather runoff as close to existing levels as feasible.
4. Minimize grading and incorporate preserve natural land features to the maximum extent feasible.
5. Incorporate source control Best Management Practices appropriate to the site.
6. Incorporate treatment control BMPs to remove pollutants of concern when the combination of site design and source control BMPs are not sufficient to protect water quality, or to meet State and Federal water quality objectives.
7. Maximize the use of vegetated strips of land or other techniques of increasing stormwater infiltration and filtration before reaching storm drain inlets.

8. Maximize percent cover by pervious surfaces, and minimize percent cover by impervious surfaces, especially those that are directly connected.

Policy C-WR-1j: Encourage the use of permeable pavements such as bricks, gravel, porous asphalt or porous concrete by providing educational materials about these alternative pavements to development contractors and homeowners.

Policy C-WR-1k: Avoid construction of new stormwater outfalls and direct stormwater to existing facilities with appropriate treatment and filtration, where feasible. Where new outfalls cannot be avoided, plan, site, and design outfalls to minimize adverse impacts to coastal resources from outfall discharges, including consolidation of existing and new outfalls where appropriate. Establish the following criteria for Best Management Practices (BMPs) to use for new development.

1. Quantitative criteria, including quantity of stormwater and percent of storm event, for the design of source control BMPs
2. Criteria for which treatment control BMPs would be required.

Policy C-WR-1l: Certain categories of development have a greater potential for adverse impacts to water quality and hydrology due to the extent of impervious surface area, type of land use, or proximity to coastal waters and may require Treatment Best Management Practices (BMPs) for post-construction treatment of stormwater runoff. These categories of development, as defined by the Regional Water Board, shall do the following:

1. Conduct a polluted runoff and hydrologic site characterization by a qualified licensed professional, early in the development planning and design stage, and document the expected effectiveness of the proposed Treatment BMPs.
2. Conduct an alternatives analysis to demonstrate that there are no appropriate and feasible alternative project designs that would substantially improve on-site runoff retention, if a proposed development will not retain on-site the runoff volume from the appropriate design storm using an LID approach.

3. Use Treatment BMPs or suites of BMPs designed to treat, infiltrate, or filter the amount of stormwater runoff produced by all storm events up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1- hour storm event (with an appropriate safety factor of 2 or greater) for flow-based BMPs.
4. Use Treatment BMPs (or suite of BMPs) to remove pollutants of concern from any portion of the design storm runoff volume that will not be retained on-site using Site Design strategies and LID BMPs, or if additional pollutant removal is necessary to protect coastal waters.
5. Use a Runoff Control BMP (or suite of BMPs), sized for the appropriate design storm, to minimize adverse post-development changes in the runoff flow regime, for a development that adds a net total of more than 15,000 square feet of impervious surface area, if using appropriate and feasible Site Design strategies and LID BMPs will not retain on-site the runoff from the appropriate design storm.

Policy C-WR-1m: New development permits or approvals shall be required to provide a mechanism for verification of inspection, repair, and maintenance of source control and treatment control Best Management Practices (BMPs) as necessary so that they function properly for the life of the project. The transfer of property to a private or public owner shall require the new owner to continue to provide verification of maintenance for all source or treatment control BMPs.

Policy C-WR-1n: Minimize water quality impacts during construction by minimizing the project footprint, phasing grading activities, implementing soil stabilization and pollution prevention measures, and preventing unnecessary soil compaction. Land disturbance from construction activities for development (e.g., clearing, grading, and cut-and-fill), especially in erosive areas (including steep slopes, unstable areas, and erosive soils) shall be minimized to avoid detrimental water quality impacts caused by increased erosion or sedimentation. Soil stabilization Best Management Practices shall be incorporated on disturbed areas as soon as feasible.

Policy C-WR-1o: Polluted runoff from construction activities shall be minimized. Erosion, sedimentation, and other polluted runoff from construction activities for development shall be minimized to the maximum extent feasible.

Policy C-WR-1p: Grading plans shall be required to include measures to avoid soil erosion. Requirements for grading plans shall be upgraded as needed to avoid sedimentation in storm water to the maximum extent feasible.

Policy C-WR-1q: Soil stabilization and erosion control on construction sites in erosive areas (steep slopes, unstable areas, and erosive soils) shall be required as a condition of grading permits for all new development regardless of the area of land to be disturbed.

Policy C-WR-1r: Applicants for new development that would disturb one or more acres of land (or other threshold required by the State Water Resources Control Board or Regional Board) shall comply with the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System Stormwater General Permit and shall file a Notice of Intent (NOI) and prepare a Stormwater Pollution Prevention Plan. Such development shall be conditioned to demonstrate proof that an NOI has been filed and the SWRCB has issued a Waste Discharge Identification Number.

Policy C-WR-1s: A Stormwater Pollution Prevention Plan (SWPPP) shall be required for all new development in or adjacent to Environmentally Sensitive Habitat Areas on sites that drain directly to surface waters, regardless of the area of land to be disturbed. The SWPPP shall be required to include a setback of construction from streams.

Policy C-WR-1t: Best Management Practices shall be implemented for constructing, maintaining, and repairing roads and trails in County parks, including stabilizing erosion, clearing vegetation, resurfacing, and removing slide debris.

Policy C-WR-1u: Construction sites shall be inspected to verify implementation of approved erosion control plans and Stormwater Pollution Prevention Plans.

Policy C-WR-1v: All projects which involve construction of new storm drain inlets or maintenance of existing inlets shall be required to add a sign or stencil to each inlet with the equivalent of this language: "No dumping, drains into ocean."

Policy C-WR-2w: Require that permits and approvals for new development include evaluation and consideration of naturally-occurring and human caused contaminants in groundwater.

Policy C-WR-1z: Operators of commercial and industrial uses shall be required to reduce and pretreat wastes prior to their entering sewer systems.

Policy C-WR-1aa: A review shall be initiated of any sewer system when it persistently fails to meet applicable standards. If necessary to assure that such standards are met, the County may deny new development proposals or impose moratoria on building and other permits that would result in a substantial increase in demand, and may impose strict treatment and monitoring requirements.

Policy C-WR-1jj: Design, construct, and maintain County buildings, roads, bridges, drainage, and other facilities to avoid or minimize sediment and other pollutants in storm water runoff. Implement Best Management Practices for their ongoing maintenance and operation.

Policy C-WR-2f: Discretionary projects in Urban Service Areas, where the density of development thus extent of impervious surface area is greater than in Rural Communities, shall be required to maintain the site's pre-development recharge of groundwater to the maximum extent practicable feasible. Develop voluntary guidelines for development in Rural Communities that would accomplish the same purpose.

Policy C-WR-4e: Water conserving plumbing and water conserving landscaping shall be required in all new development projects, and water conserving plumbing shall be required in all new dwellings. County operated water systems shall be required to minimize water loss and waste. Promote programs to minimize water loss and waste by public water suppliers and their customers. (GP2020 Revised).

Policy C-WR-4f: To minimize generation of wastewater and encourage conservation of Coastal water resources, require use of water saving devices as prescribed by the local water provider in all new developments.

Policy C-WR-4h: Development projects shall be required to retain stormwater for on-site use that offsets the use of other water where feasible. (GP2020 Revised)

Policy C-WR-4k: Ensure that public wastewater disposal systems are designed to reclaim and reuse recycled water for agriculture, geothermal facilities, landscaping, parks, public facilities, wildlife enhancement, and other uses to the extent practicable, provided that the water meets the applicable water quality

standards and is supplied in appropriate quantities for the intended uses.
(GP2020)

Sonoma County Code

Chapter 11, Construction Grading and Drainage of the Sonoma County Code provides rules and regulations to control grading, erosion, and earthwork, including excavations, fills, and embankments; establishes the administrative procedure for the issuance of permits; and provides for approval of plans and inspection of grading. Chapter 11A Municipal Regional Stormwater Permit of the Sonoma County Code requires that all construction-related activities, including designs for new development and site controls for redevelopment and construction, shall conform to the requirements of the most current edition of the San Francisco Bay RWQCB MRP.

3.9.2 Environmental Setting

3.9.2.1 Climate and Topography

The Planning Area is part of unincorporated Sonoma County and is located adjacent to Highway 12 within southern Sonoma Valley, which is surrounded by the Mayacamas Mountains to the east and the Sonoma Mountains to the west. The Planning Area has a relatively flat river plain in its center, rises in elevation and slopes to the west, and has low rolling topography in the north and east. The elevation ranges from 170 feet above sea level within the Sonoma Creek channel to over 900 feet in the Camp Via portion of the Planning Area. There are two tributary drainages, Asbury and Hill Creeks, which form or closely align with the Planning Area's perimeter and flow into Sonoma Creek. Asbury Creek drains approximately 1.1 square miles and extends 2.2 miles. Hill Creek drains slightly less area at one square mile and extends approximately 2.7 miles. These tributaries are deeply incised and have steep bank slopes. There are two water bodies within the plan area, Suttonfield Lake and Fern Lake, that both have earthen dams. Both lakes are used for raw water storage diverted from nearby creeks. Fern Lake is fed by Asbury and Hill Creeks and has a spillway that feeds back into Asbury Creek. Suttonfield Lake, which is fed by an unnamed creek and Sonoma Creek, is also used for water storage as well as domestic water use, irrigation, and fire prevention. There is a spillway on the western edge of Suttonfield Lake that directs flows down an intermittent creek back to Sonoma Creek. Both dams are maintained by Department of Developmental Services staff and inspected annually by the Department of Water Resources, Division of Safety of Dams (DSOD).¹ The last DSOD inspection took place on September 29, 2021.

The regional climate is characterized as Mediterranean with warm, dry summers and cool, wet winters. Average yearly temperatures range from a high of 90 degrees Fahrenheit (°F) and low of 52°F in the summer months and a high of 56°F and a low of 38°F in the winter months. The mean annual rainfall in the SDC plan area (at Fern Lake) is 47 inches per year, with most of the precipitation between December and February. The amount of rainfall received is variable across the valley and mountains, with 40 to 50 percent more rainfall in the hills than on the valley floor.¹

3.9.2.2 Groundwater

The Planning Area is located in the Sonoma Valley Groundwater Sub-basin which is managed under the Sonoma Valley Groundwater Sustainability Agency. Groundwater is present at different levels (depths) in Sonoma Valley with shallow and deep aquifers. The shallow aquifer is relatively continuous at depths of less than 200 feet and is hosted within alluvial and fluvial sedimentary units and some volcanic rocks. The shallow aquifer is locally connected with Sonoma Creek and adds to the water level in the location of the Planning Area. In addition, the locally shallow groundwater contributes to springs and seeps around the valley. The deeper aquifer is hydraulically isolated from the shallow aquifer.

Monitoring of groundwater levels has shown declining groundwater levels in the deeper aquifer, especially around El Verano, which is located approximately four miles downstream (south) of the Planning Area, as well as southeast of the City of Sonoma, approximately eight miles southeast of the Planning Area. Groundwater extraction outpaces recharge of the deeper aquifer, indicating that water resources are declining. There is no current evidence for subsidence in the Sonoma Valley.

Currently 74 percent of the Core Campus consists of impervious structures such as roads and sidewalks. The condition of the impervious structures varies, but much of it needs to be replaced or removed. When roads or sidewalks are removed LID measures such as native vegetation restoration and location specific landscaping can be implemented in their place.⁷

¹ Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

Infiltration best management practices can also be implemented throughout the site in addition to removing impervious structures. Some infiltration BMPs include vegetated buffer zones, infiltration basins, pervious paving, and bio-retention areas. All of these examples would increase groundwater recharge after completion of the Specific Plan.

The groundwater water quality is generally good, except for traces of boron and arsenic. These traces could be attributed to natural geothermal influences in the area. Much of the Planning Area is and will remain undeveloped and therefore provides substantial opportunity for groundwater recharge. Around the Planning Area, groundwater recharge potential varies from very good to poor, with the areas of highest potential in the eastern portion of the Planning Area, the flat alluvial areas adjacent to Sonoma Creek, and in a narrow band around Fern Lake on the western property boundary⁷⁶.

3.9.2.3 Regional Hydrology

The Planning Area lies within the Sonoma Creek Watershed, and 0.8 miles of Sonoma Creek bisects the property. There are six sub-watersheds located within the Planning Area, including Asbury, Hill, SDC, Cecilia, Suttonfield, and Hooker. The two tributaries (Asbury and Hill creeks) are perennial to intermittent streams in sections and are water sources for the Planning Area. Sonoma Creek is perennial and is fed by rainfall, groundwater, and various springs throughout the Sonoma Creek Watershed. The outlet of Sonoma Creek drains into San Pablo Bay near Sears Point. The Sonoma Creek Watershed covers 166 square miles. Along the segment of Sonoma Creek within the Planning Area, there is an upstream-contributing watershed of approximately 50 square miles⁷⁷. Sonoma Creek is an incised, moderately sinuous stream with channel depths ranging from 20 to 35 feet below the top of the bank and widths of 50 to 100 feet⁷⁸. The

⁷⁶ Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

⁷⁷ USGS *Stream Stats*. StreamStats. (n.d.). Retrieved May 16, 2022, from <https://streamstats.usgs.gov/ss/>

⁷⁸ SEC (Sonoma Ecology Center). (2006). Sonoma Creek Watershed Limiting Factors Analysis, Final Report. Sonoma Ecology Center, with Stillwater Sciences and UC Berkeley Department of Earth and Planetary Sciences

bed of the stream carries cobbles and gravel and forms pool and riffle sequences. There are point bars on the inside of curves, scouring on the outside of curves, and longitudinal bars along the stream length that are variably vegetated. There have been some engineering controls for bank stability including armoring using concrete blocks. The average monthly discharge measured over the past 64 years at Agua Caliente, about two miles downstream from the Planning Area, ranges from 0.77 cubic feet per second (cfs) in September to 226 cfs in January. The average monthly discharge measured over the past 10 years at Kenwood, about five miles upstream from the Planning Area, ranges from 0.02 cfs in September to 53 cfs in February². The length of the stream within the Planning Area is a gaining stream, so that groundwater is contributing to the water in the channel rather than draining from it. Sonoma Creek's discharge responds very quickly to rainfall and produces flood peaks soon after the rain.

Sonoma Creek provides riparian habitat for many plant and animal species. Surrounding the creek, there are woodland stands of alders, bays, and oaks with shrubby underbrush. The reach of Sonoma Creek through the Planning Area supports aquatic species such as the endangered California freshwater shrimp, federally threatened Steelhead Trout, and other native fish species. Sonoma Creek also provides valuable movement corridors that connect various adjacent habitats. See Section 3.4: Biological Resources for more information about wildlife and plant species within the Planning Area.

The two reservoirs on the property have earthen dams. Fern Lake in the southwest holds 238 acre-feet of water and Suttonfield Lake in the northeast holds 600 acre-feet. Both were constructed in the early 1900s for water storage.¹ No records were found on the construction or design of the dams. There is no accurate way to assess the risks these dams pose with the current information available. Additional subsurface exploration, laboratory testing, and geotechnical analysis is needed to determine the stability of the embankments.

There are several natural springs in Sonoma Valley and in the Planning Area, including a warm spring that has been measured with a temperature of 68 to 72°F. It has been

¹ Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

recorded that these springs are affected by seismicity in the area. Seismicity is discussed in Section 3.7: Geology, Soils, and Mineral Resources.

3.9.2.4 Water Quality

The quality of untreated water in the Planning Area is relatively good. However, some naturally occurring substances such as boron, arsenic, and nitrates found at the site pose a health hazard at high concentrations. Asbestos from cement distribution pipes and bacteria are also a potential concern and need further testing. The now shuttered water treatment plant at the site has found arsenic and nitrates below the maximum allowable contaminant level, and no asbestos is found. The plant was equipped with a lab that tests for a variety of constituents and all raw water is treated to kill bacteria prior to storage.⁷

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), as administered by the San Francisco Bay RWQCB, specifies beneficial uses that apply to water bodies where the potential exists for them to be affected by the project. Sonoma Creek has water quality requirements for the following beneficial uses: preservation of rare and endangered species, cold freshwater habitat, wildlife habitat, commercial and sport fishing, fish migration, preservation of rare and endangered species, fish spawning, warm freshwater habitat, and water contact and non-water contact recreation.⁷⁹

3.9.2.5 Flooding

Flooding occurs when water overflows stream and creek banks when runoff from the watershed exceeds the capacity of the stream or creek channel to carry the flows. Floods on smaller creeks can occur suddenly, such as in flash floods, and recede quickly when rainfall ceases. Flooding on larger creeks may not peak for hours or days after the start of a storm or series of storms. Flooding can erode banks leading to bank failure, it can change the course of a creek by cutting new channels in creek sediments, it can also destroy or damage buildings, wash away topsoil, damage crops, and transport objects caught in the flood waters. Flood damage can weaken building materials, increase mildew,

⁷ Sherwood Design Engineers. (2018). (rep.). Sonoma Developmental Center Existing Conditions Report Hydrology and Site Infrastructure Draft.

⁷⁹ San Francisco Bay Regional Water Quality Control Board. 2010. *Attachment A to the Final Staff Report: San Francisco Bay Basin Water Quality Control Plan, Basin Plan Update, Addition of Water Bodies and Beneficial Uses*. Originally published July 7, 2010.

dust, bacteria and other diseases. Public facilities including roads, utilities, retaining walls, and other improvements can be damaged or destroyed by flooding.

The Sonoma Creek stream channel is wide and deep enough to contain the 100-year flood event and a 500-year flood event only overflows the banks of the creek where no buildings currently exist (**Figure 3.9-1**). In 2005, a 100-year flood event occurred and damaged water diversion structures along Asbury and Hill creeks⁵, and flood events in the future pose risks to structures such as bridges and culverts above and within water channels. Mapping of the potential flooding from a 100-year flood event is presented in the Sonoma County General Plan 2020, Public Safety Element, Dam Failure Inundation Hazard Areas (Figure 3.9-1).⁶ Failure or overspill of Suttonfield Lake or Fern Lake dams could cause dam inundation flooding in the Sonoma Creek watershed.

Flooding from Dam Failure

Since the late 1920s the State of California has utilized the California Water Code to regulate over 1,200 jurisdictional-sized dams. The DSOD serves as the regulatory agency in charge of providing oversight of dams in the State. The DSOD also must make dam breach inundations maps available to the public pursuant to California Water Code Section 6161 (c). A collection of these maps created by licensed civil engineers and approved by the DSOD are published on the Dam Breach Inundation Map GIS application. **Figures 3.9-2 and 3.9-3** are adapted from these DSOD approved maps and present failure scenarios for the dams at Fern Lake and Suttonfield Lake.

Figure 3.9-2 represents a hypothetical failure of Fern Lake Dam with the reservoir level at the maximum possible water surface elevation during a non-flood season. In this scenario, water from Fern Lake could flood a large portion of the Core Campus area, as well as a large area of the Eldridge community just south of the Planning Area. South of Eldridge, the majority of flooding would likely be contained along the banks of Sonoma Creek. Due to the large area inundated on the map, the DSOD has classified the downstream hazard of a failure at Fern Lake as high.

⁵ Barber et al. (2012). Watershed Sanitary Survey - Roulette Springs, Asbury Creek, Hill Creek, Sonoma Creek. Prepared for Sonoma Developmental Center

Figure 3.9-3 also represents a hypothetical dam failure at Suttonfield Lake adapted from the DSOD Dam Breach Inundation Map GIS application. The lake located northeast of the Core Campus is the largest reservoir on the property, and the map represents the same conditions of hypothetical failure as **Figure 3.9-2**. In the event of a failure of the Lake Suttonfield Dam during a non-flood season with the maximum surface water elevation, the eastern portion of the Planning Area would become inundated, according to the DSOD map. As seen in **Figure 3.9-3**, the Planning Area would become flooded in the areas east of Sonoma Creek and north of Eldridge. South of the Planning Area, the majority of flooding would mostly be contained to areas close to the banks of Sonoma Creek. The extent of flooding in Sonoma Creek may also extend south past the intersection with Agua Caliente Creek. Due to the large extent of potential dam inundation area, the DSOD has determined that the downstream hazard of dam failure from Suttonfield Lake to be extremely high.

These scenarios provided by the DSOD are intended to be general information in the event of a dam failure for planning purposes only and does not describe the current conditions of the dams in the Planning Area. Specific geotechnical investigations of the dams at Fern and Suttonfield lakes would need to be conducted to determine their potential for failure⁸.

3.9.2.6 Coastal and Bay Hazards

Seiche

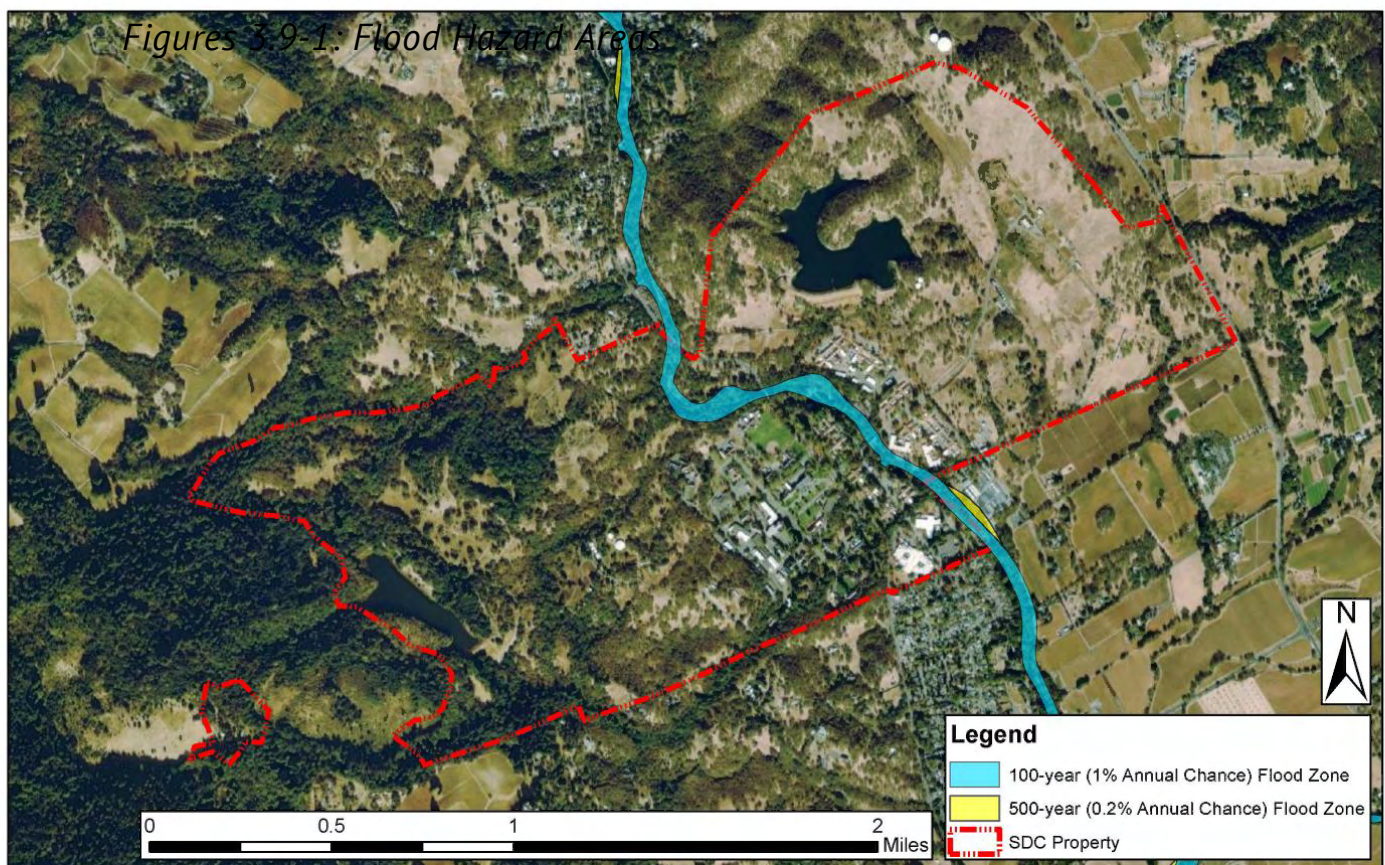
A seiche is a standing wave that oscillates in a body of water, due to strong winds, changes in atmospheric pressure, or seismic waves from an earthquake passing through a water body. Seiche occurs in an enclosed or partially enclosed body of water, such as a lake or reservoir. There is a remote possibility of a seiche at Suttonfield and Fern lakes¹.

⁸ *Dam Breach Inundation Map Web Publisher*. California Dam Breach Inundation Maps. (n.d.). Retrieved May 24, 2022, from https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2

¹ Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>

Tsunamis

Tsunamis are long-period water waves caused by underwater seismic events, volcanic eruptions, or undersea landslides. Tsunamis affecting the San Francisco Bay region would most likely originate west of the Bay, in the Pacific Ocean. Areas that are highly susceptible to tsunami inundation tend to be low-lying coastal areas, such as tidal flats, marshlands, and former bay margins that have been artificially filled. The Planning Area is not susceptible to tsunami inundation.



FEMA FIRM, 2008, Sonoma County, CA and Unincorporated Areas, Map No. 06097C0910E

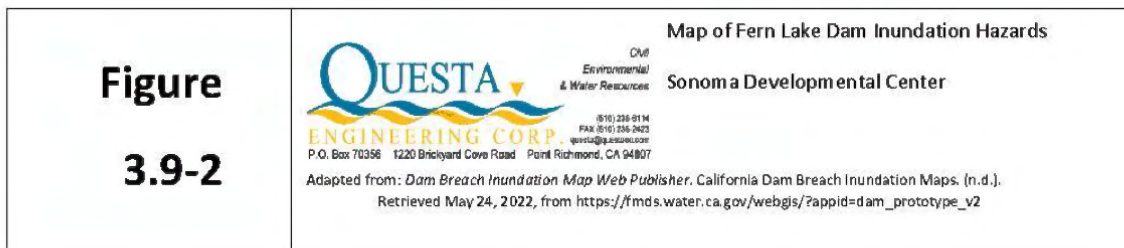
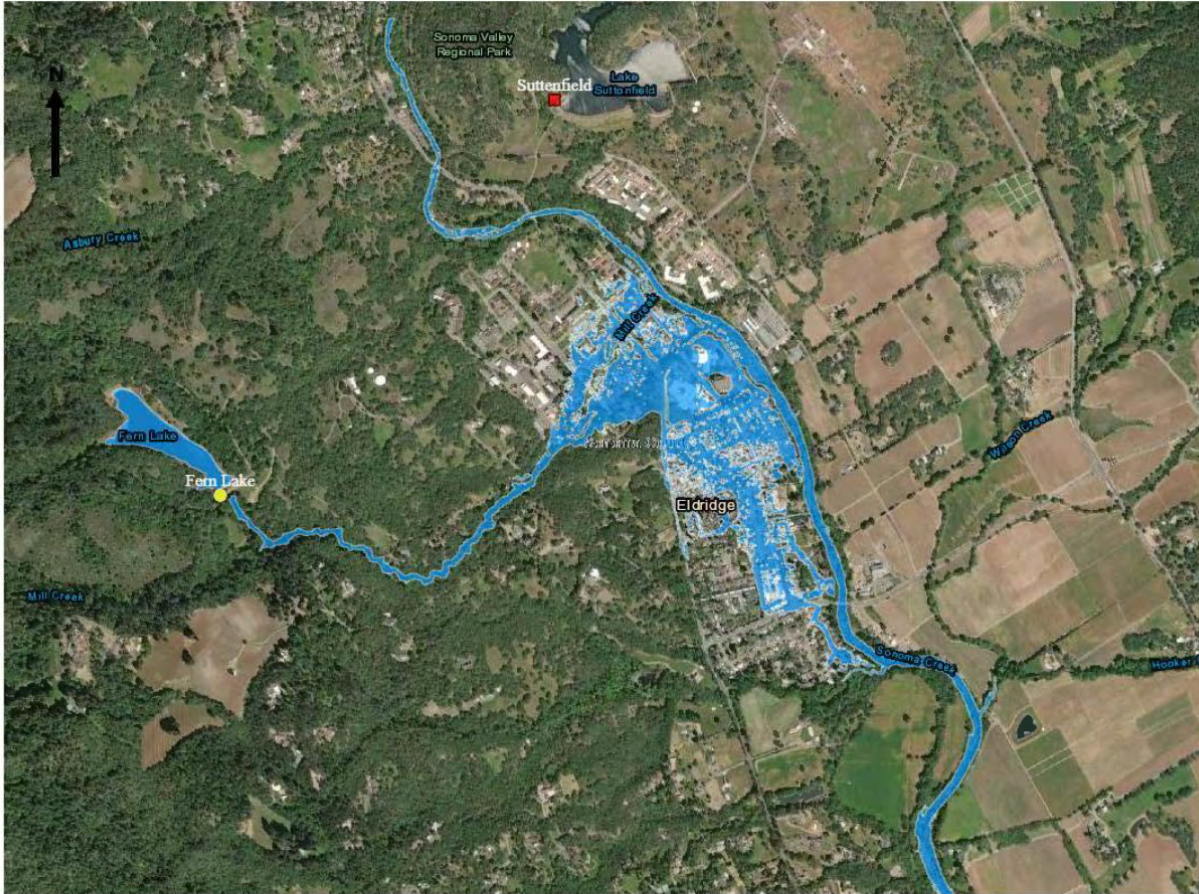
**Figure
3.9-1**

Flood Hazard Areas

QUESTA
 ENGINEERING CORP.
 Civil
 Environmental
 & Water Resources
 (510) 236-5114
 FAX (510) 236-2423
 P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807
 questa@questaac.com

**Sonoma Developmental
Center**
 Eldridge, CA

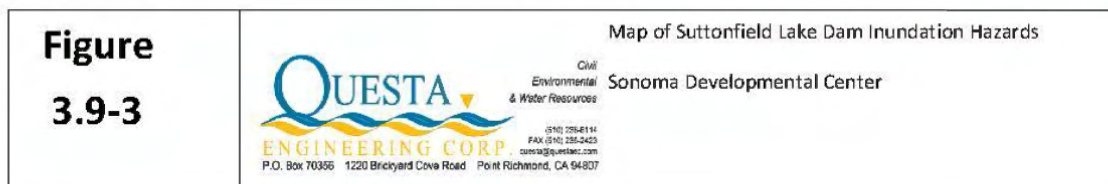
Figure 3.9-2: Map of Fern Lake Dam Inundation Hazards



Figures 3.9-3: Map of Suttonfield lake Dam Inundation Hazards



Adapted from: Dam Breach Inundation Map Web Publisher, California Dam Breach Inundation Maps. [n.d.]. Retrieved May 24, 2022, from https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2



3.9.3 Impact Analysis

3.9.3.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Criterion 2:** Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Criterion 3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- a) Result in substantial erosion or siltation on- or off-site;
 - b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - c) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - d) Impede or redirect flood flows.
- Criterion 4:** Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow; or
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Criterion 5:** Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.9.3.2 Methodology and Assumptions

The analysis focuses on issues related to surface hydrology, flood hazards, groundwater supply, and surface and groundwater quality based on existing conditions and future construction.

Impact analysis of surface water hydrology considers potential changes in the physical characteristics of water bodies, impervious surfaces, and drainage patterns throughout the Planning Area as a result of construction and operation at the site. Groundwater supply and recharge are assessed by comparing existing conditions within the site area and after implementation of the Proposed Plan. Surface water and groundwater quality is analyzed by using information on existing water quality conditions. Potential sources of contaminants associated with construction are also considered. Flooding impacts are assessed using FEMA data and historical flood information to determine the existing flood zone, specifically evaluating whether the site overlaps designated 100-year floodplains and whether it was a flood risk. CEQA does not require an analysis of how existing environmental conditions will affect a project's residents or users unless the project would exacerbate an existing environmental hazard. This analysis evaluates if construction would exacerbate existing or future flood hazards.

3.9.3.3 Relevant Policies and Implementing Actions

The following relevant goals and policies of the Proposed Plan address hydrology and water quality:

Public Facilities, Services, and Infrastructure

Goals

6-D Ensure that infrastructure, including water, wastewater, stormwater, power, and telecommunications, can adequately, sustainably, and resiliently accommodate the needs of future residents and businesses.

6-E Water Supplies: Safeguard SDC's water supplies and water rights, ensuring adequate availability of water for residents, businesses, fire suppression needs, ecosystem services, and groundwater recharge.

Policies

6-16 Minimize impervious surfaces and use pervious pavements where possible, retaining and providing new pervious surfaces such as

landscape areas, crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt. At least 50 percent of new ground floor private parking spaces and non-primary access paving are required to be surfaced with permeable paving to encourage stormwater infiltration and disperse runoff from roofs or pavement to vegetated areas where possible.

- 6-17 Maintain high water quality in lakes and streams by creating opportunities for rainwater capture such as roof drainage capture systems, installing trash screens in stormwater inlets, prohibiting use of pesticides in landscaping, and using bioretention facilities to clean stormwater before it reaches lakes and creeks in order to remove pollutants and enhance water quality through natural processes.
- 6-18 Incorporate site design measures and Low Impact Development (LID) features such as bioretention facilities in accordance with the Bay Area Stormwater Management Agencies Association (BASMAA) Manual or otherwise required by the Grading and Stormwater Division of Permit Sonoma. The bioretention facilities should have a surface area of at least 4 percent of the tributary impervious area.
- 6-26 Ensure the SDC site's water rights are retained for uses within the core campus and for habitat preservation, ecological services, groundwater recharge in the open space area, and to increase the reliability of the regional water supply.
- 6-27 Maintain water supply and filtration at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency.
- 6-28 Use water from SVCSD's Recycled Water Trucking Program for construction site activities, including dust control, cement mixing, soil compaction, to the greatest extent feasible.
- 6-30 Ensure that development does not result in a net increase in withdrawals or diversions from area springs and streams, including Roulette Springs, Hill Creek, Asbury Creek, and Sonoma Creek,

within critical low-flow periods, including summer, fall, and drought conditions, or as annual averages.

Standard Conditions of Approval

Policies

- WQ-1 Construction activities must comply with existing regulations presented in NPDES permits, San Francisco Bay MRP, the Sonoma County Code, the MS4 Phase II Permit, and the Sonoma County General Plan.
- WQ-2 Any potential hazard to life or property in the Planning Area shall be properly investigated by the appropriate licensed professional.
- WQ-3 All development that requires a geotechnical, hydrological, or environmental report shall utilize the recommendations of said report and be in compliance with regulatory agencies.
- WQ-4 Existing storm water systems shall be updated to reduce infiltration of pollutants into waterways.
- WQ-5 Since both reservoirs at the Planning Area are classified as at least a high hazard, an Emergency Action Plan (EAP) must be implemented in accordance with the requirements from the California Water Code Sections 6160 and 6161 and Government Code Section 8589.5. When the property is transferred a new EAP must be developed to reduce the risk of loss of human life or injury, and to minimize property damage in the event of a potential or actual emergency.

3.9.3.4 Impacts

Impact 3.9-1 Implementation of the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements.
(Less than Significant)

As described in Chapter 2: Project Description, the Proposed Plan is anticipated to result in 1,000 new residential units and approximately 410,000 square feet of non-residential uses; implementation of the Proposed Plan would therefore involve construction activities related to new development and redevelopment of existing buildings. Grading and other

construction-related activities may contribute to short-term water quality degradation. Sediment transport into the existing storm water system, which does not treat water, would impact water quality. Other runoff pollutants may include dust, oil, or other construction materials that could temporarily contaminate runoff. Construction-related water quality standards and waste discharge requirements are addressed in the NPDES General Permit for Construction Activities. Violations of the NPDES permit would constitute a significant impact and may increase pollutant levels in the storm water system.

Proposed policy WQ-1 would require construction activities to comply with existing regulations, including NPDES permits, San Francisco Bay MRP, the Sonoma County Code, the MS4 Phase II Permit, and the Sonoma County General Plan, that ensure that water quality is not degraded due to construction. Under the Construction General Permit, a SWPPP is required if more than one acre of soil is disturbed during construction. The SWPPP defines standard erosion control measures and BMPs that are implemented to reduce erosion. Additionally, BMPs would be the best available, most economical, and best conventional pollutant control technology that serve to control point and non-point source pollutants. Individual measures (e.g., silt fences, straw wattles, erosion control fabric, requirements for topsoil and re-vegetation, and backfill soil) would be identified in the SWPPP at a project-level. Dewatering is covered under the Construction General Permit and the NPDES requirements to ensure that there is no violation of water quality standards associated with construction. In addition, the Sonoma County General Plan requires grading permit applications to include an erosion control plan that complies with the California Stormwater Quality Association's Stormwater Best Management Plan Handbook for New Development and Redevelopment. This plan would include BMPs that would also help control pollution from stormwater and construction water runoff and prevent violation of water quality standards or waste discharge requirements.

Provision C.3 of the NPDES permit also establishes discharge requirements for redevelopment projects. The provision also includes source control, site design, and stormwater treatment measures. Implementation of LID techniques is commonly used to achieve the goal of reducing runoff pollutant discharges.

As such, Development under the Proposed Plan would be designed and maintained in accordance with regional and County water quality requirements, such as the San Francisco Bay MS4 Permit, existing Sonoma County General Plan, and local plans. Policy 6-16 of the Specific Plan also emphasizes the minimization of impervious surfaces and use pervious pavements where possible. Pervious surfaces such as crushed aggregate, turf blow, unit paver, and pervious concrete will be used for at least 50 percent of the new ground floor surfaces. These structures increase stormwater infiltration and reduce runoff

into water bodies. Therefore, construction and operation would comply with all current regulatory requirements and would not violate water quality standards or degrade water quality, and there would be a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.9-2 Implementation of the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. *(Less than Significant)*

There could be a significant impact on groundwater if it were drawn to serve the needs of new residents, visitors, and businesses in a way that would substantially impede with groundwater recharge. However, future development at SDC would use surface water supplies from the two reservoirs, and would not be reliant on groundwater. Furthermore, development would be limited to the Core Campus area, and redevelopment of existing structures would not significantly alter the area available for recharge of the groundwater aquifer. New green infrastructure and LID measures that capture storm water and increase infiltration may also increase groundwater supplies in the Planning Area as required by Policy 6-18 from the Proposed Plan. Some examples of LIDs include managing stormwater at the source to promote treatment and infiltration, minimizing areas of impervious surfaces, and vegetated swales, planters and rain gardens. Additionally, surface water diversions from local creeks supply the majority of water for domestic uses at the site such that groundwater supplies would not be interfered with substantially. There are four ground water supply wells in the Planning Area, and none of the wells are in use as of 2019.

Existing regulations in the NPDES Permit and Sonoma County General Plan Policy C-WR-2e also ensure that development would not substantially interfere with groundwater recharge. Development would not substantially interfere with groundwater recharge or groundwater management of the basin and the impact would be less than significant. The Water Supply Assessment conducted by EKI Environment & Water also found that the project will not adversely affect water supply reliability in the Planning Area. EKI also

found that the Valley of the Moon Water District will be able to meet all future demands in normal and multiple dry years from 2025 through 2045.⁹

Given these existing regulations and proposed policies, the Proposed Plan would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin, and this impact would be less than significant.

Mitigation Measures

None required.

Impact 3.9-3 Implementation of the Proposed Plan would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion, siltation, or flooding on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. (*Less than Significant*)

Erosion, Siltation, or Flooding

Construction activities involving excavation or disturbance of the ground surface could increase runoff and alter the existing drainage pattern resulting in erosion, siltation, or flooding. However, this can be mitigated with erosion and sediment control BMPs as required by the Construction General Permits. Project-specific measures would be identified and implemented to reduce contamination, erosion, and sedimentation of waterways under the SWPPP of the General Permit for Construction. Compliance with existing regulations and implementation of BMPs addressed in Impact 3.9-2 reduce potential negative impacts. There are also no structures in the 100- or 500-year flood zones as seen in Figure 3.9-1.

Therefore, there would be a less than significant impact from erosion, siltation, or flooding.

⁹ EKI Environment & Water. (2022, July). Review of Water Supply Assessment for the Sonoma Developmental Center Specific Plan.

Storm Water Runoff

The existing storm water management system consists of rock-lined and concrete-lined roadside channels, storm water inlets, and buried pipelines that transfer storm water from the Planning Area into local creeks without treatment. Natural features such as vegetation in landscaped areas, trees, and creeks also help provide storm water management in the Planning Area.

The drainage system of the Planning Area will need to be modified to meet storm water management requirements⁷. New development at the SDC will need to meet current storm water regulations. Applicable regulations include erosion, sediment, and effluent standards and the requirement that a EPA qualified person assesses conditions during construction. Runoff is also regulated by the Phase II MS4 General Permit. Failure to comply with the MS4 permit may constitute a violation of the Clean Water Act. Violation of the act could result in fines or stop work orders. The Proposed Plan utilizes the Bay Area Stormwater Management Agencies Association's Manual, which and specifies LID that should implemented during the execution of the plan. These LIDs will treat storm water, improve the quality of storm water runoff, and reduce erosion and flooding thus reducing impacts. Sonoma County also has drainage review requirements that would be applicable to the project. Drainage improvements must be designed according to the Sonoma County Water Agency's Flood Management Design Manual and to Sonoma County Code Section 11.16.040 and Section 11.16.050. Drainage improvements must also demonstrate no adverse impacts to existing and proposed structures and to adjacent properties.

Proposed policy WQ-1 and WQ-4 would ensure compliance with applicable policies and regulations such that impacts from surface runoff would be less than significant.

Runoff Water

Implementation of the Proposed Plan may increase the amount of impervious surfaces in the Planning Area, including new structures such as sidewalks, pathways, parking areas and similar improvements. Runoff from these structures may include pollutants such as oil or solvents that get transported through drainages. However, potential impacts would be reduced through the storm water management improvements mentioned above. The

⁷ Sherwood Design Engineers. (2018). (rep.). Sonoma Developmental Center Existing Conditions Report Hydrology and Site Infrastructure Draft.

NPDES General Permit for construction would also require BMPs (e.g., check dams, grass-lined channels, and land grading) under the SWPPP that would further help mitigate risks relating to polluted runoff.

Compliance with existing regulations and the Sonoma County General Plan as well as the implementation of new green infrastructure under the Proposed Plan (Policy 6-18) would result in impacts that would be less than significant.

Mitigation Measures

None required.

Impact 3.9-4 Implementation of the Proposed Plan would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.

In flood hazard, tsunami, or seiche zones, implementation of the Proposed Plan would not risk release of pollutants due to project inundation. (*Less than Significant*)

There is no risk of tsunami and a very minimal risk of seiche related to the lakes present at the Planning Area. There also are no structures in the flood hazard zones for 100 and 500 year floods. Therefore, the impact from flood, tsunami, or seiche is less than significant. However, pollutants may be released as a result of dam failure.

There are two reservoirs in the Planning Area with man-made embankments. No records were found on dam design or construction, and as such, there is no accurate way to assess the associated risks. Additional subsurface exploration, laboratory testing, and geotechnical analysis would be needed to determine the stability of the embankments, and the proposed Project does not include any proposals to modify or alter the existing dams¹. However, if either of the dams fails, portions of the Planning Area would be flooded (**Figures 3.9-2, 3.9-3**). On September 29, 2021, the DSOD determined the condition of

¹ Wallace, Roberts, Todd (WRT). (2020, January 17). Sonoma Developmental Center Existing Conditions Assessment (WRT, August 2018). transformsdc.com. Retrieved June 14, 2022, from <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>.

both dams in the Planning Area to be satisfactory. There are also no levees within the site that could threaten flooding.

The majority of the Planning Area is above 200 feet above sea level. Given the Planning Area's distance from the coast and its elevation, it is not susceptible to tsunami inundation. Additionally, it is unlikely that a seiche wave would occur in the Planning Area due to the limited sizes of Fern and Suttonfield lakes.

Mud and debris flows are mass movements of dirt and debris that occur after intense rainfall, earthquakes, and severe wildfires. The speed of a mudslide or debris flow depends on the amount of precipitation, steepness of the slope, and cohesion of the soil. Most debris flows occur during intense rainfall in areas with steep slopes and soils with low cohesion such as sands or gravels. There is also a less than significant impact from flooding not related to dam failure. The 100 year flood zone is contained in the creek and the 500 year flood zone impacts areas with no structures. Further geotechnical investigations will be required to determine the hazard potential of mudslides, debris flow, or dam failure.

Due to the potential of flooding from dam failure and because there are no records of dam construction or evaluation of the stability of the dams, a geotechnical investigation will be required as well as an emergency plan. As per Proposed Policy WQ-2 and WQ-3 a geotechnical investigation should be performed on the dam sites to evaluate the potential for failure of the embankments under both static and seismic loading conditions. Possible studies include subsurface exploration, laboratory testing, and geotechnical engineering analysis. The report should evaluate the need for improvements such as spillways, subsurface drains, reconstruction of the dam embankments, and other measures to provide long-term stability of the dam embankments. Short term mitigation measures may include lowering of the water levels in the Lakes by providing spillways at lower elevations. Long term stabilization measures would likely include reconstruction of the dam embankments and installation of subsurface drainage control measures.

As per Proposed Policy WQ-5, both Fern and Suttonfield lakes are currently under the responsibility of the State. Since both reservoirs at the Planning Area are classified as at least a high hazard, an Emergency Action Plan (EAP) must be implemented in accordance with the requirements from the California Water Code Sections 6160 and 6161 and Government Code Section 8589.5. When the property is transferred a new EAP must be developed to reduce the risk of loss of human life or injury, and to minimize property damage in the event of a potential or actual emergency.

Therefore, compliance with policies of the Proposed Plan cited above will reduce impact from flooding and dam failure to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.10-5 Implementation of the Proposed Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (*Less than Significant*)

Future development under the Proposed Plan would comply with all local, State, and federal regulations, and BMPs would reduce runoff and discharge of pollutant to storm water systems. Water quality control measures and permit requirements regarding ground-disturbing construction practices will be enforced to reduce water degradation. The NPDES Construction General Permit also requires that storm water from construction does not obstruct a water quality control plan or water quality standards. The groundwater sustainability plan for the Sonoma Valley Sub-basin was submitted to the DWR in January of 2022. The plan focuses on groundwater monitoring and existing regulations of which the Proposed Plan would abide by. Proposed Policy 6-27 from the Proposed Plan also ensures maintenance of the water supply and filtration at the site. Additionally, redevelopment of existing buildings would not interfere with a sustainable groundwater management plan. Therefore, development would result in impacts that would be less than significant.

Mitigation Measures

None required.

3.10

Land Use and Planning

3.10 Land Use and Planning

This section assesses potential environmental impacts from future development under the Proposed Plan as related to land use and planning, including evaluation of Proposed Plan consistency with other applicable land use plans and regulations, and community division. This section also outlines existing land uses in the Planning Area, as well as relevant State and regional regulations and programs.

There were 31 comments in response to the Notice of Preparation (NOP) pertaining to topics covered in this section. Specifically, the Sonoma County Conservation Action, Sonoma Valley Citizens Advisory Commission, and several other community members provided comments. The majority of comments expressed concern about impacts to the wildlife, environment, and rural character of the valley. Other comments requested impact analysis on Community Separators and potential sprawl from development. These comments pertaining to land use and planning are addressed and analyzed in Impacts 3.10-1 and 3.10-2 below.

3.10.1 Regulatory Setting

3.10.1.1 Federal Regulations

No existing federal regulations pertain to land uses in the Planning Area.

3.10.1.2 State Regulations

California Government Code

State law [California Government Code Section 65300 et seq.] requires each California municipality to prepare a general plan. State requirements call for general plans that “comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.” While allowing considerable flexibility, State planning laws do establish some requirements for the issues that general plans must address. The California Government Code establishes both the required content of general plans and rules for their adoption and subsequent amendment.

Article 8 of Chapter 3 of Division 1 of Title 7 of the Government Code (Sections 65450–65457) allows local planning agencies to prepare specific plans for the systematic

implementation of the general plan for all or part of the area covered by the general plan. A specific plan must include, either through text or diagrams, the following information:

8. The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
9. The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
10. Standards and criteria by which development will proceed as well as standards for the conservation, development, and utilization of natural resources, where applicable.
11. A program of implementation measures, including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

The specific plan must be consistent with the general plan and include a statement of the relationship of the specific plan to the general plan.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, as adopted by the California Air Resources Board. SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) to achieve GHG reduction targets. The SCS must demonstrate attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

3.10.1.3 Regional Regulations

Metropolitan Transportation Commission/Association of Bay Area Governments Plan Bay Area 2050

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) jointly adopted Plan Bay Area 2050 in October 2021. Plan Bay Area is the integrated land use and transportation plan for the nine-county San Francisco Bay Area region. The plan coordinates housing plans, open space conservation efforts, economic development strategies, and transportation investments. Plan Bay Area 2050 focuses on four key issues—the economy, the environment, housing, and transportation—outlining 35 strategies for growth and investment through 2050 to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges.

One of the main goals of Plan Bay Area is to reduce GHG emissions from cars and light-duty trucks through 2050 to meet State goals for 2035 and 2050 GHG emissions reduction targets. As described above, under SB 375, MPOs such as MTC must develop an SCS as part of the RTP. Plan Bay Area 2050 functions as both the SCS and the RTP for the region.

To reduce GHG emissions, Plan Bay Area 2050 promotes compact mixed-use infill development with a variety of housing types and densities within walkable and bikeable neighborhoods that are close to public transit, jobs, schools, shopping, parks, recreation, and other amenities.

3.10.1.4 Local Regulations

Sonoma County General Plan 2020

The General Plan 2020 was last updated in 2008. It is the County's long-range broad policy document that guides conservation, development, and public facilities and services in the County. The Land Use Element of the County's General Plan includes goals and policies that seek to concentrate future growth in existing urban areas to maintain separation with open space, support both rural and urban residential environments, use environmental suitability criteria to guide location of development, and protect scenic and natural resources and agricultural lands. Identified land use issues in this Planning Area include growth and traffic congestion, upgrading public services and infrastructure, protection of agricultural landscapes and resources, impacts of tourism, and water resources.

Sonoma County Code

Chapter 25, Subdivisions, serves as the subdivision code of Sonoma County. This chapter is adopted for the purpose of regulating the division of land in the unincorporated area of the county pursuant to Article XI, Section 7 of the California Constitution and the Subdivision Map Act and to eliminate:

- a) The creation of parcels of inadequate size and poor design;
- b) The creation of building sites in areas where topography, flooding or other factors will prevent orderly and beneficial land development;
- c) The creation of roads of improper width, alignment, grade and improvements; (
- d) Hazards to life or property from sewage effluent or inadequate drainage;
- e) The lowering of property values and the loss of opportunity for satisfactory overall development of neighborhoods caused by successive, uncontrolled and haphazard land divisions;
- f) Potential environmental damage whenever feasible and appropriate.

Chapter 26, Zoning Regulations, of the Sonoma County Code currently designates the SDC campus with a base zoning as a Public Facility, which is used to identify sites that serve the public or community needs. Sonoma County also applies seven overlay districts to the SDC property, each of which has its own specific regulations:

- **B7 Combining District**, which restricts subdivision of lots;
- **Historic Combining District**, which applies to the property west of Arnold Drive, requires County Landmarks Commission approvals for any alterations or demolition of buildings within the boundaries of a historic district;
- **Floodplain Combining District**, applied to properties which lie within the one-hundred-year flood hazard area, specifies development standards and flood protection regulations;
- **Riparian Corridor Combining Zone**, which seeks to protect critical habitat area along riparian corridors and prohibits grading, vegetation removal, agricultural cultivation, structures, roads, utility lines, and parking lots within any stream channel or conservation area;
- **Scenic Resources Combining District**, which applies to most of the property, specifies that land within community separators and scenic landscape units should site structures below ridgelines, be screened by vegetation, and that development should be clustered;

- **Valley Oak Habitat Combining District**, which applies to most of the Core Campus area, requires protection of valley oak trees and replacement of any large trees removed;
- **Local Area Development Guidelines for Taylor/Sonoma/Mayacamas Mountains**, which are intended to reduce visual impacts of residential development, and contain standards for siting, screening, grading, landscaping, and architectural design of residential structures.

3.10.2 Environmental Setting

3.10.1.1 Historical Land Use

The State of California purchased the SDC site—a 1,670-acre stretch of land—in 1889 to expand the small existing institution. Medical facilities, residential buildings, classroom facilities, and administrative buildings were built on the campus over several decades, designed in a relatively compact footprint within the expansive grounds to maximize the benefits of the tranquility and peacefulness of the site. SDC operations made use of the significant open space for recreation and agriculture, with programs that made use of the land to support the clients. Institutional decline in the 1970s and 1980s led to the eventual transfer of several hundred acres of what was identified as surplus land to the county and state park system, including approximately 600 acres that were transferred to the adjacent Jack London State Historic Park in 2002. With its remaining 945 acres, the SDC continued to operate agriculture and recreation programs on the property and kept much of the land in active use until the State announced closure of developmental centers in 2015 and closed the SDC in late 2018.

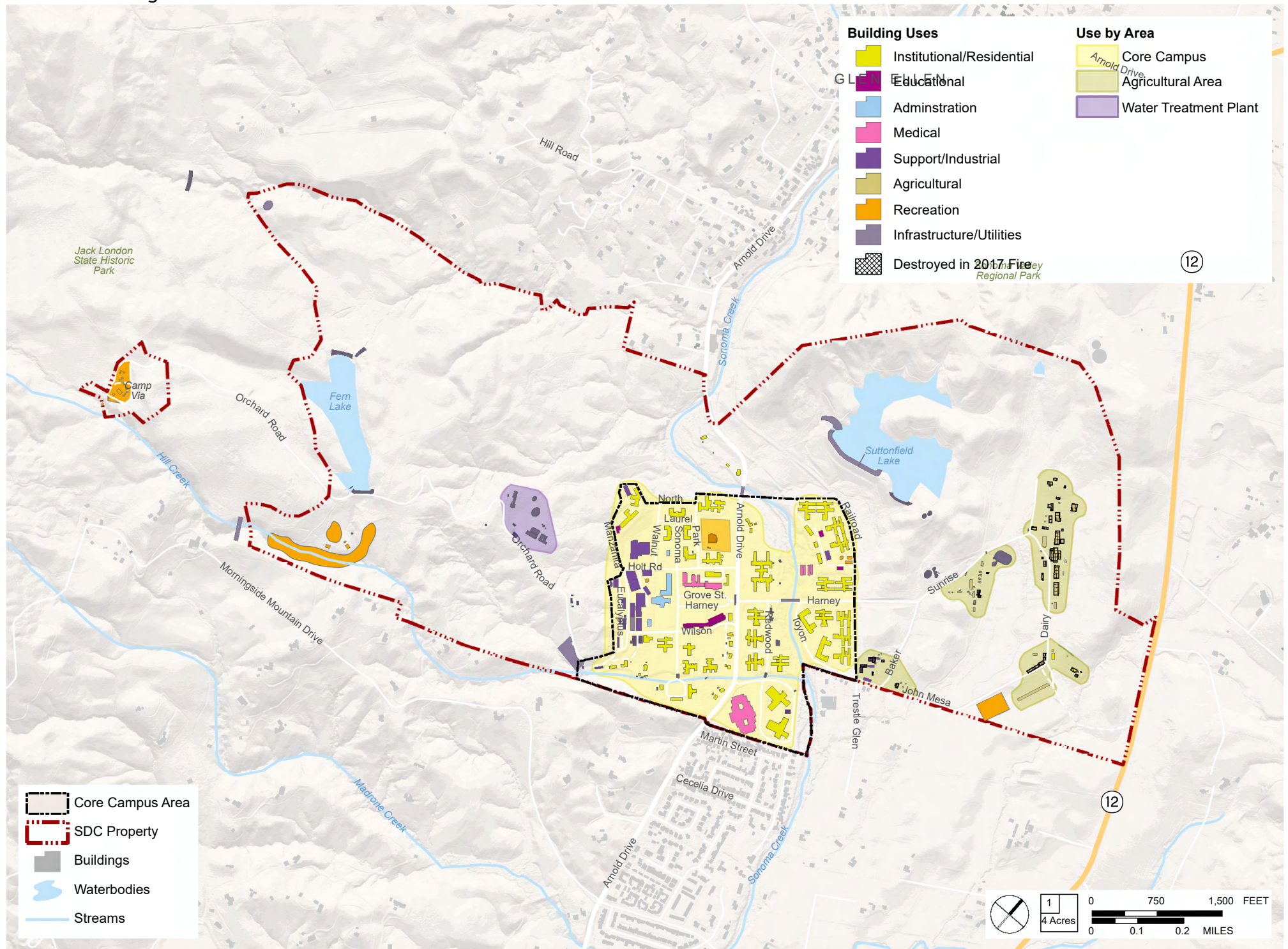
The 180-acre SDC Core Campus is the only portion of the Planning Area developed for habitation; the surrounded area is largely open space, with the exception of water transportation infrastructure and some small utility buildings. The campus includes buildings intended for a mix of uses such as medical facilities, residential buildings, classroom facilities, administrative buildings, and recreational spaces. A cluster of industrial and support buildings sits at the western edge of the core campus. On the eastern portion of the site, historic agriculture uses, including the former Sunrise Industries farm, had several support buildings, many of which were burned in the 2017 Sonoma Complex fires.

3.10.1.2 Existing Land Use

As of 2022, the approximately 935-acre Planning Area primarily includes roughly 755 acres of contiguous open space and a 180-acre Core Campus. Open space includes former agricultural land, recreational uses, the Eldridge Cemetery, and many acres of valuable wildlife habitat. Embedded in the open space is an existing network of trails and access roads as well as a water system consisting of two reservoirs, aqueducts, spring head, storage tanks, treatment plant, pipelines, and a water intake in Sonoma Creek.

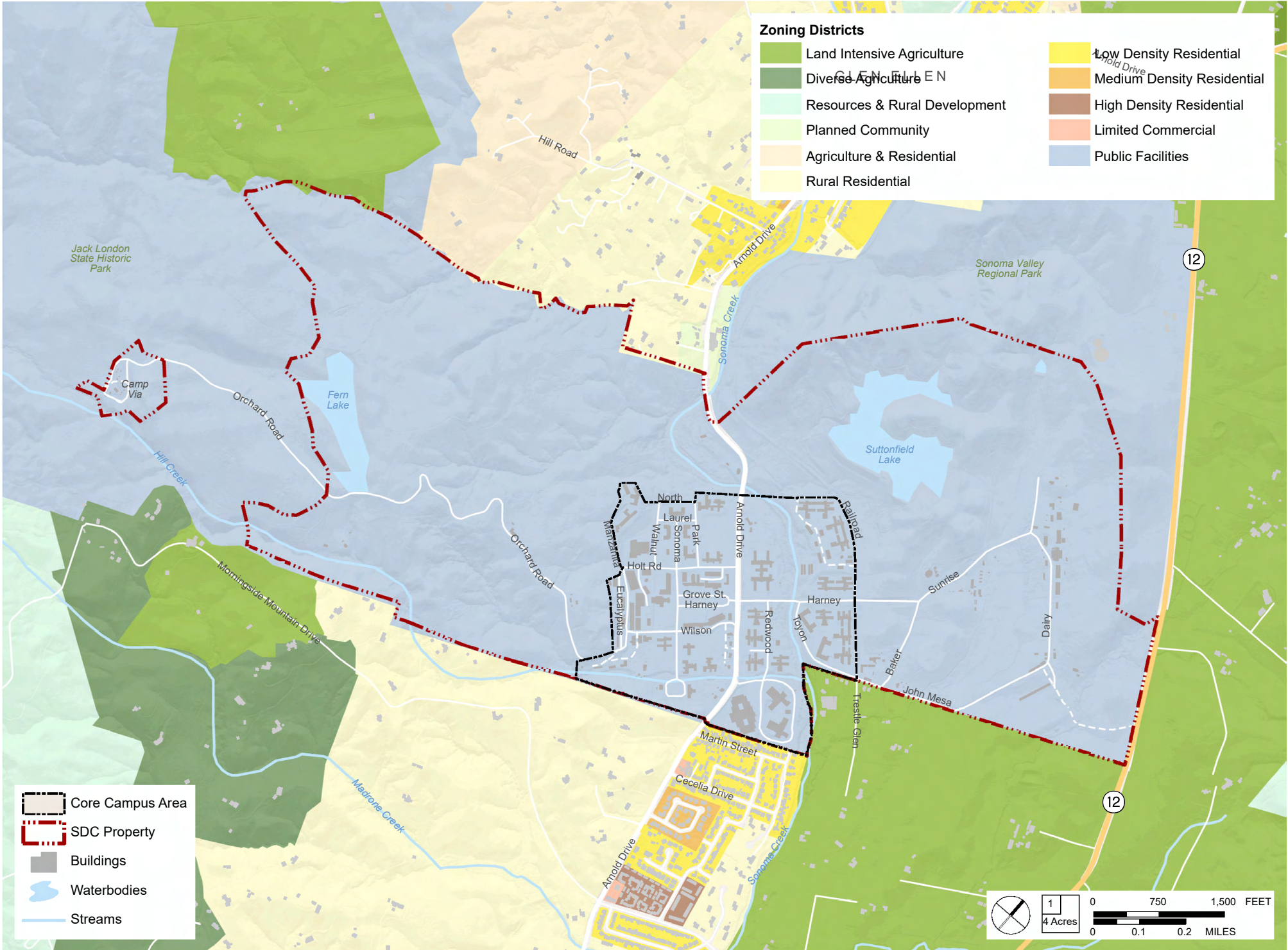
Since the closure of the SDC campus in late 2018, most of the buildings on the SDC property are now vacant. The Sonoma Ecology Center is one of the only buildings that continues to operate on the eastern side of the Core Campus, as do some offices in the Porter Administration/Post Office Building west of Arnold Drive, and some of the recreational uses in the Planning Area, including the ropes course and Camp Via. The distribution of existing land uses throughout the Planning Area prior to the SDC campus closure are shown in **Figure 3.10-1** as well as current zoning designations as shown in **Figure 3.10-2**. The relative acreage and distribution of proposed land uses designated by the Proposed Plan are shown in **Table 3.10-1** and **Figure 2.4-1**, which is located in Chapter 2: Project Description.

3.10-1: Existing Uses at SDC



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

3.10-2: Current Zoning



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

Table 3.10-1: Proposed Land Use Summary

<i>Land Use</i>	<i>Acres</i>	<i>Percent</i>
Non-Residential	9.5	1.1%
Commercial	0.9	
Hotel	2.1	
Office	4.4	
Public	0.7	
Institutional	0.9	
Utility	0.5	
Residential	28.9	3.3%
Single-Family Detached	11.4	
Single-Family Attached	6.0	
Multi-Family	11.5	
Open Space	846.5	95.7%
Active Open Space (parks, paseos)	12.1	
Buffer Zones (riparian corridors, fire breaks, wildlife corridors)	42.6	
Other Open Space (landscaped areas)	41.8	
Preserved Open Space	750	
Total	884.9	100%

Notes:

1. Acreage is approximate and does not include transportation/roads/ROW.
2. Percentages have been rounded to the nearest tenth.

Source: Dyett & Bhatia, 2022.

3.10.3 Impact Analysis

3.10.3.1 Significance Criteria

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

Criterion 1: Physically divide an established community; or

Criterion 2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.10.3.2 Methodology and Assumptions

Potential impacts resulting from implementation of the Proposed Plan were evaluated based on relevant information from the planning and policy documents listed in the Regulatory Setting section of this chapter and in consideration of the proposed land use designations, diagrams, and policies.

3.10.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address land use and planning:

Land Use

Goals

4-A Diverse Mix of Land Uses: Promote a diverse and integrated mix of residential development and employment uses, including research, creative services, education, office, retail, and small businesses, to create a vibrant, walkable community hub that provides economic and cultural opportunities for Sonoma Valley communities.

4-C Balanced Development: Prioritize residential uses as both an economic engine and catalyst for activity on the site, while balancing in non-residential uses incorporate uses supportive of the County's workforce and economic development

needs, community and institutional uses, and neighborhood-commercial uses to promote walkable lifestyles.

Policies

- 4-1 Promote a fine-grained mix of land uses within the Historic Core, with housing, hospitality, office, commercial, and community uses fronting on the Central Green to create a vibrant community center with activity throughout the day.
- 4-2 Locate the primary commercial uses around the Central Green, including eating and drinking establishments, retail, and other local- and visitor-serving commercial uses, in order to reinforce the Central Green as the heart of the site. Give attention to ground floor activation and transparency of final designs to ensure a permeable edge between building interiors and the public realm. Smaller commercial uses may be located in other areas of the campus to the extent that they directly serve the surrounding land uses.
- 4-3 Require completion of at least 10,000 square feet of retail and eating and drinking establishments and of at least 200 housing units west of Arnold Drive before beginning construction of any housing east of Arnold Drive.
- 4-4 Promote a mix of commercial uses that provides neighborhood services for residents, such as a market, bakery, coffee shop, to reduce the need for driving for everyday needs.
- 4-5 Collaborate with local organizations such as the Sonoma Valley Certified Farmer's Market, the Springs Community Farmer's Market, and other local farming organizations to hold a regular farmer's market in the Central Green, if feasible.
- 4-6 Ensure a diverse range of housing types to accommodate a variety of household sizes and life stage, by incorporating a wide range of unit sizes, ranging from co-living and studio apartments to three- or four-bedroom units, in order to accommodate various household sizes and life stage.

- 4-7 Generate a fine grain, mixed product street pattern by not permitting anyone builder to control or develop similar products on more than one block face.
- 4-9 Prohibit vacation rentals in residential land use areas as defined in Section 26-04-020 of the County Municipal Code. Short-term rentals are allowed as a support use for the institutional designation.
- 4-10 Any Hotel or hospitality use within the Planning Area must incorporate a community-serving component such as recreational facilities, food services, or performance spaces that are open to the public.
- 4-11 Allow for a flexible mix of uses within the Employment Center and Flex Zone designations, allowing development to respond to market conditions and the needs of potential users, in order to facilitate an economically feasible development scenario, and vibrant, synergistic business operating environment.
- 4-12 Prohibit auto-oriented establishments such as service and repair uses and drive-through establishments in the Planning Area.
- 4-13 Require all development at SDC to comply with additional standard conditions of project approval, as detailed in Appendix A. These conditions should be updated by County staff over time to reflect changing conditions, new information, and compliance with changing local and State laws and guidelines.

Mobility and Access

Goals

- 3-A Street network: Enhance the existing street network to create a walkable and pedestrian-friendly environment that provides connections both within the core campus and to surrounding communities and regional trail systems.
- 3-B Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.

3-C Complete Streets: Ensure the street network balances the needs of pedestrians, bicyclists, transit users, and drivers, prioritizing safety, comfort, and car-free transportation connections.

3-D Bicycle Connections: Improve bicycle connectivity within and beyond the SDC site and foster an accessible and safe street environment for bicyclists.

3-E Pedestrian Connections: Develop a network of sidewalks and pedestrian paths that promote greater and more direct connections within the campus, and opportunities for recreation and connections to nature.

3-F Transit Connections: Connect the site to the greater region through existing and future transit networks, with reliable, comfortable and safe public transit service that is responsive to the diverse needs of the residents, employees and visitors of the SDC area.

Policies

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network. Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destinations on the site such as the Central Green, baseball fields, community centers, and recreational amenities.
- 3-2 No gaps in the sidewalk network to maintain continuous pedestrian access through the Core Campus and into neighboring communities.
- 3-3 Maximize pedestrian access paseos and walkways to establish a fine-grained pedestrian network throughout the Core Campus, including wherever blocks are longer than 250 feet except where historic building configurations make connections infeasible.
- 3-4 Establish new pedestrian and bicycle corridors within the SDC to facilitate connectivity throughout the site and link to neighboring communities.

- 3-5 Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.
- 3-6 Prohibit new cul-de-sacs and interruptions of the street grid within the Planning Area to maximize multi-modal connectivity within SDC site.
- 3-7 Add two new intersections on Arnold Drive immediately north and south of the Main Entry Road to improve connectivity to the entire SDC site, as shown on Figure 3.1-1.
- 3-8 Design the street network to minimize cut-through vehicle traffic in residential areas.
- 3-9 Limit vehicle speeds within the Core Campus to 25 miles per hour or less through both posted speed limits and street design, in order to reduce the risk of collisions involving cars, bicycles, pedestrians, and local wildlife.
- 3-10 Seek opportunities to increase safe street crossing opportunities for local wildlife, including through overpasses or underpasses, interconnected tree canopies, densely- vegetated street landscaping, and narrow street widths.
- 3-12 Ensure that pedestrian and bicycle connections, alleyways, and other circulation routes internal to blocks are ADA compliant, have visible entries from streets, and are otherwise designed for pedestrian comfort.
- 3-13 Design Arnold Drive as a complete street, maintaining one vehicle travel lane in each direction and including bicycle facilities, quality pedestrian paths and sidewalks with appropriate seating and lighting, and transit facilities that provide shelter, lighting, and updated information for riders.

- 3-15 Establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen by removing barriers and installing appropriate signage and crossings.
- 3-16 Create a multi-use creek trail running parallel to Sonoma Creek that connects to a greater Glen Ellen-Eldridge community bikeway.
- 3-17 Provide bicycle parking as a street amenity throughout the SDC in appropriate locations such as the Historic Core and Central Green that is secure and, where possible, sheltered from inclement weather. A bikeshare service can also be considered to fulfill bicycling needs.
- 3-21 Improve bicycle and pedestrian connectivity to the open space by establishing new clearly-marked and easily accessible trail connections.
- 3-22 Work with Sonoma County Transit for expansion of transit service and a transit pass subsidy for new residents and employees.
 - a. Work with Sonoma County Transit to establish an express bus service to and from the cities of Sonoma and Santa Rosa that would utilize a new connector road between the SDC Core Campus and Highway 12; or
 - b. Work with Sonoma County Transit to extend the fare-free Route 32 shuttle from the City of Sonoma to the SDC site, maintaining the regular intercity Route 30 bus service as well.

3.10.3.4 Impacts

Impact 3.10-1 Development under the Proposed Plan would not physically divide an established community. *(No Impact)*

The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local bridge, that would affect mobility within an existing community or between a community and outlying area. However, physical division could also occur if large buildings were designed in such a way so as to create “walls” or oriented in such a way that would obstruct movement or circulation on commonly used routes.

The Proposed Plan does involve the construction of linear features or other barriers, such as roads, as described above. Proposed Goal 3-B aims to develop and support greater connectivity between SDC and the surrounding areas through constructing a road that serves as a direct connection to Highway 12. This added road would not remove any means of access, but instead would increase access throughout the Planning Area, as demonstrated in the Plan guiding principles (listed in Chapter 2: Project Description), which support the idea of ensuring that new development complements adjacent communities and makes the center a hub of community life in Sonoma Valley.

The Proposed Plan includes features specifically aimed at enhancing connectivity within the Planning Area and improving linkages between the larger Sonoma Valley. Such features include car-free circulation options within the site and transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, such as transit access, safe sidewalks and crossings, and regional bicycle routes. Two new intersections on Arnold Drive immediately north and south of the Main Entry Road will be added to improve connectivity to the entire SDC site. The Proposed Plan will also establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen in addition to the development of a multi-use creek trail running parallel to Sonoma Creek that connects to a greater Glen Ellen-Eldridge community bikeway. Further, multimodal neighborhood connections will be added to connect the Campus east and west of Arnold Drive. The addition of these intersections, as well as a complete network of sidewalks and the construction of pedestrian/bicycle corridors would enhance connectivity within the Planning Area, improve linkages with surrounding areas, welcome community use, and encourage social connections between people and neighborhoods (proposed policies 3-1, 3-2, 3-3, 3-4, 3-6, 3-7, 3-8, 3-9, 3-10, 3-12, 3-13, 3-15, 3-16, 3-17, 3-21, and 3-22).

Specifically, the Proposed Plan would ensure that new development provides a fine-grained street grid and pedestrian pathways that connect to the existing street grid. Proposed Policy 3-1 requires that streets be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destination on the site such as the main lawn, baseball fields, community centers, and recreational amenities. In addition, Goal 3-F aims to connect the site to the greater region through existing and future transit networks. By improving connectivity and land use consistency around the Core Campus and larger Sonoma Valley region, the Proposed Plan would make it easier for residents and employees to travel within the Planning Area and beyond.

Therefore, because the Proposed Plan would not introduce any physical barriers to the Planning Area and would generally improve connectivity for all users, including vehicles,

bicyclists, and pedestrians, it would result in no impact with respect to physically dividing an existing community.

Mitigation Measures

None required.

Impact 3.10-2 Development under the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (*Less than Significant*)

Regional Plans

Plan Bay Area 2050 is the regional blueprint for development and conservation in the nine-county San Francisco Bay Area. As discussed in the Regulatory Setting, Plan Bay Area 2050 promotes compact, mixed-use, infill development within walkable/bikeable neighborhoods close to public transit, jobs, schools, shopping, parks, recreation, and other amenities in order to reduce GHG emissions. Plan Bay Area 2050 was adopted in October 2021 and continues to support the goals of Plan Bay Area 2040 while identifying a path to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges.

Development under the Proposed Plan is designed to promote environmental sustainability. The Core Campus is envisioned as a vibrant mixed-use, compact, pedestrian-scaled district, while remaining well connected to the larger Sonoma Valley. In order to reduce GHG emissions, development will promote car-free circulation options within the site and promote transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, including through transit access, safe sidewalks and crossings, and regional bicycle routes. As described in the Biological Resources Chapter, the campus will be surrounded by a vast network of permanently preserved open spaces to protect natural resources, foster environmental stewardship, and maintain and enhance the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. Further, buildings and infrastructure will be designed efficiently and sustainably, conserving water and creating opportunities for water reuse and recharge. Proposed Plan policies specific to the Core subarea would allow for a mix of compact commercial and residential uses as well as community gathering spaces which are well connected to the Sonoma Valley region in order to support this vision and the overall intent of Plan Bay Area 2050 (policies 4-1, 4-2, 4-3, 4-4, 4-5, 4-6, 4-9, 4-10, and 3-22).

Local Plans and Regulations

Local land use plans and regulations that cover the Planning Area include the Sonoma County General Plan 2020 and the Sonoma County Code, although applicability has been limited in the past due to the State's ownership and use of the Project Area. Land use policies and designations of the Proposed Plan are based on existing local policies and land use designations, with some updates to reflect new uses envisioned for the Core Campus area. As such, the Proposed Plan's policies and designations are generally consistent with the General Plan's land use policies, which would be further reinforced through approval of the Specific Plan and related General Plan Amendment. The SDC site lies within a context of primarily rural residential and land-intensive agriculture land uses, as designated by the Sonoma County General Plan. The Land Use Element of the General Plan includes goals and policies that seek to concentrate future growth in existing urban areas to maintain separation with open space, support both rural and urban residential environments, use environmental suitability criteria to guide location of development, and protect scenic and natural resources and agricultural lands. Except for most of the Core Campus area, the SDC site is located within a local voter-approved Community Separator overlay that preserves lands with very low densities between communities. The Community Separators help to achieve the County's General Plan Land Use Element goal to maintain natural character and low intensities of development in open spaces between cities and communities. The Open Space and Resource Conservation Element provides a policy framework to protect and enhance scenic resources, landscapes and corridors; preserve "biotic" resources such as sensitive habitat areas and riparian corridors; conserve agricultural soil and lands; explore energy conservation and renewable energy production; expand outdoor recreation opportunities such as bikeways and trails; and protect archaeological, cultural, and historic resources.

The Proposed Plan includes multiple goals and policies that would support environmental protection objectives of the General Plan. The Proposed Plan includes multiple policies that encourage sustainable development principles, such as mixed-use, compact development and pedestrian- and bicycle-friendly streets within the Planning Area. The Proposed Plan would not facilitate new development in the 750 acres of preserved open space, which is located outside of Core Campus boundaries. Thus, the Proposed Plan focuses on infill development and development of underutilized and vacant areas within the Core Campus in order to preserve scenic and biotic resources and avoid development within Community Separators. Further, the Proposed Plan would provide for a net increase in jobs and housing units in the Planning Area in a mixed-use configuration intended to reduce reliance on automobiles. All residential uses may be eligible for density bonuses

in accordance with State law and as outlined in Sonoma County General Plan and Zoning Code. The Proposed Plan also requires the County to coordinate with local and regional transit providers to increase access to transit options (proposed Policy 3-22).

Further, the Proposed Plan retains the overall land use framework of the General Plan, with some targeted changes to promote economic development and appropriate residential and commercial infill development in the Core Campus. The Proposed Plan's land use designations (see **Figure 3.10-3**) are generally consistent with those in the General Plan, although they differ in some instances. In these limited exceptions, the Proposed Plan's designations differ from the General Plan in order to more accurately reflect either the existing zoning or current use on the property. While the Proposed Plan does include some targeted changes to land use designations, these changes are generally consistent with the General Plan vision of supporting transit-oriented residential and commercial development, encouraging new retail opportunities, and preserving open space. A General Plan amendment with a land use map amendment will be approved concurrently with the SDC Specific Plan that establishes the foundation for the Specific Plan's vision, goals, and policies, and recognizes SDC's development potential. Maintaining "vertical consistency" between the General Plan and Specific Plan is required by State law.

While the General Plan establishes a policy framework, the Zoning Code prescribes standards, rules, and procedures for development. The Zoning Code translates SDC Specific Plan policies into specific use regulations, development standards, and performance criteria that govern development on individual properties. The SDC Specific Plan provides policies for new and modified land use districts and overlays, use and development standards, and density and intensity limits, consistent with the land use classifications and development standards included in Chapter 4, Land Use and Development. These policies will be incorporated into the Zoning Code and will be adopted concurrently with the SDC Specific Plan.

Therefore, given that the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency as discussed above, there would be less than significant impact from implementation of the Proposed Plan related to conflicts with local plans and regulations.

Mitigation Measures

None required.

3.11 Noise

3.11 Noise

This section assesses potential environmental impacts related to noise from future development under the Proposed Plan, including those associated with noise standards, groundborne vibration, ambient noise levels, and airport noise. The section describes the characteristics, measurement, and physiological effects of noise and existing sources of noise in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were two comments in response to the Notice of Preparation (NOP) pertaining to topics covered in this section. Specifically, one community member expressed concern about the impacts of construction and operational noise on the wildlife corridor. Another community member about the general operational noise resulting from the Proposed Plan. These comments regarding construction and operational noise impacts are addressed in the Impact Analysis below.

3.11.1 Regulatory Setting

3.11.1.1 Federal Regulations

Environmental Protection Agency

Under the authority of the Noise Control Act of 1972, the U.S. Environmental Protection Agency (EPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, EPA issued guidance levels for the protection of public health and welfare in residential land use areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA; these are levels at which individuals would not experience annoyance or activity interference. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility.

Table 3.11-1: Groundborne Vibration Impact Criteria

<i>Land Use Category</i>	<i>Groundborne Vibration Impact Level (VdB)</i>		
	<i>Frequent Events^a</i>	<i>Occasional Events^b</i>	<i>Infrequent Events^c</i>
Category 1: Buildings where vibration would interfere with interior operations (research facilities, hospitals with vibration sensitive equipment)	65 ^d	65 ^d	65 ^d
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses (schools, churches)	75	78	83

Notes:

- Frequent Events* is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
- Occasional Events* is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this number of operations.
- Infrequent Events* is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
- This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research may require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air-conditioning systems and stiffened floors.

N/A = not applicable

*Source: California Department of Transportation 2013b.**Occupational Safety and Health Administration*

Under the Occupational Safety and Health Act of 1970 (29 United States Code Section 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are

exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.

Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development's environmental criteria and standards are presented in 24 Code of Federal Regulations (CFR) Part 51. New construction proposed in high noise areas (exceeding 65 dBA DNL) must incorporate noise attenuation features to maintain acceptable interior noise levels. A goal of 45 dBA DNL is set forth for interior noise levels and attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation to achieve an interior level of 45 dBA DNL or less if the exterior level is 65 dBA DNL or less. Approvals in a "normally unacceptable noise zone" (exceeding 65 dB, but not exceeding 75 dB) require a minimum of 5 dB of additional noise attenuation for buildings having noise sensitive uses if the DNL is greater than 65 dB, but does not exceed 70 dB, or a minimum of 10 dB of additional noise attenuation, if the day-night average is greater than 70 dB but does not exceed 75 dB.

Federal Highway Administration

An assessment of noise and consideration of noise abatement per Title 23 of the CFR, Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise," is required for proposed federal or federal-aid highway construction projects on a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. The FHWA considers noise abatement for sensitive receivers, such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, places of worship, libraries, and hospitals when "worst-hour" noise levels approach or exceed 67 dBA Leq. The California Department of Transportation (Caltrans) has further defined "approach" as meaning to be within 1 dB of the Noise Abatement Criteria (NAC).

Federal Railroad Noise Emissions Compliance Regulation

FTA's Office of Safety is responsible for enforcing the Railroad Noise Emissions Compliance Regulation that sets maximum sound levels from railroad equipment and for regulating locomotive horns.

The FTA has issued a manual for assessing transit-related vibration and noise impacts, which was most recently updated in 2018. The *Transit Noise and Vibration Impact Assessment* contains criteria and procedures for use in analyzing the potential noise and

vibration impacts of various types of high-speed fixed guideway transportation systems, including freight, passenger, and high-speed rail. The manual also contains standard vibration control and mitigation measures, to be used when impacts would be significant, based on the level and frequency of vibrations, surrounding land uses, and presence of sensitive receptors.

3.11.1.2 State Regulations

State of California Noise Standards

The State of California does not have statewide standards for environmental noise, but the Governor's Office of Planning and Research (OPR) has established general plan guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land use types is categorized into four general levels: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be "normally acceptable" for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be "clearly unacceptable."

In addition, California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) specifically requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community and analyze and quantify current and projected noise levels; (2) show noise contours for noise sources stated in CNEL; (3) use noise contours as a guide for establishing a pattern of land uses; and (4) implement measures and possible solutions that address existing and foreseeable noise problems.

The State of California has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, Part 2, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are enforced by local jurisdictions through the building permit application process.

3.11.1.3 Local Regulations

Sonoma County General Plan 2020

The County sets noise standards in the Noise Element of the Sonoma County General Plan 2020. Noise level performance standards are shown in **Table 3.11-2** and are to be applied as performance standards for noise producing land uses which may affect noise sensitive land uses and new noise sensitive land uses proposed near noise generating land uses. The General Plan designates areas within Sonoma County as noise impacted if they are exposed to existing or projected exterior noise levels exceeding 60 dB L_{dn} , 60 dB CNEL, or the performance standards of **Table 3.11-2**.

Table 3.11-2 : Maximum Allowable Exterior Noise Exposures for Non-transportation Noise Sources

Hourly Noise Metric ¹ , dBA	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L_{50} (30 minutes in any hour)	50	45
L_{25} (15 minutes in any hour)	55	50
L_{08} (4 minutes 48 seconds in any hour)	60	55
L_{02} (72 seconds in any hour)	65	60

¹The sound level exceeded n% of the time in any hour. For example, the L_{50} is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level.

Source: Sonoma County General Plan 2020, 2008.

The General Plan includes the following goals and policies associated with noise and vibration:

Goal NE-1: Protect people from the adverse effects of exposure to excessive noise and to achieve an environment in which people and land uses may function without impairment from noise.

Policy NE-1a: Designate areas within Sonoma County as noise impacted if they are exposed to existing or projected exterior noise levels exceeding 60 dB L_{dn} , 60 dB CNEL, or the performance standards of Table NE-2.

Policy NE-1b: Avoid noise sensitive land use development in noise impacted areas unless effective measures are included to reduce noise levels. For noise due to traffic on public roadways, railroads and airports, reduce exterior noise to 60 dB L_{dn} or less in outdoor activity areas and interior noise levels to 45 dB L_{dn} or less with windows and doors closed. Where it is not possible to meet this 60 dB L_{dn} standard using a practical application of the best available noise reduction technology, a maximum level of up to 65 dB L_{dn} may be allowed but interior noise level shall be maintained so as not to exceed 45 dB L_{dn} . For uses such as Single Room Occupancy, Work-Live, Mixed Use Projects, and Caretaker Units, exterior noise levels above 65 dB L_{dn} or the Table NE-2 standards may be considered if the interior standards of 45 dB L_{dn} can be met. For schools, libraries, offices, and other similar uses, the interior noise standard shall be 45 dB L_{eq} in the worst case hour when the building is in use.

Policy NE-1c: Control non-transportation related noise from new projects. The total noise level resulting from new sources shall not exceed the standards in Table NE-2 as measured at the exterior property line of any adjacent noise sensitive land use. Limit exceptions to the following:

- 1) If the ambient noise level exceeds the standard in Table NE-2, adjust the standard to equal the ambient level, up to a maximum of 5 dBA above the standard, provided that no measurable increase (i.e. +/- 1.5 dBA) shall be allowed
- 2) Reduce the applicable standards in Table NE-2 by five dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises, such as pile drivers and dog barking at kennels
- 3) Reduce the applicable standards in Table NE-2 by 5 decibels if the proposed use exceeds the ambient level by 10 or more decibels
- 4) For short term noise sources which are permitted to operate no more than six days per year, such as concerts or race events, the allowable noise exposures shown in Table NE2 may be increased by 5 dB. These events shall be subject to a noise management plan including provisions for maximum noise level limits, noise monitoring, complaint response and allowable hours of operation. The plan shall address potential cumulative noise impacts from all events in the area.
- 5) Noise levels may be measured at the location of the outdoor activity area of the noise sensitive land use, instead of the exterior property line of the adjacent noise sensitive land use where:

- a. the property on which the noise sensitive use is located has already been substantially developed pursuant to its existing zoning, and
- b. there is available open land on those noise sensitive lands for noise attenuation.

This exception may not be used on vacant properties which are zoned to allow noise sensitive uses.

Policy NE-1d: Consider requiring an acoustical analysis prior to approval of any discretionary project involving a potentially significant new noise source or a noise sensitive land use in a noise impacted area. The analysis shall:

- 1) Be the responsibility of the applicant,
- 2) Be prepared by a qualified acoustical consultant,
- 3) Include noise measurements adequate to describe local conditions,
- 4) Include estimated noise levels in terms of L_{dn} and/or the standards of Table NE-2 for existing and projected future (20 years hence) conditions, based on accepted engineering data and practices, with a comparison made to the adopted policies of the Noise Element. Where low frequency noise (ex: blasting) would be generated, include assessment of noise levels and vibration using the most appropriate measuring technique to adequately characterize the impact,
- 5) Recommend measures to achieve compliance with this Element. Where the noise source consists of intermittent single events, address the effects of maximum noise levels on sleep disturbance,
- 6) Include estimates of noise exposure after these measures have been implemented, and
- 7) Be reviewed by the Permit and Resource Management Department (PRMD) and found to be in compliance with PRMD guidelines for the preparation of acoustical analyses.

Policy NE-1e: Continue to follow building permit procedures to ensure that requirements based upon the acoustical analysis are implemented.

Policy NE-1f: Require development projects that do not include or affect residential uses or other noise sensitive uses to include noise mitigation measures where necessary to maintain noise levels compatible with activities planned for the project site and vicinity.

Policy NE-1g: Enforce the State Noise Insulation Standards (Title 24, Part 2, California Administrative Code and Appendix Chapter 12 of the California Building Code) concerning new multiple occupancy dwellings.

Policy NE-1h: Prepare and consider a noise control ordinance to regulate existing noise sources as follows:

- 1) The draft ordinance shall be prepared by County Counsel with the assistance of the Public Health Department, the Sheriff's Department, and PRMD.
- 2) Consider occupational noise exposure guidelines and ordinances of other counties.
- 3) The intent of the ordinance shall be to protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.
- 4) Excessive levels of noise shall be defined as levels which exceed the standards of Table NE-2 and other policies of the Noise Element.
- 5) In unincorporated areas of the County, it shall be unlawful to create noise which exceeds the standards of Table NE-2, as measured at the exterior of any noise sensitive use.
- 6) The noise ordinance may contain maximum allowable levels of interior noise created by exterior sources.
- 7) The ordinance may exempt or modify noise requirements for agricultural uses, construction activities, school functions, property maintenance, heating and cooling equipment, utility facilities, waste collection and other sources.
- 8) The ordinance shall include responsibilities and procedures for enforcement, abatement and variances.

Policy NE-1i: County equipment and vehicles shall comply with adopted noise level performance standards consistent with the best available noise reduction technology.

Policy NE-1j: Encourage the California Highway Patrol to actively enforce sections of the California Vehicle Code relating to adequate vehicle mufflers and modified exhaust systems.

Policy NE-1k: Incorporate into the Development Code the standards and policies of the Noise Element, where appropriate.

Policy NE-1I: Review and update the Noise Element to ensure that noise information and policies are consistent with regulations and conditions within the community.

Policy NE-1m: Consider requiring the monitoring of noise levels for discretionary projects to determine if noise levels are in compliance with required standards. The cost of monitoring shall be the responsibility of the applicant.

Sonoma County Code

Section 26-88-123, Mixed Use Developments, of the Sonoma County Code provides standards for mixed use developments and implements the General Plan provisions related to mixed use. One such provision is the regulation of noise that occurs during and post-construction on the site. The code states that noise generated by mixed-use projects shall be consistent with the General Plan Noise Element. In addition, one such criteria for approval of a mixed-use development are to ensure that residential and commercial uses shall be integrated in such a manner as to address noise, hazardous materials, and other land use compatibility issues on site as well as off-site.

3.11.2 Environmental Setting

3.11.2.1 Physical Setting

Noise Characteristics and Measurement

Because of the technical nature of noise and vibration impacts, a brief overview of basic noise principals and descriptors is provided below.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude, with audible frequencies of the sound spectrum ranging from 20 to 20,000 Hz. The typical human ear is not equally sensitive to this frequency range. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A weighted decibels (dBA), which is typically applied to community noise measurements. Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Table 3.11-3**.

An individual's noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time. However, noise levels rarely persist at that level over a long period of time. Rather, community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which together constitute a relatively stable background noise exposure, with many of the individual contributors being unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding to the addition and subtraction of distant noise sources, such as changes in traffic volume. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

Table 3.11-3: Typical Noise Levels in the Environment

<i>Source of Noise</i>	<i>A-Weighted Sound Pressure Level in Decibels</i>
Civil Defense Siren (100 feet in distance between source and listener)	130
Jet Takeoff (200 feet in distance between source and listener)	129
Riveting Machine	115
Rock Music Band	110
Piledriver (50 feet in distance between source and listener)	105
Ambulance Siren (100 feet in distance between source and listener)	100
Boiler Room	90
Printing Press Plant	89
Freight Cars (50 feet in distance between source and listener)	88
Garbage Disposal in the Home	85
Pneumatic Drill (50 feet in distance between source and listener)	80
Inside Sports Car: 50 mph	79
Vacuum Cleaner (10 feet in distance between source and listener)	69
Data Processing Center	65
Department Store	61
Speech (1 foot in distance between source and listener)	60
Auto Traffic near Freeway	58
Typical Minimum Daytime Levels – Residential Areas	55
Private Business Office	52
Large Transformer (200 feet in distance between source and listener)	49
Light Traffic (100 feet in distance between source and listener)	48
Average Residence	42

Table 3.11-3: Typical Noise Levels in the Environment

Source of Noise	A-Weighted Sound Pressure Level in Decibels
Typical Minimum Nighttime Levels – Residential Areas	41
Soft Whisper	30
Rustling Leaves	21
Recording Studio	20
Mosquito	10

Note: 10 decibels is the Threshold of Hearing and 120 decibels is the Threshold of Pain.

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the noise exposure to be measured over periods of time to legitimately characterize an existing community noise environment. The following noise descriptors are used to characterize environmental noise levels over time, which are applicable to the Proposed Plan.

- L_{eq} : The equivalent sound level over a specified period of time, typically, one hour (L_{eq}). The L_{eq} may also be referred to as the average sound level.
- L_{max} : The maximum, instantaneous noise level experienced during a given period of time.
- L_{min} : The minimum, instantaneous noise level experienced during a given period of time.
- L_x : The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.
- L_{dn} : The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).
- **CNEL**: The Community Noise Equivalent Level (CNEL) is the average A-weighted noise level during a 24-hour day that includes an addition of 5 dB to measured noise levels between the hours of 7:00 a.m. to 10:00 p.m. and an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Physiological Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- 1) Subjective effects (e.g., dissatisfaction, annoyance)
- 2) Interference effects (e.g., communication, sleep, and learning interference)
- 3) Physiological effects (e.g., startle response)
- 4) Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep.⁸⁰

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new

⁸⁰ California Department of Transportation. September 2013. Transportation and Construction Vibration Guidance Manual. Available: <https://www.contracosta.ca.gov/DocumentCenter/View/34120/Caltrans-2013-construction-vibration-PDF>. Accessed : June 7, 2022.

noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur:⁸¹

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference;
- A change in ambient noise levels of 5 dBA is considered to be a readily perceivable difference; and
- A change in ambient noise levels of 10 dBA is subjectively heard as a doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and ten sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source.⁸²

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance at a rate that depends on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between six dBA for acoustically “hard” sites and 7.5 dBA for “soft” sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical

⁸¹ Ibid.

⁸² Ibid.

surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet, etc.). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, increase the ground attenuation value by 1.5 dBA (per doubling distance).⁸³

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as “line” sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.” Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.⁸⁴ Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances (e.g., more than 500 feet). Other factors such as air temperature, humidity, and turbulence can also have significant effects on noise levels.⁸⁵

Noise-Sensitive Receptors

Many land uses are considered sensitive to noise. Noise-sensitive receptors are land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise, such as residential dwellings, transient lodging, dormitories, hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Special Status species and their

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

habitat may also be considered noise sensitive. Existing noise-sensitive receptors within the Planning Area include Special Status species and their habitat.

Existing Noise Conditions and Sources

Since the closure of the SDC facility, the Planning Area does not have major stationary sources of noise, such as large factories. The predominant source of noise in the Planning Area, as in most communities, is motor vehicles on roadways. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to noise-sensitive uses. Roadways with the highest traffic volumes and speeds produce the highest noise levels.

Within and in the vicinity of the Planning Area, Sonoma County Transit (SCT) provides fixed route bus service in Sonoma County. Route 30 provides regional service to the project site and surrounding communities including Santa Rosa, Oakmont Village, Kenwood, Glen Ellen, Agua Caliente, and Sonoma. Route 30 stops on the west and east sides of Arnold Drive at Harney and Redwood; both stops are located on the campus. As of September 2020, Route 30 operates Monday through Friday with approximately 90-minute headways between 5:55 a.m. and 9:30 p.m. Weekend service operates with approximately four-hour headways between 7:25 a.m. and 7:30 p.m.

Route 34 provides regional service to the project site and surrounding communities including Santa Rosa, Kenwood, Glen Ellen, Agua Caliente, Boyes Hot Springs, and Sonoma. Route 34 stops on the west and east sides of SR 12 at Madrone Road. Route 34 operates Monday through Friday, with one run during the morning commute period and one during the evening commute period.

Similarly, Route 38 provides regional service to the project site and surrounding communities including Kenwood, Glen Ellen, Agua Caliente, Boyes Hot Springs, El Verano, Sonoma, and San Rafael. Route 38 operates Monday through Friday and provides one run during the morning commute period and one during the evening commute period. It should be noted that the schedules described above are considered the regularly scheduled service hours. As such, they are schedules unaltered by the interruptions due to the COVID-19 pandemic.

Ground Vibration

Characterization and Measurement

While sound is the transmission of energy through the air, groundborne vibration is the transmission of energy through the ground or other solid medium and is perceived by

humans as motion (of the ground, floor, or building). Vibrations can also generate noise by transmitting energy through the air.

Groundborne vibration can be quantified in two main ways. One commonly used descriptor is PPV, or Peak Particle Velocity. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV). This type of vibration will be discussed in more detail below under Construction Vibration.

Groundborne vibration can also be quantified by the root-mean-square (RMS) velocity amplitudes, which can be useful for assessing human annoyance. The RMS amplitude is expressed in terms of the velocity level in decibel units (VdB). The background vibration velocity level in residential areas is usually around 50 VdB or lower. The vibration velocity level threshold of perception for humans is approximately 65 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Table 3.11-4 summarizes the typical groundborne vibration velocity levels and average human response to vibration that may be anticipated when a person is at rest in quiet surroundings. If the person is engaged in any type of physical activity, vibration tolerance increases considerably. The duration of the event has an effect on human response, as does its daily frequency of occurrence. Generally, as the duration and frequency of occurrence increase, the potential for adverse human response increases.

Groundborne noise is a secondary component of groundborne vibration. When a building structure vibrates, noise is radiated into the interior of the building. Typically, this is a low-frequency sound that can be perceived as a low rumble. The magnitude of the sound depends on the frequency characteristic of the vibration and the manner in which the room surfaces in the building radiate sound. Groundborne noise is quantified by the A-weighted sound level inside the building. The sound level accompanying vibration is generally 25 to 40 dBA lower than the vibration velocity level in VdB. Groundborne vibration levels of 65 VdB can result in groundborne noise levels of up to 40 dBA, which can disturb sleep.

Groundborne vibration levels of 85 VdB can result in groundborne noise levels of up to 60 dBA, which can be annoying to daytime noise-sensitive land uses such as schools.⁸⁶

Construction Vibration

As described above, vibration resulting from the operation of heavy construction equipment is often reported in PPV, which is the rate or velocity, in inches per second, at which rock and soil particles oscillate as seismic waves travel outward from a vibration source.

The operation of heavy construction equipment, particularly pile driving equipment and other impact devices (e.g., pavement breakers), creates seismic waves that radiate along the surface of and downward into the ground. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Variations in geology and distance result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes decrease with increasing distance.

⁸⁶ Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed: May 16, 2022.

Table 3.11-4: Typical Levels of Groundborne Vibration

<i>Human or Structural Response</i>	<i>Vibration Velocity Level (VdB)</i>	<i>Typical Sources (50 feet from source)</i>
Threshold for minor cosmetic damage to fragile buildings	—100—	Blasting from construction project Bulldozer or heavy-tracked construction equipment
Difficulty in reading computer screen	—90—	Upper range of commuter rail
Threshold for residential annoyance for occasional events (e.g., commuter rail)	—80—	Upper range of rapid transit
Threshold for residential annoyance for frequent events (e.g., rapid transit)	—70—	Typical commuter rail Bus or truck over bump Typical rapid transit
Approximate threshold for human perception of vibration; limit for vibration-sensitive equipment	—60—	Typical bus or truck on public road
	—50—	Typical background vibration

Source: Federal Transit Administration, 2006.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil or rock conditions through which the vibration is traveling. The following equation is used to estimate the vibration level at a given distance for typical soil conditions.⁸⁷ PPV_{ref} is the reference PPV at 25 feet.

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

⁸⁷ Ibid.

Table 3.11-5 summarizes typical vibration levels generated by construction equipment at the reference distance of 25 feet and other distances as determined using the attenuation equation above.⁸⁸

Tables 3.11-6 and 3.11-7 summarize guidelines developed by the California Department of Transportation (Caltrans) for damage and annoyance potential from transient and continuous vibration that is usually associated with construction activity. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include: impact pile drivers, blasting, drop balls, “pogo stick” compactors, and crack-and-seat equipment.

Table 3.11-5: Vibration Source Levels for Construction Equipment

<i>Equipment</i>	<i>PPV at 25 Feet</i>	<i>PPV at 50 Feet</i>	<i>PPV at 75 Feet</i>	<i>PPV at 100 Feet</i>	<i>PPV at 175 Feet</i>
Pile driver (impact) ^a	0.65	0.230	0.125	0.081	0.035
Pile driver (sonic/vibratory) ^a	0.65	0.230	0.125	0.081	0.035
Hoe ram or large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Loaded trucks	0.076	0.0269	0.0146	0.0095	0.0041
Jackhammer	0.035	0.0124	0.0067	0.0044	0.0019
Small bulldozer	0.003	0.0011	0.0006	0.0004	0.0002

Note:

a. The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2013b) is used as the source for vibration from a vibratory pile driver.

Source: Federal Transit Administration, 2006.

⁸⁸ Ibid.

Table 3.11-6: Vibration Damage Potential Threshold Criteria Guidelines

<i>Structure and Condition</i>	<i>Maximum PPV (inches/second)</i>	
	<i>Transient Sources</i>	<i>Continuous/Frequent Intermittent Sources</i>
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes:

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity.

Source: California Department of Transportation 2013b.

Table 3.11-7: Vibration Annoyance Potential Criteria Guidelines

<i>Human Response</i>	<i>Maximum PPV (inches/second)</i>	
	<i>Transient Sources</i>	<i>Continuous/Frequent Intermittent Sources</i>

Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Notes:

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity.

Source: California Department of Transportation 2013b.

3.11.3 Impact Analysis

3.11.3.1 Significance Criteria

To determine whether a project would result in a significant noise impact, the County's Guidelines for the Preparation of Noise Analysis states that a noise study must answer the CEQA Initial Study checklist questions. This requires consideration of whether a project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

Since preparation of the County's Guidelines for the Preparation of Noise Analysis, the CEQA Initial Study checklist questions for noise were revised for conciseness by combining the above into three thresholds. The issues to analyze and the thresholds are substantively the same. The revised questions require consideration of whether a project would result in:

- **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;**
- **Generation of excessive groundborne vibration or groundborne noise levels; or**
- **For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.**

3.11.3.2 Methodology and Assumptions

Per the CEQA Guidelines Appendix G Initial Study checklist questions and the thresholds described above, noise impacts would normally be considered significant if:

Construction Noise

- 1) Construction noise occurs between 10 p.m. to 7 a.m. and exceeds the noise limits in **Table 3.12-2**.

Operational Noise

- 1) Operational noise exceeds the noise limits in **Table 3.12-2**.
- 2) For traffic-related noise, impacts would be considered significant if the project would result in exposure of sensitive receptors to an unacceptable increase in noise levels. For purposes of this analysis, a significant impact would occur if

project-related traffic increases the ambient noise environment of noise-sensitive locations by 3 dBA or more if the locations are subject to noise levels in excess of 60 CNEL for exterior areas or 45 CNEL for interior noise levels, or by 5 dBA or more if the locations are not subject to noise levels in excess of the aforementioned standards.

Vibration

- 1) For human receivers, the vibration level threshold to determine significance is 0.24 in/sec PPV.⁸⁹ For structures, based on AASHTO recommendations, the vibration level thresholds to determine significance is 0.4 in/sec PPV and 0.08 in/sec PPV for historic buildings.

The following environmental impact analysis is based on noise modeling performed by Charles M. Salter Associates, informed by traffic modeling prepared by W-Trans for the Proposed Plan's study network, including data on traffic volumes, as well as on land use and roadway network changes assumed as part of the Proposed Plan.

3.11.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address noise:

Open Space and Resources and Hazards

Goals

- 2-G Natural and Human-Caused Hazards: Minimize the potential impacts of hazards at the site and to the surrounding community, such as excessive noise, poor air quality, seismic activity, and flooding.

Mobility and Access

Policies

⁸⁹ California Department of Transportation. September 2013. Transportation and Construction Vibration Guidance Manual. Available: <https://www.contracosta.ca.gov/DocumentCenter/View/34120/Caltrans-2013-construction-vibration-PDF>. Accessed : June 7, 2022.

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network. Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destinations on the site such as the Central Green, baseball fields, community centers, and recreational amenities.
- 3-8 Design the street network to minimize cut-through vehicle traffic in residential areas.
- 3-9 Limit vehicle speeds within the Core Campus to 25 miles per hour or less through both posted speed limits and street design, in order to reduce the risk of collisions involving cars, bicycles, pedestrians, and local wildlife.

Community Design and Sustainability

Policies

- 5-51 Design utilities buildings to shield adjacent districts from visual clutter, noise, and odors by using screening, enclosed buildings, and landscaped buffers.

Standard Conditions of Approval

Policies

- HAZ-1 Ensure If construction activities occur between the hours of 10 p.m. to 7 a.m., within 0.5 mile of a noise-sensitive receiver (residences, schools, day care facilities, hospitals, nursing homes, long term medical or mental care facilities, places of worship, libraries and museums, transient lodging, and office building interiors), the following measures shall be implemented:
 - i. Nighttime construction noise shall not exceed the noise level standards shown in Table NE-2 of the Sonoma County General Plan 2020 when conducted between the hours of 10 p.m. to 7 a.m.
 - ii. The project applicant shall retain a qualified consultant to prepare a project-specific construction noise impact analysis.

- iii. The analysis of nighttime construction activities shall be completed in accordance with the County's Guidelines for the Preparation of Noise Analysis. The analysis shall consider the type of construction equipment to be used and the potential noise levels at noise-sensitive receivers located 0.5 miles of a noise-sensitive receiver.
- iv. Provided the nighttime construction noise analysis determines that nighttime noise levels will not exceed 45 dBA L50, 50 dBA L25, 55 dBA L08, or 60 dBA L02 between the hours of 10 p.m. to 7 a.m., construction may proceed without additional measures.
- v. Provided the nighttime construction noise analysis determines that nighttime noise levels would exceed the nighttime standards shown in Table NE-2, additional measures shall be implemented to reduce noise levels below the standard. These measures may include, but not be limited to, use of temporary noise barriers or performing activities at a further distance from the noise-sensitive land use.

HAZ-2 If construction activities using pile driving or blasting occurs during construction, the following measures shall be implemented:

- i. Daytime (7 a.m. to 10 p.m.):
 - a. Use of a pile driver shall not occur within 160 feet of a vibration-sensitive receiver.
 - b. Daytime pile driving or blasting vibration shall not exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV and of 0.08 in/sec PPV for all preserved and reused buildings within the Planning Area.
- ii. Nighttime (10 p.m. to 7 a.m.):
 - a. Nighttime pile driving or blasting vibration shall not exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV and of 0.08 in/sec PPV for all preserved and reused buildings within the Planning Area within 0.25 mile of the vibration-sensitive receivers.

- b. The project applicant shall retain a qualified consultant to prepare a project-specific construction vibration impact analysis.
- c. The analysis of nighttime blasting vibration shall be completed in accordance with industry standards. The analysis shall consider the blasting plan and potential vibration levels at vibration-sensitive receivers located within 0.25 mile of the vibration-sensitive receivers.
- d. Provided the analysis concludes vibration levels do not exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV and of 0.08 in/sec PPV for all preserved and reused buildings within the Planning Area, pile driving or blasting may proceed without additional measures.
- e. Provided the analysis concludes that vibration levels exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV and of 0.08 in/sec PPV for all preserved and reused buildings within the Planning Area, additional measures shall be implemented to reduce vibration levels below the standard. These measures may include, but not be limited to, pre-drilling pile holes, utilizing a vibratory pile driver, performing pile driving at a further distance from the noise-sensitive land use, or using blasting mats to reduce vibration levels below the threshold.

3.11.3.4 Impacts

Impact 3.11-1 Implementation of the Proposed Plan would not generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the Planning Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant*)

Construction

Development facilitated by the Proposed Plan may be constructed near areas with existing noise-sensitive receivers, such as Special Status species and their habitat. Construction activities that occur between 7 a.m. to 10 p.m. would be required to comply with County standards, and therefore if construction took place during these hours, general construction activity noise levels would be less than significant.

Construction that occurs outside of the 7 a.m. to 10 p.m. allowed hours would be subject to the Sonoma County General Plan 2020 noise standards listed in **Table 3.11-2**. Construction equipment could be located as close as 25 feet to the nearest noise-sensitive receivers but would typically be located at an average distance farther away due to the nature of construction (i.e., each piece of construction equipment would work in different locations throughout the day and average a farther distance). It is conservatively assumed that the construction equipment would operate on average, 50 feet from the nearest noise-sensitive receivers. **Table 3.11-8** illustrates typical noise levels associated with construction equipment at a distance of 50 feet. At a distance of 50 feet, all construction equipment listed in **Table 3.11-8**, excluding the saw, would generate a noise level at or above 80 dBA L_{eq} . The distance at which these pieces of equipment would generate 45 dBA L_{50} would be at a minimum of 2,800 feet. General construction activities that occur within 2,800 feet of existing noise-sensitive land uses between 10 p.m. to 7 a.m., would exceed the 45 dBA L_{50} County noise limit. Therefore, construction activities from development facilitated by the Proposed Plan could exceed the 45 dBA L_{50} County noise limit and could result in a substantial temporary or periodic increase in ambient noise levels in the Planning Area vicinity above levels existing without the project. Noise impacts from general construction activities during the nighttime hours would have a potentially significant impact.

Table 3.11-8: Typical Noise Levels for Construction Equipment

<i>Estimated Noise Levels at Nearest Sensitive Receptors (dBA L_{eq})</i>			
<i>Equipment</i>	<i>25 feet</i>	<i>50 feet</i>	<i>100 feet</i>
Air Compressor	86	80	74
Backhoe	86	80	74
Concrete Mixer	91	85	79
Dozer	91	85	79
Grader	91	85	79
Jack Hammer	94	88	82
Loader	86	80	74
Paver	91	85	79
Pile-drive (Impact)	107	101	95
Pile-driver (Sonic)	101	95	89
Roller	91	85	79
Saw	82	76	70
Scarified	89	83	77
Scraper	91	85	79

Truck	90	84	78
-------	----	----	----

Source: FTA, 2018.

Use of impact devices, such as an impact pile driver, may be used during construction facilitated by the Proposed Plan. Construction activities that occur between 7 a.m. to 10 p.m. would be consistent with County standards, and therefore if construction took place during these hours, impact-related construction activity noise levels would be less than significant.

Impact-related construction that occurs outside of the 7 a.m. to 10 p.m. allowed hours would be subject to the County noise standards listed in **Table 3.11-2**. If these activities did occur, they could potentially occur within closer distances to noise-sensitive land uses as general construction activities described above. This is because impact devices are typically not mobile equipment and would be stationed at one area of a construction site throughout a typical construction day. Given typical setbacks and equipment size, a conservative close distance to existing noise-sensitive land uses for impact pile driving would be 25 feet. At a distance of 25 feet, a pile driver would generate a noise level of up to 107 dBA L_{eq} . Therefore, if pile driving occurs within these distances of existing noise-sensitive land uses between 10 p.m. to 7 a.m., construction noise levels would exceed the 45 dBA L_{50} County noise limit. Therefore, impacts would be potentially significant.

Although general construction activities may exceed County noise standards as established in the Sonoma County General Plan 2020, implementation of Proposed Plan policies would reduce noise impacts of construction projects to a less-than-significant level. Proposed Policy HAZ-1 from the Standard Conditions of Approval would ensure that if construction activities occur between the hours of 10 p.m. to 7 a.m., within 0.5 mile of a noise sensitive receiver, specific measures shall be implemented that include requiring nighttime construction not to exceed the noise level standards established in **Table 3.11-2**. In addition, the project applicant is required to retain a qualified consultant to prepare a project-specific construction noise impact analysis and if construction noise analysis determines that nighttime noise levels would exceed the standards shown in **Table 3.11-2**, additional measures shall be implemented to reduce noise levels below the standard. These measures may include, but not be limited to, use of temporary noise barriers or performing activities at a farther distance from the noise-sensitive land use. Therefore, compliance with existing General Plan standards and implementation of the Proposed Plan policy cited above would ensure that impacts related to construction noise would be less than significant.

On-Site Operational Noise

Noise generated by on-site activities for new development would be subject to Sonoma County General Plan 2020 noise standards shown in **Table 3.11-2**. Stationary noise sources at new residential and mixed-use development would include ground-level and rooftop ventilation and heating (HVAC) systems. The standards establish maximum allowable exterior noise exposures for non-transportation noise sources.

Operation of stationary sources, loading activity, and industrial equipment that complies with the maximum allowable exterior noise exposures would result in less than significant noise impacts with regard to the generation of noise in excess of thresholds. The majority of proposed uses in the Planning Area include residential and commercial mixed-use development, therefore the potential for new development contributing to increases in on-site operational noise would be minimized. Therefore, compliance with the requirements of the Sonoma County General Plan 2020 would reduce potential on-site noise impacts to a less-than-significant level.

Traffic Noise

Future development associated with the Proposed Plan would result in an increase in traffic in and adjacent to the Planning Area, development of new roads, and placement of new sensitive receptors within the Planning Area. Future noise conditions were projected using a reference distance of 50 feet from each roadway segment centerline for local roadways. Then, based on the average daily traffic volumes provided by the traffic consultant, traffic noise levels were quantified for the 2040 Plus Project condition. Existing (2022) traffic noise levels were also estimated using a reference distance of 50 feet from each roadway segment centerline for local roadways. The difference in noise between these two scenarios represents the Proposed Plan's incremental contribution to noise levels in the area. **Table 3.11-9** shows the results of the noise modeling analysis and **Figure 3.11-1: Projected Noise Contours (2040)** shows projected noise level contours along local roadways within the Planning Area with implementation of the Proposed Plan.

Traffic noise impacts along roadways within the Planning Area were analyzed using the operational noise threshold discussed in the Significance Criteria section on page 3.11-24. Under this threshold, a significant impact would occur if project-related traffic increases the ambient noise environment of noise-sensitive locations by 3 dBA or more if the locations are subject to noise levels in excess of 60 CNEL for exterior areas.

Table 3.11-9: Traffic Noise Analysis Summary

<i>Roadway</i>	<i>Segment</i>	<i>Existing (CNEL)¹</i>	<i>2040 + Project (CNEL)</i>	<i>Increase (dB)</i>	<i>Significant Impact?¹</i>
Arnold Drive	Harney to Glen Ellen	66	66	<1	No
Arnold Drive	Harney to Madrone Road	67	68	1	No
Highway 12 Connector	-	n/a	59	n/a	No
Highway 12	-	72	73	1	No

Notes:

¹ A 3 dB or less change in noise levels traffic would not constitute a significant impact, because such a change in noise is considered just noticeable.

Source: Salter & Associates, 2022.

As shown in **Table 3.11-9**, none of the roadway segments studied, including a potential Highway 12 connector, are projected to exceed established standards in 2040 and would not experience a 3 dB or more increase in noise levels under the Proposed Plan compared to existing conditions, resulting in noise impacts to sensitive receptors along major roadways in the Planning Area to be less than significant despite increases in traffic noise.

Mitigation Measures

None required.

Impact 3.11-2 Implementation of the Proposed Plan would not result in generation of excessive groundborne vibration or groundborne noise levels. (*Less than Significant*)

Construction Vibration

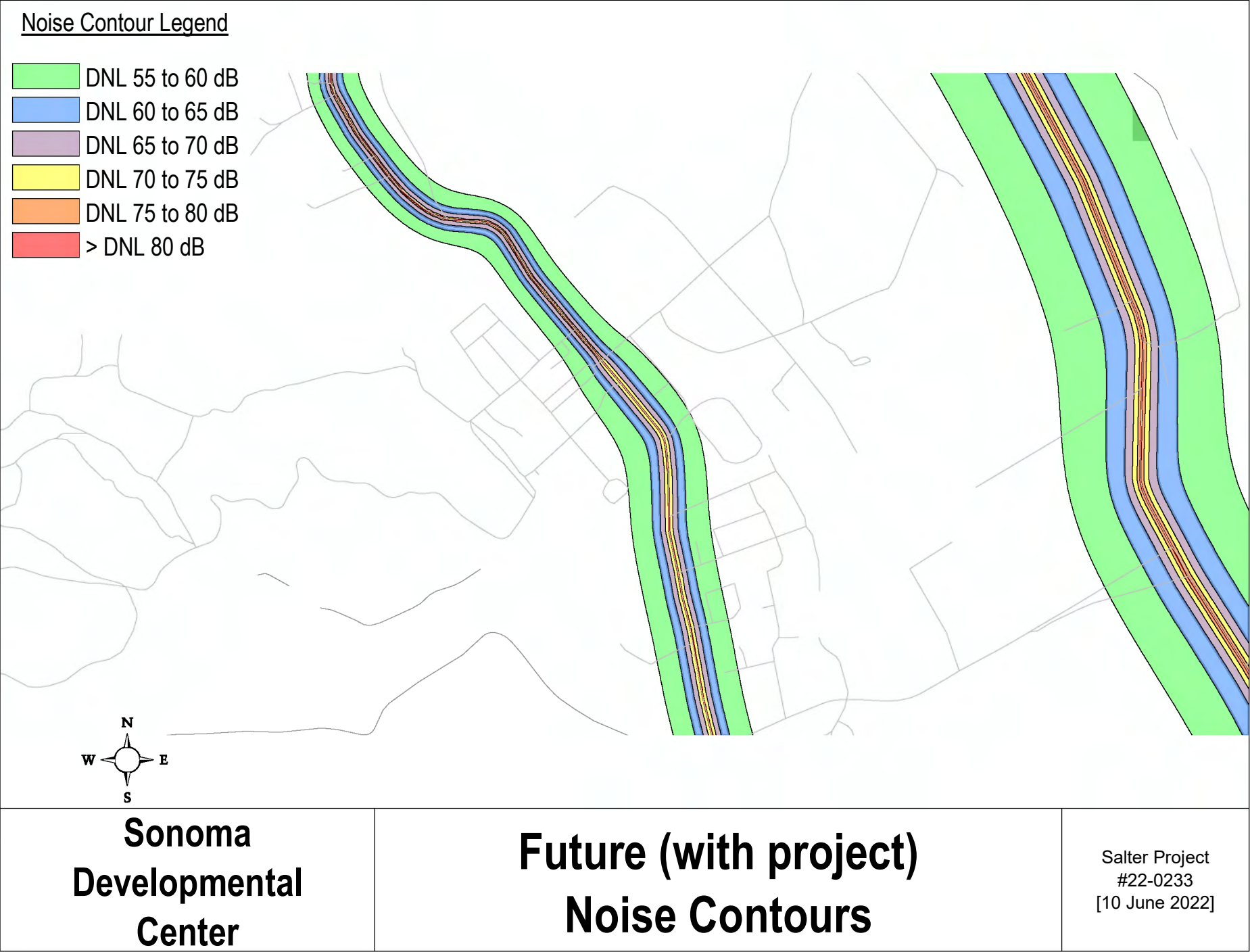
The greatest anticipated source of vibration during general construction activities would be from a dozer, which may be used within 25 feet of the nearest existing buildings when accounting for setbacks and equipment size. A dozer would create approximately 0.089 in/sec PPV at a distance of 25 feet.⁹⁰ This would be lower than what is considered a

⁹⁰ Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment. Available:

distinctly perceptible impact for humans of 0.24 in/sec PPV, and the structural damage impact of 0.4 in/sec PPV. However, this does exceed the vibration threshold of 0.08 in/sec PPV for historic buildings which are particularly vibration-sensitive receivers. Therefore, impacts associated with vibration from general construction activities would be potentially significant.

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf.
Accessed: May 16, 2022.

Figure 3.11-1: Future Noise Contours (2040)



Impact construction activities known to generate excessive ground-borne vibration include pile driving and breakers. Pile driving may be used during construction facilitated by the Proposed Plan. Given typical setbacks and equipment size, a pile driver may be used within 25 feet of the nearest existing buildings. This analysis conservatively assumes the use of an impact pile driver; the upper range for an impact pile driver would create approximately 1.518 in/sec PPV at a distance of 25 feet.⁹¹ This would exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV, and the structural damage impact of 0.4 in/sec PPV and .08 in/sec PPV for historic buildings. Therefore, impacts associated with vibration from impact construction activities would be potentially significant.

Breakers may be used during construction facilitated by the Proposed Plan. Given typical setbacks and equipment size, a breaker may be used within 25 feet of the nearest existing buildings. A breaker would create approximately 0.24 in/sec PPV at a distance of 25 feet.⁹² This would not exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV or the structural damage impact of 0.4 in/sec PPV, but would exceed the structural damage impact of .08 in/sec PPV for historic buildings. Therefore, impacts associated with vibration from a breaker would be potentially significant.

Blasting may also be required during construction to break up rocks and can generate vibration in the form of vibration waves that radiate away from the charge location. Exact blast charge weights and locations are not known at this time. For this analysis, it is assumed blasting may occur as close as 25 feet to the nearest existing buildings. Sample vibration rates from blasting include 4.2 in/sec PPV and 7.3 in/sec PPV at 25 feet from a 5-pound charge and 10-pound charge, respectively, which would exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV, and the structural damage impact of 0.4 in/sec PPV and .08 in/sec PPV for historic buildings. Impacts from blasting would be potentially significant.

Since general construction activities may exceed County groundborne vibration standards, implementation of Proposed Plan policies would be required to reduce vibration impacts of construction projects to a less-than-significant level. Proposed Policy HAZ-1

⁹¹ Ibid.

⁹² California Department of Transportation. September 2013. Transportation and Construction Vibration Guidance Manual. Available: <https://www.contracosta.ca.gov/DocumentCenter/View/34120/Caltrans-2013-construction-vibration-PDF>. Accessed : June 7, 2022.

from the Standard Conditions of Approval would ensure that daytime pile driving or blasting vibration shall not exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV at vibration sensitive receivers as well as 0.08 in/sec PPV for all preserved and reused buildings within the Planning Area. Similarly, nighttime pile driving or blasting vibration shall not exceed these standards within 0.25 miles of vibration-sensitive receivers. Further, the project applicant shall retain a qualified consultant to prepare a project-specific construction vibration impact analysis in accordance with industry standards. Provided the analysis concludes that vibration levels exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV and the structural damage impact to structures of 0.4 in/sec PPV and of 0.08 in/sec PPV for all preserved and reused buildings, additional measures shall be implemented to reduce vibration levels below the standard. These measures may include, but not be limited to, pre-drilling pile holes, utilizing a vibratory pile driver, performing pile driving at a further distance from the noise-sensitive land use, or using blasting mats to reduce vibration levels below the thresholds. Therefore, compliance with existing General Plan standards and implementation of the Proposed Plan policy cited above would ensure that impacts related to groundborne vibration levels would be less than significant.

Operational Vibration

Stationary Source Vibration

As development occurs, there is generally a potential for more operational vibration sources to be developed. However, implementation of the Proposed Plan would not directly result in an increase of operational sources of vibration in the Planning Area. Additionally, should mechanical equipment be installed or new sources of vibration be constructed, the potential vibration effects would be analyzed in a project-specific environmental analysis. Further, vibration from mechanical equipment is generally localized, and it is unlikely that vibration effects would occur outside the immediate vicinity of the vibration-generating mechanical equipment. Stationary source vibration impacts associated with implementation of the Proposed Plan would be less than significant.

Traffic Vibration

Groundborne vibration generated by traffic traveling on roadways is generally below the threshold of perception at adjacent land uses, unless there are severe discontinuities in the roadway surface. There would be an anticipated increase in traffic in the Planning Area associated with both the increase in density and intensity allowed under the Proposed Plan and with regional increases in traffic generally (see Section 3.14: Transportation).

Vibration resulting from vehicle traffic is generated primarily by heavy truck passage over discontinuities in the pavement (such as potholes, bumps, and expansion joints).

This analysis assumes that roadways in the Planning Area are or would be reasonably maintained, with no severe discontinuities. Additionally, Proposed Plan policies address streetscape improvements that would limit cut-through vehicle traffic and serve to avoid traffic-related vibration impacts (proposed policies 3-1 and 3-8). Therefore, traffic vibration impacts associated with implementation of the Proposed Plan would be less than significant.

Mitigation Measures

None required.

Impact 3.11-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, implementation of the Proposed Plan would not expose people residing or working in the Planning Area to excessive noise levels. (*No Impact*)

Public airports located in Sonoma County include the Charles M. Schulz Sonoma County Airport, the Cloverdale Municipal Airport, the Healdsburg Municipal Airport, the Petaluma Municipal Airport, the Sonoma Skypark Airport, and the Sonoma Valley Airport. There are no private airstrips in the Planning Area. The County's Comprehensive Airport Land Use Plan (CALUP) was adopted by the Sonoma County Airport Land Use Commission (ALUC) in 2001 and it applies around all six airports in the County. It establishes airport influence areas and noise standards for all airports in the County. The Planning Area does not fall within any of the airport influence areas. Further, the Air Transportation Element of the Sonoma County General Plan 2020 contains noise contour maps from 55 to 75 CNEL for each airport. None of the noise contours overlap with the Planning Area. Therefore, no substantial noise exposure from airport noise would occur to workers or residents of development facilitated by the Proposed Plan, and no impacts would occur.

Mitigation Measures

None required.

3.12

Population and Housing

3.12 Population and Housing

This section assesses potential environmental impacts from future development under the Proposed Plan, as related to population and housing, including evaluation of the Proposed Plan's impact on population growth and housing displacement. This section describes existing demographics and housing in the Planning Area, as well as relevant State, regional, and local regulations and programs.

There were 37 responses to the Notice of Preparation (NOP) regarding topics covered in this section. A few comments requested the EIR analyze a scenario with a maximum number of housing units, especially multifamily and affordable housing units. Several other commenters requested the EIR analyze a fewer housing unit scenario. See Chapter 4: Alternatives where different population and housing scenarios are explored. These comments are addressed, as appropriate, in the Impact Analysis.

3.12.1 Regulatory Setting

3.12.1.1 Federal Regulations

No existing federal regulations pertain to population and housing in the Planning Area.

3.12.1.2 State Regulations

California Government Code Section 14670.10.5

Government Code Section 14670.10.5, enacted in 2019, outlines the State's goals and objectives for the SDC Specific Plan. In light of the statewide affordable housing crisis, State law provides that the SDC Specific Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources outside the core. Other required components of the planning process include involvement of the community in order to reduce uncertainty, increasing land values, expediting marketing, and maximizing interest of potential purchasers. The legislation contemplates that these efforts will require environmental review and amendments to the County's General Plan and zoning ordinances, while addressing the economic feasibility of future development.

State Planning Law

Article 8 of Chapter 3 of Division 1 of Title 7 of the Government Code (sections 65450 – 65457) allows local planning agencies to prepare specific plans for the systematic implementation of the general plan, for all or part of the area covered by the general plan. A specific plan must include, either through text or diagrams, the following information:

12. The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
13. The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
14. Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
15. A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

Additionally, the specific plan must be consistent with the general plan and include a statement of the relationship of the specific plan to the general plan.

State Housing Element Law

State housing element statutes (Government Code Sections 65580 through 65589.11) mandate that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, State housing policy rests largely upon the effective implementation of local general plans and, in particular, housing elements. Additionally, Government Code Section 65588 dictates that housing elements must be updated at least once every eight years. The County of Sonoma maintains a Housing Element associated with the County's General Plan, which is described below and addresses housing affordability, including Regional Housing Needs Assessment (RHNA) goals.

Density Bonus

California Government Code Section 65915 establishes provisions for density bonuses for housing developments to encourage the construction of affordable housing. The code requires local jurisdictions to adopt ordinances for the approval of density bonuses as well as procedures and timelines for the processing of density bonus applications. The code requires local governments to grant density bonuses and/or other applicable incentives to housing projects that provide a percentage of housing for low-income, senior, and/or other special-needs tenants as specified in the code.

Department of Housing and Community Development

The State Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California and ensuring the availability of affordable housing for all income groups.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, adopted by the California Air Resources Board (CARB). SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) as part of the regional transportation plan (RTP) to help achieve these GHG reduction targets. The SCS must demonstrate the attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

3.12.1.3 Regional Regulations

Regional Housing Needs Allocation

The Regional Housing Needs Allocation (RHNA) process addresses the need for housing in communities throughout the State. To ensure that adequate housing is available for all income groups, HCD determines the regional need in coordination with the Association of Bay Area Governments, which is required to distribute the nine-county San Francisco Bay Area region's share of statewide need to cities and counties within its jurisdiction. The purpose of the RHNA is to allocate a "fair share" of the region's projected housing need to cities and counties by household income group, categorized as "very low," "low," "moderate," and "above moderate." According to the Final 2023–2031 RHNA, ABAG has

determined that unincorporated Sonoma County's fair share of regional housing need for the 2023 to 2031 period would be 3,881 units. Approximately 1,632 of these units would be allocated as housing affordable to very low- and low-income households.⁹³ The ABAG Executive Board adopted the Final RHNA Plan in December 2021. It should be noted that while the present RHNA allocation is for the next eight years, full development of the SDC Specific Plan would occur over a longer time horizon, over multiple RHNA cycles.

3.12.1.4 Local Regulations

Sonoma County General Plan 2020

The General Plan 2020 was last updated in 2008. It is the County's long-range broad policy document that guides conservation, development, and public facilities and services in the County. The Land Use Element of the County's General Plan includes goals and policies that seek to concentrate future growth in existing urban areas to maintain separation with open space, support both rural and urban residential environments, use environmental suitability criteria to guide location of development, and protect scenic and natural resources and agricultural lands. Identified land use issues in this Planning Area include growth and traffic congestion, upgrading public services and infrastructure, protection of agricultural landscapes and resources, impacts of tourism, and water resources. The following land use policy is applicable to the Sonoma Developmental Center.

Policy LU-20ff: Consider future public uses of the Sonoma Developmental Center and Skaggs Island properties as a priority if they are declared surplus and offered for sale to local agencies, particularly park, recreation, and open space uses and affordable housing.

Housing Element

The 2014 Housing Element is a component of Sonoma County's General Plan and is updated on an eight-year cycle. The 2014 Housing Element was adopted in December 2014 and covers the planning period of 2015 to 2023. ABAG determined that Sonoma

⁹³ Association of Bay Area Governments. December 2021. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031. Available: https://abag.ca.gov/sites/default/files/documents/2022-04/Final_RHNA_Methodology_Report_2023-2031_March2022_Update.pdf. Accessed: May 8, 2022.

County's fair share of regional housing need for the 2015 to 2023 period would be 515 units. The 2014 Housing Element includes a number of implementation programs to allow for homeless shelters, permanent supportive housing, and transitional housing. Other programs aim to retain affordable units, assist affordable housing developers, and explore non-traditional housing structures.

ABAG has determined that Sonoma County's fair share of regional housing need for the 2023 to 2031 period would be 3,881 units. To ensure that housing is available to meet the needs of future residents under the Proposed Plan, the County is currently in the process of updating its Housing Element to assess its supply of housing and provide policies and programs to ensure that it continues to meet its fair share of regional housing needs.

In 2020, Permit Sonoma, also known as the Permit and Resource Management Department (PRMD), staff began preparation of a rezoning of sites for multifamily residential housing. The Housing Sites effort will add sites to the County's Housing Element site inventory to comply with State law and will implement current General Plan Policies and Programs that require the County to identify urban sites near jobs and transit which may appropriately accommodate additional housing. The project would help meet the County's RHNA allocation (for both the 2015 to 2023 and 2023 to 2031 periods), as well as the County's desire to provide higher-density housing throughout the unincorporated areas. The County published a Draft EIR for review in 2021.⁹⁴

Sonoma County Code

The Sonoma County Code is organized by chapters, articles, divisions, and sections, and includes the County's Zoning Ordinance (Chapter 26 of the Code). The code is updated as new ordinances are adopted by the Board of Supervisors. Detailed zoning regulations—including permitted and conditional uses, and development regulations—including provisions related to building height, bulk, and massing—are directly integrated within the Sonoma County Zoning Ordinance.

The County's Zoning Ordinance divides the community into 32 zoning districts and specifies the uses that are permitted, conditionally permitted, and, in some instances, uses that are specifically prohibited within each district. Each zoning district has developed

⁹⁴ Sonoma County. April 2021. Rezoning Sites for Housing Project Draft Environmental Impact Report. Available: <https://permitsonoma.org/regulationsandinitiatives/rezoningsitesforhousing>. Accessed: May 2, 2022.

standards that are designed to protect and promote the health, safety, and general welfare of the community. Within a typical district, there are regulations related to land use, lot size, coverage, building heights, parking, landscaping, and design criteria.

The purpose of the Affordable Housing Program Requirements and Incentives ordinance (Article 89 of Chapter 26) is to implement the Housing Element of the General Plan; achieve a balanced community with a wide range of housing available for households of all income levels; increase the supply of housing units available, accessible, and affordable for moderate-, low-, very low- and extremely low-income households who are most in need of housing, including housing for seniors, the disabled, large families, and other households with special housing needs; address the need for affordable housing related to employment growth associated with new or expanded market rate housing development; address the need for affordable housing related to employment growth associated with new or expanded nonresidential development; ensure that the remaining developable land within the County is utilized in a manner consistent with the County's affordable housing goals, objectives, policies, and programs; provide affordable housing units to serve varying housing needs and income levels that are compatible in character and quality with their surrounding neighborhoods; and maintain the physical condition and affordability of units produced through the provisions of this article over time.

In addition, the code provides general requirements to help address affordable housing within the County, such as requiring any person who constructs or develops one or more residential units, whether a single-family home, units in multi-family dwellings, or by condominium conversions or otherwise, shall provide affordable housing through one or more of the following three methods:

- **On-site construction of the required affordable units.** Provide the required affordable unit(s) on-site, in compliance with the Section 26-89-040.C.;
- **Payment of affordable housing fee.** Pay an affordable housing fee in compliance with Subsection 26-89-040.F.; or
- **Alternative equivalent actions.** Perform an alternative equivalent action in compliance with Subsection 26-89-040.G.; which may be allowed to fulfill the affordable housing requirements of this Section if approved by the Director, at his or her sole discretion.

3.12.2 Environmental Setting

3.12.2.1 Historical Use

Historically, the SDC facility peaked in population in 1960 at 3,745 residents. Total population and employment at that time reached upwards of approximately 5,000 individuals. As of May 1, 2015, 405 people were in continuing residence at the SDC facility prior to its closure, with 181 individuals (approximately 45 percent) living in one of ten Nursing Facility (NF) residences and the remaining 224 (approximately 55 percent) residing in one of the facility's 11 Intermediate Care Facility (ICF) residences. An additional ICF residence provided services where area individuals in crisis were admitted to receive short-term stabilization and return to a community setting.

In 1996, SDC had 1,914 employees.⁹⁵ As of August 29, 2015, there were 1,365 employees at SDC prior to its closure. Of these employees, 88 percent were full-time, five percent were part-time, and the status of the remaining seven percent was intermittent, temporary, or limited term. SDC employees primarily lived in the following counties: 45 percent in Sonoma County, 31 percent in Solano County, seven percent in Napa County, five percent in Contra Costa County, three percent in Alameda County, two percent in Marin County, and two percent in Sacramento County.⁹⁶ Today, the Sonoma Ecology Center is one of the only buildings that continues to operate on the Core Campus as do some offices in the Porter Administration/Post Office Building which employ a total of less than 50 people on the site.

3.12.2.2 Population

As the facility is presently shuttered, there are no residents at the SDC. For the county overall, in 2020, the population of unincorporated Sonoma County was approximately

⁹⁵ California Health and Human Services Agency Department of Developmental Services. October 2015. Plan for the Closure of the Sonoma Developmental Center. Available: https://www.dds.ca.gov/wp-content/uploads/2019/03/SDC_ClosurePlan100115_20190318.pdf. Accessed: June 7, 2022.

⁹⁶ Ibid.

134,570 and the entire Sonoma County population was approximately 488,863.⁹⁷ Between 2010 to 2020, the unincorporated County’s population decreased by about 7.2 percent from 145,079 residents.⁹⁸ However, between 2010 to 2020, the entire County’s population increased by about 1.3 percent from 483,878. Between 2020 and 2040, the unincorporated County’s population is projected to increase by approximately 19.0 percent, while the entire County’s population is projected to increase by approximately nine percent.⁹⁹ **Table 3.12-1** presents the anticipated population, household, and job growth projections for the entire County and unincorporated Sonoma County between 2020 and 2040 based on projections from the California Department of Finance and ABAG.

Table 3.12-1: Sonoma County Population, Housing, and Employment Projections, 2020–2040

	2020	2040	Net Increase	Percent Change
--	------	------	--------------	----------------

⁹⁷ California Department of Finance. May 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2022. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

⁹⁸ California Department of Finance. May 2022. E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

⁹⁹ California Department of Finance. May 2022. P-2: County Population Projections (2010-2060). Available: <https://dof.ca.gov/forecasting/Demographics/projections/>. Accessed: June 1, 2022.

Sonoma County				
Population	488,863 ¹	533,600 ¹	44,737	+9.2
Housing Units	204,742 ¹	235,440 ²	30,698	+15.0
Jobs	225,800 ¹	243,585 ²	17,785	+7.9
Unincorporated Sonoma County				
Population	134,570 ¹	160,150 ²	25,580	+19.0
Housing Units	61,961 ¹	68,765 ²	6,804	+11.0
Jobs	55,555 ²	61,595 ²	6,040	+10.9

Sources: (1) California Department of Finance, 2022; (2) Association of Bay Area Governments, 2017

3.12.2.3 Housing

The SDC has facilities that are originally designed to house up to 3,500 clients. These are not in use and in various stages of disrepair. For the county, in 2020, there were 61,691 housing units in unincorporated Sonoma County and 204,742 in the entire County.¹⁰⁰ Between 2010 and 2020, the unincorporated County's housing stock decreased by nearly nine percent from 67,967 housing units. This decrease in housing units is likely due either to annexations of land previously in the unincorporated county into various incorporated cities in Sonoma County or destruction from either the 2017 Sonoma Complex Fires, 2019 Kincade Fire, the Glass Fire of 2020, or the LNU Lightning Complex Fires of 2020. The entire County's housing stock remained nearly the same, at 204,572 housing units in 2010.¹⁰¹ As shown in **Table 3.12-1**, ABAG projects that the number of housing units will increase by approximately 11 percent in unincorporated Sonoma County and by approximately 15 percent in the entire County, between 2020 and 2040.¹⁰²

¹⁰⁰ California Department of Finance. May 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2022. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

¹⁰¹ California Department of Finance. May 2022. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark*. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

¹⁰² Association of Bay Area Governments, July 2017. Plan Bay Area Projections 2040. Available: <http://projections.planbayarea.org/>. Accessed: June 2, 2022.

In 2010 Sonoma County had an average household size of approximately 2.46, which is slightly lower than other nearby jurisdictions. In 2020, the average household size in the County was about 2.6, which is still lower than the household size of other neighboring counties, such as Napa County at about 2.79, Solano County at about 2.86, and Contra Costa County at about 2.85.¹⁰³

3.12.2.4 Employment

There is limited employment presently at the site. There are some utility and maintenance workers, some workers in the Post Office building, and at the Sonoma Ecology Center, with total employment at the site estimated to be less than 50. In 2020, there were 225,800 jobs in Sonoma County and ABAG estimates there were 55,555 jobs in unincorporated Sonoma County. Between 2010 and 2020, the County's employment increased by 3.8 percent from 217,500 jobs in 2010. In 2020, the unemployment rate was 7.9 percent in Sonoma County. The COVID-19 pandemic significantly affected the employment rate in the County. In comparison, the 2019 Sonoma County unemployment rate was 2.7 percent.¹⁰⁴ As shown in **Table 3.12-1**, ABAG projects that the number of jobs in unincorporated Sonoma County will increase by approximately 11 percent and by approximately eight percent in the entire County, between 2020 and 2040.¹⁰⁵ Generally, there is more housing than jobs in Alameda, Contra Costa, Solano, and Sonoma counties, while there are more jobs than housing in Marin, Napa, San Francisco, San Mateo, and Santa Clara counties. Sonoma County has a jobs-to-housing balance ratio that ranges from less than 0.5 jobs per household to between 0.5 and 1.0 jobs per household.¹⁰⁶

¹⁰³ ACS 5-Year Estimates Data Profiles DP04 – Selected Housing Characteristics

¹⁰⁴ California Employment Development Department. June 2021. Local Area Unemployment Statistics (LAUS), Annual Average. Available: <https://data.edd.ca.gov/Labor-Force-and-Unemployment-Rates/Local-Area-Unemployment-Statistics-LAUS-Annual-Ave/7jbb-3rb8>. Accessed: June 2, 2022.

¹⁰⁵ Association of Bay Area Governments, July 2017. Plan Bay Area Projections 2040. Available: <http://projections.planbayarea.org/>. Accessed: June 2, 2022.

¹⁰⁶ Association of Bay Area Governments, October 2021. Plan Bay Area 2050. Available: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed May 27, 2022.

Based on buildout projections developed for the Proposed Plan, the SDC site is expected to house 2,400 people in 1,000 housing units. Specifically, the population will include 1,872 non-seniors in 780 housing units and 528 seniors in 220 housing units. Further, intentional consideration will be incorporated into new development to support housing opportunities for individuals with developmental disabilities. The Proposed Plan will designate at least five parcels to build homes for persons with developmental disabilities. The Proposed Plan is also expected to provide 940 new jobs to the Planning Area. See Chapter 2: Project Description, for more information on buildout projections.

3.12.3 Impact Analysis

3.12.3.1 Significance Criteria

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

- Criterion 1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or**
- Criterion 2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.**

3.12.3.2 Methodology and Assumptions

Potential impacts resulting from implementation of the Proposed Plan were evaluated based on relevant information from the planning and policy documents listed in the Regulatory Setting section of this chapter.

3.12.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address population and housing:

Land Use

Goals

- 4-D Generate deed restricted affordable housing at a range of income levels, household sizes, and ability levels, including both income-restricted affordable housing and housing that is affordable by design.
- 4-E Support affordable housing development beyond the minimum requirements through County, State, federal, and other funding sources.
- 4-F Promote “missing middle income” housing to support the needs of the workforce that do not meet the requirements for income-restricted affordable housing.

Policies

- 4-6 Ensure a diverse range of housing types to accommodate a variety of household sizes and life stage, by incorporating a wide range of unit sizes, ranging from co-living and studio apartments to three-or four-bedroom units, in order to accommodate various household sizes and life stage.
- 4-8 Designate at least five parcels to build homes for persons with developmental disabilities, prioritizing parcels closer to open space areas.
- 4-14 At least 25% of both single family and multifamily rental and for-sale units must be deed-restricted, in perpetuity, as inclusionary income-restricted units.
- 4-15 Prohibit the payment of in-lieu fees for affordable housing. All required inclusionary housing must be built at the SDC site.
- 4-16 Strive to spread out the inclusionary housing throughout the site and co-locate with the market rate housing, to the greatest extent feasible, rather than clustering within one district. Ensure that inclusionary and affordable units are integrated into the overall fabric of the community, and have similar look and feel to other new buildings on site.

- 4-17 At least 50 percent of the market rate housing should be designed as “missing middle housing,” intended for sale or rental to individuals or families making between 121 and 160 percent of Sonoma County’s Area Median Income (AMI) by including: small lot sizes; smaller, efficient dwelling sizes; a mix of duplex, triplex, fourplex, townhomes, and cottage clusters; a range of studio through three- or four-bedroom units; and simple but high-quality materials in construction and finishes.
- 4-18 Explore creation of a first-time homeowner ‘soft second’ (i.e. forgivable loan) program for historically disadvantaged communities by partnering with affordable housing organizations in order to expand homeownership opportunities and promote racial equity.
- 4-19 Utilize partnerships between Sonoma County and local affordable housing developers to develop at least one 100 percent affordable housing project of around 100 income-restricted units at SDC.

Mobility and Access

Goals

- 3-A Street network: Enhance the existing street network to create a walkable and pedestrian-friendly environment that provides connections both within the core campus and to surrounding communities and regional trail systems.
- 3-B Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.

Policies

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network. Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destinations on the site such as the Central Green, baseball fields, community centers, and recreational amenities.

- 3-5 Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.
- 3-7 Add two new intersections on Arnold Drive immediately north and south of the Main Entry Road to improve connectivity to the entire SDC site, as shown on Figure 3.1-1.
- 3-8 Design the street network to minimize cut-through vehicle traffic in residential areas.
- 3-22 Work with Sonoma County Transit for expansion of transit service and a transit pass subsidy for new residents and employees.
 - c. Work with Sonoma County Transit to establish an express bus service to and from the cities of Sonoma and Santa Rosa that would utilize a new connector road between the SDC Core Campus and Highway 12; or
 - d. Work with Sonoma County Transit to extend the fare-free Route 32 shuttle from the City of Sonoma to the SDC site, maintaining the regular intercity Route 30 bus service as well.

Utilities and Infrastructure

Goals

- 6-D Ensure that infrastructure, including water, wastewater, stormwater, power, and telecommunications, can adequately, sustainably, and resiliently accommodate the needs of future residents and businesses.

Policies

- 6-9 Work with Sonoma Valley County Sanitation District (SVCS) to explore the feasibility of establishing a recycled water facility on-site to offset the use of potable water on the site and to provide recycled water for non-potable uses such as landscape irrigation and firefighting.

- 6-10 Implement greywater systems in new residential and commercial facilities to reduce potable water use for irrigation, toilet flushing, and other appropriate uses, in order to conserve potable water and reduce water waste. Meet landscape irrigation, groundwater recharge, and other water supply needs with on-site treated wastewater to the maximum extent feasible.
- 6-11 Apply for state, federal, and private grants to assist in expanding the recycled water and greywater infrastructure. Explore opportunities to partner with other agencies and the feasibility of issuing bonds for this purpose.
- 6-12 Construct of new sewer laterals and mains to meet Sonoma County Water Agency Sanitation Standards and maintain these pipelines and appurtenances to ensure that inflow and infiltration is not a problem for the SVCSD in the future.
- 6-13 Provide sufficient wastewater conveyance, pumping, and treatment capacity for peak sewer flows and infiltration.
- 6-14 Continue to clean and video inspect the sewer infrastructure to mitigate sanitary sewer overflows, locate deficiencies, and reduce leaks and contamination.
- 6-15 Ensure that indoor plumbing fixtures in all new and retrofitted buildings meet or exceed CALGreen Tier 2 standards.
- 6-16 Minimize impervious surfaces and use pervious pavements where possible, retaining and providing new pervious surfaces such as landscape areas, crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt. At least 50 percent of new ground floor private parking spaces and non-primary access paving are required to be surfaced with permeable paving to encourage stormwater infiltration and disperse runoff from roofs or pavement to vegetated areas where possible.
- 6-17 Maintain high water quality in lakes and streams by creating opportunities for rainwater capture such as roof drainage capture systems, installing trash screens in stormwater inlets, prohibiting use of pesticides in landscaping, and using bioretention facilities to

clean stormwater before it reaches lakes and creeks in order to remove pollutants and enhance water quality through natural processes.

- 6-18 Incorporate site design measures and Low Impact Development (LID) features such as bioretention facilities in accordance with the Bay Area Stormwater Management Agencies Association (BASMAA) Manual or otherwise required by the Grading and Stormwater Division of Permit Sonoma. The bioretention facilities should have a surface area of at least 4 percent of the tributary impervious area.
- 6-19 Connect each building within the Core Campus to a microgrid:
 - a. Work with local distributed energy resources (DERs) installation groups and advocates to build enough on-site energy generation, such as solar, wind, geothermal, and methane gas cogeneration, to power the Planning Area in case of emergency;
 - b. Connect to PG&E's grid through the Community Microgrid Enablement Program or an equivalent, with isolation devices that allow SDC to fully connect or disconnect from PG&E's system.
- 6-20 Prohibit new natural gas lines to all new buildings and require new and adaptively reused buildings to be fully powered by electricity.
- 6-21 Build all new utility lines underground and bury existing utility lines to improve safety and reduce visual clutter in accordance with Sonoma County Code Sec. 25-44.
- 6-24 Work with Recology and developers to create standards for shared trash enclosures.
- 6-25 Connect all new and adaptively reused buildings to broadband internet.

3.12.3.4 Impacts

Impact 3.12-1 Development under the Proposed Plan would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). *(Less than Significant)*

Implementation of the Proposed Plan could induce substantial population growth directly if its proposed land uses and development standards would provide for significant population or employment growth above projected levels, or indirectly if infrastructure extensions would encourage significant numbers of people to move to the area.

There is presently a severe shortage of housing in Sonoma County, like in much of the rest of the Bay Area. In October 2020, Focus Strategies released a housing market gap analysis report commissioned by the Sonoma County Community Development Commission. The report identified a potential existing housing gap of over 5,400 units in 2019. Based on projected annual population growth rates, the housing gap was projected to increase to more than 7,400 units in 2024. The report also identified an acute shortage of housing that is available and affordable to low-, very low-, and median-income households.¹⁰⁷ Similarly, California Government Code Section 14670.10.5 states that California is experiencing an acute affordable housing crisis. The cost of land significantly limits the development of affordable housing. It is the intent of the State law that priority be given to affordable housing in the disposition of the Sonoma Developmental Center real estate property.

Development associated with implementation of the Proposed Plan is projected to result in approximately 2,400 new residents, 1,000 new housing units, and 940 new jobs. This includes 180 new inclusionary units funded by the Project and 100 affordable housing units provided by the County. Therefore, buildout of the Proposed Plan would help fulfill State legislature requirements to develop affordable housing within the Planning Area and help mitigate the severe housing shortage facing Sonoma County. Further, the Sonoma

¹⁰⁷ Focus Strategies. October 2020. Sonoma County Continuum of Care Strategic Plan. Available: <https://sonomacounty.ca.gov/development-services/community-development-commission/divisions/homeless-services/continuum-of-care/strategic-plan#:~:text=Focus%20Strategies%2C%20in%20coordination%20with,data%2Ddriven%20set%20of%20objectives>. Accessed: June 7, 2022.

County General Plan 2020 Housing Element specifies that future re-use of the SDC facility should include affordable housing and prioritize open space uses in accordance with General Plan Land Use Policy LU-20ff or any subsequent Specific Plan adopted by the Board of Supervisors. In order to fulfill these requirements, buildout under the Proposed Plan will provide both market rate and affordable housing, a variety of housing types, explore the creation of a first-time homeowner grant program for minority groups, and develop only on existing urban and built-up land in order to preserve open space resources (proposed policies 4-6, 4-8, 4-14, 4-15, 4-16, 4-17, 4-18, and 4-19).

The Proposed Plan will in result in 940 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population, and would thus not induce growth. Thus, population growth and employment opportunities under the Proposed Plan is in line with current General Plan goals and objectives.

Therefore, given that the Proposed Plan's projected population growth is commensurate with State legislative requirements to prioritize affordable housing development as well as General Plan goals and policies, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant.

Mitigation Measures

None required.

Impact 3.12-2 Development under the Proposed Plan would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. *(No Impact)*

Since the closure of the SDC facility in 2018, there are no existing people or housing within the Planning Area that would be displaced from development under the Proposed Plan. Therefore, implementation of the Proposed Plan would have no impact on displacing substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Mitigation Measures

None required.

3.13

Public Services and Recreation

3.13 Public Services and Recreation

This section provides an evaluation of potential impacts on public facilities and services as a result of the Proposed Plan, including impacts related to fire, police, school services, and park and recreation facilities. This section describes existing public services and facilities in the Planning Area, as well as relevant State and local regulations and programs.

There were 29 responses to the Notice of Preparation (NOP) regarding topics covered in this section. Commenters voiced a concern regarding future school needs to accommodate the increase in population resulting from implementation of the Proposed Plan. Other commenters called for analysis of impacts on existing and future recreational demand, such as parks, community services, passive recreational uses, and preservation of existing open space and recreational opportunities. These comments are addressed in the following Impact Analysis.

3.13.1 Regulatory Setting

3.13.1.1 Federal Regulations

No existing federal regulations pertain to public services or recreation in the Planning Area.

3.13.1.2 State Regulations

California Fire and Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The CBC is based on the International Building Code but has been amended for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Chapter 7 of the County Code outlines the County's adopted building regulations. Commercial and residential buildings are plan-checked by local building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials,

and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Code of Regulations

CCR Title 5 Education Code, governs all aspects of education within the state. California State Assembly Bill (AB) 2926—the School Facilities Act of 1986—was enacted in 1986 and added to the California Government Code (Section 65995). It authorizes school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also established that the maximum fees which may be collected under this and any other school fee authorization are \$1.50 per square foot (\$1.50/s.f.) for residential development and \$0.25/s.f. for commercial and industrial development.

AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 et seq. of the Government code. Under this statute, payment of statutory fees by developers serves as total mitigation under CEQA to satisfy the impact of development on school facilities. However, subsequent legislative actions have alternatively expanded and contracted the limits placed on school fees by AB 2926.

Senate Bill 50, California Government Code 65995(b), Education Code Section 17620, and the Mitigation Fee Act

Senate Bill (SB) 50 (funded by bonds sold under Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

SB 50 amended the California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. On February 23, 2022, the State Allocation Board approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) to \$4.79/s.f. of assessable space for residential

development of 500 square feet or more, and to \$0.78/s.f. of chargeable covered and enclosed space for commercial/industrial development.

Enacted as AB 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development plan on which it is to be levied. The act came into force on January 1, 1989.

Assembly Bill 1191, California Government Code 66477

The Quimby Act, within the Subdivision Map Act, authorizes the legislative body of a city or county to require the dedication of land or to impose fees for park or recreational purposes as a condition of the approval of a tentative or parcel subdivision map, if specified requirements are met. Existing law requires any fees collected to be committed within five years after the payment of the fees or the issuance of building permits on $\frac{1}{2}$ of the lots created by the subdivision, whichever occurs later. Existing law requires any fees not committed to be distributed and paid to the then record owners of the subdivision, as specified.

California Commission on Peace Officer Standards and Training

The California Commission on Peace Officer Standards and Training (POST) advocates for, exchanges information with, sets selection and training standards for, and works with law enforcement and other public and private entities. POST was established by the Legislature in 1959 to identify common needs that are shared by representatives of law enforcement.

3.13.1.3 Local Regulations

Sonoma County General Plan 2020

The General Plan 2020 includes the following goals, objectives, and policies associated with public services and recreation:

Goal PF-2: Assure that park and recreation, public education, fire suppression and emergency medical, and solid waste services, and public utility sites are available to the meet future needs of Sonoma County residents.

Objective PF-2.1: Provide an adequate supply and equitable geographic distribution of regional and local parks and recreation services based on population projections.

Objective PF-2.2: Use the National Recreation and Parks Administration (NRPA) standards as the minimum standards for determining park needs.

Objective PF-2.3: Assist school districts in developing more precise estimates of population growth within their attendance areas.

Objective PF-2.4: Use estimates by school districts of new school site needs as the basis for applying school site designations on land use plan maps.

Objective PF-2.5: Promote cooperation among fire and emergency service agencies in the area of public education and awareness, especially in those areas isolated from emergency service providers either by distance or topography.

Objective PF-2.6: Integrate fire protection systems into new structures as a means of improving fire protection services through adoption of a County ordinance.

Objective PF-2.7: Encourage more effective use of existing emergency and medical services by emphasizing an integrated Countywide response system.

Objective PF-2.8: Continue to coordinate fire protection services and planning with all other related agencies.

Policy PF-2a: Plan, design, and construct park and recreation, fire and emergency medical, public education, and solid waste services and public utilities in accordance with projected growth, except as provided in Policy LU-4d.

Policy PF-2b: Work with the Cities to provide park and recreation, public education, fire and emergency medical, and solid waste services as well as public utilities. Use proposed annexations, redevelopment agreements, revenue sharing agreements, and the CEQA process as tools to ensure that incorporated development pay its fair share toward provision of these services.

Policy PF-2c: Use the following standards for determination of park needs: Twenty acres of regional parks per 1,000 residents countywide and five

acres of local and community parks per 1,000 residents in unincorporated areas. A portion of State parklands may be included to meet the standard for regional parks.

Policy PF-2d: Provide community parks as needed in Urban Service Areas until the area incorporates, are annexed, or another service providing entity is established.

Policy PF-2e: In the event that a proposed park or school site is designated on the GP 2020 Land Use Maps (Figures LU-5a through 5i) or Open Space and Resource Conservation Maps (Figures OSRC-5a through 5i), consider the designation as applying to a general area rather than a particular parcel, unless and until a particular site is acquired and approved for public use development authorized by the land use plan.

Policy PF-2f: Adopt and implement a new Outdoor Recreation Plan with parks and recreation facilities necessary to meet the needs of GP2020.

Policy PF-2g: Require dedication of land or in-lieu fees as a means of funding park and fire services and facilities.

Policy PF-2h: Consider establishing a land acquisition reserve fund to purchase park or recreation lands in areas lacking adequate park facilities.

Policy PF-2i: Consider user fees in County park areas where special facilities are available. Offer discounts to County residents.

Policy PF-2j: Where there is an unmet need for local park facilities, encourage the formation of County service areas or other special districts to meet the need, if economically feasible.

Policy PF-2k: Assist school districts in estimating the amount, rate and location of projected population growth within their attendance areas.

Policy PF-2l: Continue to implement State law pertaining to school impact mitigation that allows for the dedication of land, the payment of fees, or both, as a condition of approval for development projects.

Policy PF-2m: Prepare a Fire Services Master Plan for urban and rural areas in cooperation with the Cities, State, and other fire service agencies.

The minimum contents necessary for an adequate master plan are: (1) A statement of objectives, policies and programs, (2) A forecast of growth, (3) Projected fire and emergency medical service needs, and (4) A level of service assessment.

Policy PF-2n: Require prior to discretionary project approval written certification that fire and related services customarily provided to comparable uses are available or will be available prior to occupancy for projects within the service area of the applicable fire agency.

Policy PF-2o: The Department of Fire Service shall review and comment on any proposed changes in the boundaries of areas of State and local responsibility for wildland fire protection and the service boundaries of local fire districts and volunteer companies.

Goal OSRC-17: Establish a countywide park and trail system that meets future recreational needs of the County's residents while protecting agricultural uses. The emphasis of the trail system should be near urban areas and on public lands.

Objective OSRC-17.1: Provide for adequate parklands and trails primarily in locations that are convenient to urban areas to meet the outdoor recreation needs of the population, while not negatively impacting agricultural uses.

Policy OSRC-17a: Apply the "Public-Quasi Public/Park" designation to all existing local, County, and State parklands. Policy OSRC-17b: Apply the "Planned Parks" designation to indicate general areas where a need exists for parks.

Policy OSRC-17c: Consider requiring dedication of public access by fee or easement from a public roadway to a navigable stream (Subdivision Map Act), the ocean, public lakes, and major reservoirs as a condition of approval for major subdivisions if the project blocks an existing public access point or it results in the need for additional access, and other reasonable access is not available.

Policy OSRC-17d: The trails on Figure OSRC-3 make up the County's designated plan for trails. Trail locations are approximate and are described below. Roadways may be used where access cannot be obtained through private property.

Policy OSRC-17e: Encourage private organizations to assist in the construction and maintenance of trails.

Policy OSRC-17f: Consider requiring a dedication in fee or by easement for trails as a condition of approval of subdivisions. There must be a need identified on Figure OSRC-3 and the project must either block an existing access or result in the need for additional recreational opportunities. Locate and fence trails to minimize impacts on agricultural uses.

Policy OSRC-17g: Use the following guidelines to determine consistency of projects involving lands with abandoned railroad rights of way where reasonably related to the impacts of the project: (1) The project does not or will not preclude the use of the right-of-way for trails. (2) A width of 60 feet generally is reserved for trail purposes, unless the Regional Parks Department determines that a different width would be adequate. (3) An irrevocable offer of dedication for the right-of-way has been made to the County of Sonoma.

Policy OSRC-17h: Identify and evaluate alternative sites in the Boyes Hot Springs area to meet the projected need for a regional park facility in Sonoma Valley.

Sonoma County Code

Chapter 13, Sonoma County Fire Safety Ordinance, outlines the County Fire Code which includes information on emergency planning and preparedness, fire service features, and fire protection systems. The 2019 California Fire Code as adopted by reference and amended in Article IV, constitutes the County Fire Code.

Chapter 25, Subdivisions, provides parkland dedication requirements in Section 25-58. The County has determined that the amount of existing recreational and community park area exceeds five acres of property for each 1,000 persons residing within this county. Therefore, in accordance with Government Code Section 66477, each subdivider shall dedicate land or pay an in-lieu fee, in order to provide five acres of park area per one thousand 1,000 persons residing in the proposed subdivision.

Chapter 25C, School Facilities Fee/Dedication Ordinance, provides a method for financing interim school facilities necessitated by new residential developments causing conditions of overcrowding. At the option of the impacted school district, school impact fees or the dedication of land may be required pursuant to this chapter or, in the alternative, pursuant

to Chapter 25D, Alternative School Facilities Fees Dedication Ordinance, of the Sonoma County Code or an ordinance adopted in connection with a specific plan prepared in accordance with Government Code sections 65450 et seq.

3.13.2 Environmental Setting

3.13.2.1 Physical Setting

Police Protection

The Sonoma County Sheriff's Office (Sheriff's Office) provides law enforcement, coroner, court security, and detention services for unincorporated Sonoma County, the Town of Windsor, and the City of Sonoma. The Sheriff's Office is located at 2796 Ventura Avenue, approximately 18 miles northwest of the Planning Area. As of 2021, there are 629 total allocated staff: 223 sworn deputy sheriff staff, six sworn correctional staff, and 69 civilian staff in Law Enforcement; one sworn deputy sheriff, 202 sworn correctional deputies, and 77 civilian staff in Detention; five civilian staff in Telecommunications; and 10 sworn deputy sheriff staff, three sworn correctional staff, and 33 civilian staff in Sheriff's Administration.¹⁰⁸

The Sheriff's Office released its first Strategic Plan in July 2019. This document outlines the goals that guide activities and priorities through 2022 including increasing staffing levels; strengthening community relationships; identifying and working toward long-term facility needs of the Sheriff's Office; and protecting and supporting the community during disasters, large-scale emergencies, and recovery efforts.¹⁰⁹

¹⁰⁸ Sonoma County Sheriff's Office. August 2021. Sonoma County Sheriff's Office Annual Report 2020-2021. Available:

[https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20\(COLOR\)%20.pdf](https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20(COLOR)%20.pdf). Accessed: June 17, 2022.

¹⁰⁹ Sonoma County Sheriff's Office. July 2019. Sonoma County Sheriff's Office Strategic Plan 2019-2022. Available:

<https://static1.squarespace.com/static/542ec317e4b0d41ade8801fb/t/5d1d422bd7cf6b000110be2c/1562198581103/Strategic-Plan-2019-2022-FINAL-remediated.pdf>. Accessed: June 6, 2022.

The Planning Area is served by the Sheriff's Office and is part of the Valley Zone (Zone 6), staffed from the Sonoma Valley substation located approximately four miles to the south of the Planning Area and just west of the City of Sonoma. Surrounding communities including Glen Ellen and Eldridge are also within this zone boundary.

The Planning Area would be included in the Valley Zone (Zone 6). The Sheriff's Office has not established service ratios or response time goals at this time. In 2020, the average response time for patrol in unincorporated areas was 10 minutes and 28 seconds for Priority 1 calls for service.¹¹⁰

Fire Protection

The SDC property constitutes its own fire district served by the Eldridge Fire Department, which operates out of the station located directly on the main campus. The Eldridge Fire Department is a State agency that coordinates with the County as an all-risk department, responding to all emergencies within the district. Due to uncertainty whether the department would continue operation after closure of the developmental center, the fire department lost many of its staff members and is currently understaffed. However, the Eldridge Fire Department was extended to continue full operation and currently covers two of three shifts, supplemented by staff from the neighboring fire protection district Sonoma Valley Fire and Rescue Authority (SVFRA) for the remaining shift, following a 2/4 schedule (two days on, four days off).

The Eldridge Fire Department maintains a two-minute getaway service standard from the time they receive a service call, which are responded to through a mobile data transmitter (MDT) system. Equipment operated by the department includes a Type 1 fire engine and a Type 3 brush rig. An ambulance is also available through partnership with SVFRA, but it is not used for service calls. The Eldridge Fire Department does not have an ISO (Insurance Services Office) rating but run under SVFRA's Class 1 rating standard.

The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire

¹¹⁰ Sonoma County Sheriff's Office. August 2021. Sonoma County Sheriff's Office Annual Report 2020-2021. Available: [https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20\(COLOR\)%20.pdf](https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20(COLOR)%20.pdf). Accessed: June 17, 2022.

Protection District, with which the Eldridge Fire Department has automatic aid agreements. The Sonoma County Local Agency Formation Commission (LAFCO) will also have the responsibility to review and approve or disapprove these proposed changes regarding expanding the existing Sonoma County fire districts to serve the Planning Area.

The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing outbreak of fires and to regulate storage, handling, and processing of hazardous materials in the county. Sonoma County has 25 fire departments that cover the 44 public fire districts in the county, with additional support from Cooperative Fire Protection Agreements with the State Department of Forestry and Fire Prevention (CAL FIRE).

In 2002, the City of Sonoma and Valley of the Moon Fire Protection District entered into a Joint Powers Agreement creating a public entity known as the Sonoma Valley Fire & Rescue Authority (SVFRA). The SVFRA provides all-risk fire, rescue, and emergency medical services to 58.5 square miles comprised of the communities of Agua Caliente, Boyes Hot Springs, Diamond-A, El Verano, Feters Hot Springs, Temelec, Seven Flags, and contract services to the City of Sonoma and Glen Ellen.

As of 2022, there are four career fire stations and two volunteer-staffed stations organized into six companies under the SVFRA—four paramedic engine companies and two ALS ambulances. SVFRA also staffs an assortment of specialized equipment through the supplemental staffing of 41 dedicated volunteer firefighters. This equipment includes a Ladder Truck, two Rescues, three Water Tenders, and nine additional Fire Engines, including six specialized wildland engines. The SVFRA also provides ambulance service to the greater Sonoma Valley, an area of approximately 100 square miles. Station 5, the Glen Ellen Station, is also staffed by SVFRA employees.¹¹¹

SVFRA maintains standards of response coverage benchmarks of six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. Based on the 2017 Annual Report, which represents the most recent data available, there were approximately 5,300 calls for service, most of which were for

¹¹¹ Sonoma Valley Fire District. 2022. District Overview. Available: <https://www.sonomavalleyfire.org/district-overview>. Accessed: May 24, 2022.

emergency medical services (68 percent). The District has achieved a one minute and 56 second average improvement in response times.¹¹²

Other nearby fire stations include the Mayacamas Volunteer Fire Department in the Mayacamas Range west of the SDC site, and the CAL FIRE Glen Ellen Station located within the Sonoma Valley Regional Park.

With four SVFRA stations in addition to the Eldridge Fire Department within four miles of the SDC site, fire service is well-established in the area. **Table 3.13-1** lists fire department stations anticipated to serve the Planning Area.

Table 3.13-1: Fire Department Stations Serving the Planning Area

<i>Fire Station</i>	<i>Services</i>
Eldridge Fire Department 15000 Arnold Drive, Eldridge	Type 1 Fire Engine
SVFRA Fire Station 1 630 Second Street West, Sonoma	Type 1 Fire Engine ALS Ambulance
SVFRA Fire Station 2 877 Center Street, El Verano	Type 1 Fire Engine
SVFRA Fire Station 3 1 West Agua Caliente Road, Agua Caliente	Type 1 Fire Engine ALS Ambulance
SVFRA Fire Station 5 13445 Arnold Drive, Glen Ellen	Type 1 Fire Engine

Source: Dyett and Bhatia, 2022; Sonoma Valley Fire & Rescue Authority, 2022

Schools

The Planning Area and surrounding communities, including Glen Ellen and Eldridge, fall within the Sonoma Valley Unified School District (SVUSD), which consists of nine public schools serving kindergarten through grade 12: five elementary schools, two middle schools, and two high schools (**Table 3.13-2**). SVUSD enrollment for the 2021-2022

¹¹² Sonoma Valley Fire District. 2017. Annual Report 2017. Available: <https://www.sonomavalleyfire.org/files/2725f7def/Annual+Report+2017.pdf>. Accessed : May 24, 2022.

school year was 3,334 students.¹¹³ There were 276 certificated staff members employed as of 2018, translating to approximately 12 students per staff.¹¹⁴ There are also 46 preschools/early learning facilities in Sonoma County provided through a combination of center-based childcare and State programs; three of these early learning sites are in the local area.

The Planning Area is located within the Dunbar Elementary school boundary of SVUSD. Dunbar Elementary school is 3.4 miles away from the SDC campus, and the next nearest elementary school is Flowery Elementary (3.5 miles away). The nearest middle school is Altamira Middle (2.9 miles away), the nearest high school is Sonoma Valley High (8.0 miles away), and the nearest preschool is 4Cs Flowery Preschool (3.5 miles away). El Verano and Flowery elementary school boundaries are roughly the same distance from the SDC site, and both begin immediately south of West Agua Caliente Road.

Some of the local school campuses include facilities that date back to the 1950s, though they have undergone various modernizations and renovations throughout the years. As a result, the condition of facilities of SVUSD schools range from good to in need of improvement. SVUSD has a Facilities Master Plan that guides funding for improvement projects to ensure that school facilities are up-to-date and provide engaging environments for students to learn in. Started in 2011 and last updated in 2017, the most recent Facilities Master Plan consists of 33 projects, including new classrooms, multi-purpose room and library modernizations, and new athletic facilities, that are scoped for six to eight years from 2017 as bond sales for the 2010 voter-approved general obligation bond Measure H occur.

¹¹³ Sonoma Valley Unified School District. February 2022. SVUSD Student Population Forecast: School Year 2021-2022 Report. Available: <file:///C:/Users/clare.DB/Downloads/Student%20Demographics.pdf>. Accessed: June 16, 2022.

¹¹⁴ California Department of Education. 2019. Certificated Staff Data Reports. Available: <https://www.cde.ca.gov/ds/ad/ssctop.asp>. Accessed : June 16, 2022.

Table 3.13-2: Sonoma Valley Unified School District Schools.

<i>School Name</i>	<i>Grades Served</i>	<i>Enrollment, 2021-22</i>
Dunbar Elementary	K-5	150
El Verano Elementary	K-5	280
Flowery Elementary	K-5	357
Prestwood Elementary	K-5	298
Sassarini Elementary	K-5	257
Altamira Middle	6-8	367
Adele Harrison Middle	6-8	404
Sonoma Valley High	9-12	1,165
Creekside High	9-12	56
Total		3,334

Note: Calculated total enrollment includes only public schools in the district and does not include private or sectarian schools.

Source: Sonoma Valley Unified School District, 2022

The SVUSD Student Population Forecast: School Year 2021-2022 Report provides 10-year forecasts student populations up to School Year 2031. Provided in this report are 10-year projections of student yield factors, shown in **Table 3.13-3**.¹¹⁵ When applied to planned residential development units, student yield factors can determine the number of additional students expected to be generated from new construction within the district.

¹¹⁵ Sonoma Valley Unified School District. February 2022. SVUSD Student Population Forecast: School Year 2021-2022 Report. Available: <file:///C:/Users/clare.DB/Downloads/Student%20Demographics.pdf>. Accessed: June 16, 2022.

Table 3.13-3: Sonoma Valley Unified School District Student Yield Factors

<i>Housing Type</i>	<i>K-6 Yield</i>	<i>7-8 Yield</i>	<i>9-12 Yield</i>
SFD	0.4	0.1	0.2
APT/AFD	0.2	0.05	0.1

Note: SFD = single family detached; APT = apartment; AFD = affordable housing

Source: Sonoma Valley Unified School District, 2022

Parks

The Sonoma County Regional Parks Department provides 54 parks throughout the county that offer wild landscapes and miles of trails in addition to amenities such as sports fields, playgrounds, and campgrounds. Of these parks, six are located within five miles of the Planning Area: Ernie Smith Community Park, Larson Park, Maxwell Farms Regional Park, Moran Goodman Park, North Sonoma Mountain Regional Park, and Sonoma Valley Regional Park. Each of these parks is shaped by a master plan that guides development and maintenance of the park.

While Ernie Smith and Larson community parks are larger facilities and offer more amenities such as sports fields that provide recreational opportunities for many residents, more localized parks, such as Moran Goodman, have limited accessibility and range of use. Regional parks, including Maxwell Farms, North Sonoma Mountain, and Sonoma Valley, offer more extensive use opportunities. Furthermore, lack of open space and water-based recreation in the very densely populated Sonoma Springs area has contributed to unauthorized use of Lake Suttonfield for fishing, swimming, and damming of Sonoma Creek for recreational play, indicating an existing community desire for more recreational opportunities. A variety of state parks and conservation areas owned by public, private, and non-profit organizations supplement the County's park inventory, primarily providing additional hiking or multi-use trails and picnic areas from which to enjoy the rich natural landscape of Sonoma Valley.

Parks and recreational spaces currently account for approximately 12 acres of land use in the Planning Area. In addition, there are 16 miles of trails and roads with low traffic volumes and vehicle speeds on the SDC property and six access points to these paths. Since SDC's closure, public recreational use has neither been formally encouraged nor facilitated with trail maps or trailheads, excluding Camp Via which continues to operate in

the Planning Area. Rather, community knowledge about these trails is generally word of mouth or through informal trail blogs online. Access to these trails is generally from the adjacent Jack London State Historic Park to the west or Sonoma Valley Regional Park to the east of the site. Other recreational resources on the SDC property include the Baseball Field, Oak Valley School gym, Butler Pool and Bathhouse, and a historic carousel within the Core Campus, in addition to equestrian facilities and John Mesa Park in the eastern agricultural area and a privately-operated ropes course on the way to Camp Via to the west of the main campus. While swimming, fishing, and other aquatic activities are prohibited in Suttonfield and Fern lakes, these features also serve as recreational destinations valued for their scenic views enjoyed by hikers and equestrians along the trails and unpaved roads encircling the lakes.

The conditions of these on-site resources range from good to in disrepair. The ropes course facility continues to operate and provides experiential training, challenge courses, teambuilding, corporate events and wilderness adventure to a variety of groups. The Baseball Field on the northern edge of the main campus adjacent to Arnold Drive is a lit, well-maintained athletic field used by local organizations and clubs as well as informally by the local community for softball and soccer. Other facilities in good to fair condition include the Oak Valley School gym that houses an indoor basketball court and the historic carousel on Palm Street, which was renovated sometime around 2008. Two unmaintained former soccer fields (otherwise known as John Mesa Park) total approximately 2.4 acres at the southeast corner of the property. This area has more recently been used for informal soccer play by the community but was closed along with the equestrian facilities after the 2017 Sonoma Complex (Nuns) Fire. Butler Pool and Bathhouse, located on Railroad Drive, has been identified as a health and safety hazard and is being removed.

Other Public Facilities

Given that the SDC site is currently under State jurisdiction and was originally designed as a primarily self-enclosed campus, access to civic facilities was not previously assessed or established, and as a result, are not common in the area. Most of the County administrative offices where residents of unincorporated Sonoma County receive local services are located in the City of Santa Rosa, which is the county seat. The nearest public community facility is the Sonoma Community Center, approximately 6.3 miles away in the City of Sonoma.

The Sonoma County Library has served as the county-wide public library system for cities, towns, and communities in Sonoma County including Cloverdale, Cotati, Guerneville, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma and Windsor.

Library services and programs are offered at 14 branch locations as well as online and via a bookmobile that together represent community hubs for learning, arts, technology, and gathering. The closest library to the Planning Area is the Sonoma Valley Regional Library in the City of Sonoma, approximately 5.3 miles south of the site.

A portion of the Planning Area is within the Sonoma State Home Historic District, which includes two individual resources that are listed on the National Register of Historic Places, the Main Building and the Sonoma House. Other nearby Sonoma County Historic landmarks designated by the Landmarks Commission based on local, State, and federal criteria include Jack London Barn in the Jack London State Historic Park, Valley of the Moon Winery in Eldridge, and Sobre Vista Overview Farms just south of Eldridge. The City of Sonoma also hosts California's northernmost Mission, adjacent to the historic Sonoma Plaza. These resources further contribute to the historic fabric of the Planning Area and are important cultural assets to surrounding communities.

3.13.3 Impact Analysis

3.13.3.1 Significance Criteria

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

Criterion 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- a) Fire protection
- b) Police protection
- c) Schools
- d) Parks
- e) Other public facilities

Criterion 2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

Criterion 3: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.13.3.2 Methodology and Assumptions

The above criteria were used to determine whether the proposed project would have a significant impact related to public services and recreation. Potential project-related impacts were analyzed based on their potential to result in either physical degradation of public facilities, or a reduction of public service ratios such that construction of a new public service facility would be required to meet service ratio needs as identified in applicable documents (e.g., the Sonoma County General Plan 2020 and Sonoma County General Plan Environmental Impact Report [General Plan EIR]), as well as other local planning documents, to identify the project's potential to result in impacts.

3.13.3.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address public services and recreation:

Land Use

Policies

- 4-1 Promote a fine-grained mix of land uses within the Historic Core, with housing, hospitality, office, commercial, and community uses fronting on the Central Green to create a vibrant community center with activity throughout the day.
- 4-5 Collaborate with local organizations such as the Sonoma Valley Certified Farmer's Market, the Springs Community Farmer's Market, and other local farming organizations to hold a regular farmer's market in the Central Green, if feasible.
- 4-21 Preserve and enhance the landscape elements that contribute to the significance and character of the Sonoma State Home Historic District, including the formal tree grid at the Central Green, the baseball field, Sonoma Bridge, the front entrance gate, and the Eldridge Cemetery, as well as primary circulation routes.

- 4-28 Prepare interpretive signage, art, or other exhibition onsite to educate residents and visitors about the history of the site, including pre-history, Native American history and the history of the Sonoma State Home. Signage should be available in English and Spanish and Native American tribal language as appropriate.

Open Space and Resources and Hazards

Goals

- 2-B Balance: Promote a balance of habitat conservation, agriculture, and recreational open space, reflecting the recent historic use of the surrounding open space.
- 2-C Recreational Resources: Support the continued use of the preserved open space at the site as a recreation resource for the community by establishing access points to the system of trails and recreation spaces.

Policies

- 2-1 Work with Sonoma County to dedicate the preserved open space as regional parkland.
- 2-4 Streamline the existing trail system by mapping, improving, and clearly marking designated trails for recreational use in order to minimize negative effects on the open space from recreational use.
- 2-5 Consider creating a designated area for water recreation at Suttonfield Lake, such as an access point near the trail from Arnold Drive with rail fencing and clearly marked signage and rules for swimming, dogs, and non-motorized boating.

Community Design

Goals

- 5-C Pedestrian-Oriented Development: Design development to enhance access and walkability, and pedestrian comfort, safety, and delight.

Policies

- 5-16 Develop a cohesive and integrated system of parks and open spaces, to fulfill the active and passive recreational needs of the community, building on the overall framework outlined in Figure 5.1-1.
- 5-17 Ensure a balanced mix of spaces and equipment at overall project scale for different activities and ages, such as playgrounds, exercise equipment, bocce or horseshoe courts, multi-purpose sports fields, and gathering areas of different scales.
- 5-18 Include well-designed accessible amenities such as restrooms, drinking fountains for people and dogs, benches, community bulletin boards, and picnic tables.
- 5-19 Design public spaces with handrails, ramps, and other accessibility measures that meet and exceed ADA requirements.
- 5-20 Central Green and Surrounding Roadways – The Central Green will be preserved as an open, grassy expanse that has flexibility to be used for special events as well as day-to-day relaxation, picnics, and informal recreation. Additional perimeter shade trees and lighting is recommended, with infill trees as needed to maintain a consistent spacing of approximately 50' on center. Surrounding roadways should be improved with a textured surface that slows traffic and creates an attractive setting for special events that involve temporary street closures for food and other vendors and activities.
- 5-21 Central Green Facing Properties – New development and renovation of adjacent buildings and sites should provide small plaza spaces, landscaping, lighting, seating, and other amenities within the generous front setback areas to complement the Central Green and surrounding roadways. These areas should help to activate the overall Central Green area and function as attractive, semi-public open spaces in their own right. For buildings that face another street in addition to the Central Green should treat the Central Green as a primary façade, while also presenting active and attractive frontages to the secondary façade.

- 5-22 New development in the Planning Area shall be designed to incorporate CALGreen and the Sonoma County Water Efficient Landscape Ordinance (Chapter 7D3 of the Sonoma County Code) requirements as applicable in order to ensure compliance with federal and State requirements for water efficiency.
- 5-59 Require a mix of high-quality, long-lasting materials for all new buildings, and use reclaimed and salvaged materials from demolished SDC buildings wherever feasible.
- 5-60 Ensure that development meets Title 24 and CALGreen requirements and incorporates green building measures such as sustainably designed sites, water systems, passive heating and cooling, sustainable materials, indoor environmental and air quality, and use of innovative sustainability techniques.

Public Facilities, Services, and Infrastructure

Goals

- 6-A Community Facilities: Provide high-quality community facilities and spaces to serve new residents of the SDC site and the greater Sonoma Valley.
- 6-B Parks and Recreation: Maintain and increase the park spaces at SDC to provide recreational spaces for active play, gatherings, and leisure, including facilities to serve the needs of people of different ages, interests, and abilities.

Policies

- 6-1 Expand an existing Sonoma County fire district to serve SDC, and identify a location for the fire district to construct a new fire station within the Core Campus. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.
- 6-2 Work closely with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools.

- 6-3 Ensure that the existing baseball and soccer fields as shown in Figure 6.2-1 are retained and maintained with continued public access.
- 6-4 Provide a fenced off-leash dog park within the Core Campus at least 200 feet from any creeks or wildlife corridors, with amenities such as benches, shade trees, and drinking water access.
- 6-5 Provide park spaces east of Arnold Drive on both sides of Sonoma creek with easy access from adjacent residential developments.
- 6-6 Ensure that parks and public spaces in the Core Campus offer a diverse range of amenities for a diverse range of park users, such as children's playgrounds and play areas, picnic areas, multi-use sports fields, an amphitheater or other outdoor performance spaces, areas for quiet contemplation, night sky viewing areas, and support facilities to enhance user comfort, including restrooms, drinking fountains, shade trees, and benches.
- 6-7 Allocate space for a local non-profit or other operator, in collaboration with Sonoma County Regional Parks Department, to build and operate a gym and community center to serve the wider Sonoma Valley community.

3.13.3.4 Impacts

Impact 3.13-1 Development under the Proposed Plan would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. (*Less than Significant*)

Police Protection

The Planning Area is served by the Sonoma County Sheriff's Office and is part of the Valley Zone (Zone 6), staffed from the Sonoma Valley substation located approximately

four miles to the south of the Planning Area. The Sheriff's Office has not established service ratios or response time goals at this time. In 2020, the average response time for patrol in unincorporated areas was 10 minutes and 28 seconds for Priority 1 calls for service.¹¹⁶ However, the increased local population generated by implementation of the Proposed Plan may increase the need for police services.

New development under the Proposed Plan consists of the projected population as well commercial, institutional, public uses, and employment accessible to the greater region, which would likely result in a subsequent increase in police service calls to the Planning Area compared to existing conditions. Proposed Plan Goal 5-C would assist in reducing the demand for police services by adequately and proactively addressing public safety concerns through building design and site planning. The public realm will be designed for pedestrian-oriented development which is meant to enhance pedestrian comfort and safety.

One of the goals in the Sonoma County Sheriff's Office Strategic Plan 2019-2022 is to increase staffing levels by filling all vacancies and advocating for additional allocations. Thus, there is potential for the Sheriff's Office to continue to increase staffing levels to accommodate future growth in the county. This could require the construction of new police service facilities that may result in environmental impacts, but details of such future need, facility location, and timing, and any specific impacts associated with the construction of such new facilities are not known at this time, and any analysis of such impacts would be speculative. In addition, any such new facilities would require separate environmental analysis and any necessary project-specific mitigation prior to being considered for approval. As a result, this impact would be less than significant.

Fire Protection

The Eldridge Fire Department continues full operations that service the Planning Area, supplemented by staff from the neighboring fire protection district, SVFRA. The increased local projected buildout population, employment, and housing units generated by the Proposed Plan would likely result in a subsequent increase in fire and emergency medical service calls to the Planning Area compared to existing conditions. Standards of response coverage benchmarks, as defined in the SVFRA Standards of Response Coverage report,

¹¹⁶ Sonoma County Sheriff's Office. August 2021. Sonoma County Sheriff's Office Annual Report 2020-2021. Available:

[https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20\(COLOR\)%20.pdf](https://data.sonomasheriff.org/files/internet/FINAL%20Annual%20Report%202020-2021-%209.2021%20(COLOR)%20.pdf). Accessed: June 17, 2022.

include six minutes until the first unit arrives on the scene for urban areas, seven minutes for suburban areas, and 12 minutes for rural areas, with a goal of meeting these standards for 90 percent of all calls for service. In order to maintain standards of response coverage benchmarks as a result of buildout under the Proposed Plan, it is anticipated that services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District. Further, the Proposed Plan will expand the existing Sonoma County fire district to serve the Planning Area and identify a location for the fire district to construct a new fire station within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes. The Proposed Plan will also explore the feasibility of providing an additional east-west connection from the Core Campus to SR 12 to further improve emergency access (proposed Policy 3-5).

Construction of a new fire station could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new developments of fire protection facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (proposed Policy 6-1). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new fire station or SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5.2-30 and 5.2-31 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Because there is not sufficient information as to location or timing for a new fire station, analysis of potential impacts would be speculative at this time. Further, construction of a new fire station would be subject to separate project-level CEQA review at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate. As such, compliance with existing regulations as well as proposed policies would reduce impacts to a less-than-significant level related to the provisions of fire protection facilities.

Schools

As discussed in Section 3.12: Population and Housing, buildout of the Proposed Plan would result in up to 1,000 new residential units and a future population of 2,400 residents. While 220 of these units are age-restricted for seniors, it is reasonably foreseeable that some of these units would support families with children that may attend SVUSD facilities. To calculate student potential for new development under the Proposed Plan, the

applicable student generation rates provided in the SVUSD Student Population Forecast: School Year 2021-2022 Report (see **Table 3.13-3**) are applied to buildout projections of the Proposed Plan, as shown in **Table 3.13-4**. Specific generation rates are applied based on the housing type of the residential development within the Planning Area.

Using the SVUSD's student yield factors for K-6, 7-8, and 9-12 grade student populations per household for single-family housing, apartments, and affordable housing units, implementation of the Proposed Plan would result in a total of approximately 448 new students within the Planning Area.

Table 3.13-4: Sonoma Valley Unified School District Student Generation Rates

<i>Housing Type</i>	<i>Residential Units under the Proposed Plan</i>	<i>New K-6 Student Population</i>	<i>New 7-8 Student Population</i>	<i>New 9-12 Student Population</i>	<i>Total New K-12 Student Population³</i>
SFD ^{1,2}	500	200	50	100	350
APT/AFD ¹	280	56	14	28	98
Total	780⁴	256	64	128	448

Notes:

1. SFD = single family detached; APT = apartment; AFD = affordable housing
2. SFD yields were used to calculate student generation rates for both single-family detached and attached housing types.
3. Student Yield Factors from Table 3.13-3 were multiplied by new residential units by housing type to calculate new student populations.
4. The 220 senior units that will be developed under the Proposed Plan are not included in this table.

Sources: Sonoma Valley Unified School Districts, 2022; Dyett and Bhatia, 2022

According to the SVUSD Student Population Forecast: School Year 2021-2022 Report, the total enrollment capacity of all SVUSD schools is 6,074 students. However, as of School Year 2021, there were 3,334 enrolled students at SVUSD schools, resulting in a utilization of 54.9 percent. Further, the report forecasts the number of total enrolled students during School Year 2031 to be 2,413.1 students, which is approximately a 28

percent decrease from School Year 2021 enrollment.¹¹⁷ Although enrollment trends and district forecasts are decreasing, the Proposed Plan would result in an increase of 448 students. While this increase does not align with overall trends, it represents a modest growth on a local scale, and existing school facilities already have more than sufficient capacity to accommodate this growth.

Proposed Policy 6-2 would also require project applicants for development under the Proposed Plan coordinate with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools. Additionally, project applicants for development under the Proposed Plan would be required to comply with SB 50, which mandates statutory school facilities fees for residential and commercial developments. Compliance with SB 50 would financially offset impacts on SVUSD capacity and would provide funding for potential future school facility development needs associated with the Proposed Plan-related population increase. Therefore, due to available school capacity, compliance with SB 50, and implementation of Proposed Plan policies, construction or expansion of new school facilities would not be required, and this impact would be less than significant.

Parks

There are 54 regional parks and trails within Sonoma County that are managed by the Sonoma County Regional Parks Department as well as additional recreational facilities such as community and neighborhood parks and school athletic fields. According to the Sonoma County General Plan 2020, the County's regional parkland ratio is 20 acres of parkland per 1,000 residents. The County's community and neighborhood parkland ratio is 2.5 acres of parkland per 1,000 residents.

Consistent with the Quimby Act (California Government Code Section 66477), the General Plan 2020 Policy PF-2g requires dedication of land or in-lieu fees as a means of funding park facilities. Policy PF-2c requires the use of the following standards for determination of park needs: 20 acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. Although the Proposed Plan would result in a population increase of about 2,400, there are approximately 12 acres of parks and recreational facilities designed into the Proposed Plan. Moreover, 755 acres of the Planning Area will be retained as open space that will

¹¹⁷ Sonoma Valley Unified School District. February 2022. SVUSD Student Population Forecast: School Year 2021-2022 Report. Available: <file:///C:/Users/clare.DB/Downloads/Student%20Demographics.pdf>. Accessed: June 16, 2022.

be publicly accessible and integrated into the regional parks system (proposed Policy 2-1). Open space preservation doesn't require new construction, so impacts are negligible, but other recreational facilities will require construction of new or physically altered facilities (proposed policies 2-1, 6-3, 6-4, 6-5, 6-6, and 6-7) and have a potentially significant environmental impact.

The environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR (see Section 3.3: Air Quality, Section 3.6: Energy and Greenhouse Gas Emissions, Section 3.11: Noise, and Section 3.14: Transportation). Detailed design of the new park facilities has not yet been completed, so site-specific impacts cannot be evaluated at this time. However, construction of new parks would be subject to separate project-level CEQA review at the time the design and exact location is proposed in order to identify and mitigate any project-specific impacts as appropriate. As such, compliance with existing regulations would reduce impacts to a less-than-significant level related to the provisions of park facilities.

Other Public Facilities

Implementation of the Proposed Plan would increase local population as well as develop commercial, institutional, and public uses accessible to the greater region which would increase demand for other public facilities. The County has not adopted service standards for other public facilities but supports expansion and funding mechanisms to ensure adequate access. The Proposed Plan would create a diverse range of spaces at different scales and sizes throughout the Planning Area to provide opportunities for people to congregate and relax, which could serve as community facilities (proposed policies 4-1, 4-5, 4-21, 4-28, and 2-1). These include a mix of land uses fronting on the Central Green, space to host a weekly farmer's market, and opportunities for historic interpretation on site. Further, Proposed Policy 6-7 requires space to be allocated for Sonoma County and local partners to build and operate a community center to serve the wider Sonoma Valley community.

In the event that a new public service or community facility is needed, construction of such a facility could result in subsequent environmental impacts; the specific impacts of which are not known at this time and any analysis would require speculation. However, any new developments of public service or community facilities necessary to serve the Planning Area would be located and constructed on existing urban and built-up land. Environmental impacts related to construction emissions, VMT, and biological resources associated with construction or expansion of the proposed community facilities are accounted for in

technical modeling provided in other chapters of this EIR. Further, proposed policies 5-59 and 5-60 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Future recreational facilities will tier from this EIR to identify and mitigate site-specific impacts if and when design of those parks is complete. Therefore, public service and community facilities impacts of the Proposed Plan would be less than significant.

Mitigation Measures

None required.

Impact 3.13-2 Development under the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (*Less than Significant*)

As discussed in Chapter 3.12: Population and Housing, buildout of the Proposed Plan would result in up to 1,000 new residential units and a future population of 2,400 residents. In addition, implementation of the Proposed Plan would result in approximately 940 jobs and develop commercial, institutional, and public uses accessible to the greater region. The Planning Area is located between State and regional parks and is located within five miles of six regional parks that provide an array of recreational amenities. Further, the Jack London State Historic Park and Sonoma Valley Regional Park border the Planning Area. The context of the Planning Area is therefore rich with recreational resources, and the approximately 755 acres of open space within the Planning Area itself is also a valuable recreational resource for future residents and surrounding communities.

As discussed under Impact 3.13-1, the Proposed Plan would preserve approximately 755 acres of open space within the 945-acre Planning Area, which is envisioned as a recreational amenity with designated trails and water recreational opportunities that integrate with existing regional parks (proposed policies 2-1, 2-4, and 2-5). Additionally, the Core Campus subarea within which development would primarily be focused would include approximately 12.1 acres of active open space which is envisioned to include the Central Green, Baseball Fields, a dog park, and a diverse range of parks and public spaces (proposed policies 6-3, 6-4, 6-5, and 6-6). These park spaces would provide a diverse range of amenities for a diverse range of park users, such as children's playgrounds and play areas, picnic areas, multi-use sports fields, an amphitheater or other outdoor performance spaces, areas for quiet contemplation, night sky viewing areas, and

support facilities to enhance user comfort, including restrooms, drinking fountains, shade trees, and benches. The Central Green would also serve as the vibrant heart of SDC, with a mix of uses and activity throughout the day. Community facilities such as the proposed gym and community center would service future residents and also serve the wider Sonoma Valley community.

Construction of proposed park and recreation facilities could result in subsequent environmental impacts; the specific impacts of which are not known at this time and any analysis would require speculation. However, any new developments of parks or recreation facilities necessary to serve the Planning Area would be located and constructed on existing urban and built-up land. Environmental impacts related to construction emissions, VMT, and biological resources associated with construction or expansion of the proposed facilities are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5-59 and 5-60 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Future recreational facilities will tier from this EIR to identify and mitigate site-specific impacts if and when design of those parks and recreation facilities is complete.

All of these proposed park and recreational facilities would distribute use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of these facilities would not occur or be accelerated. Moreover, proposed Goal 6-B and Policy 6-3 require the protection and maintenance of existing and proposed recreational facilities to support continued public access without physical deterioration. Therefore, given the extensive park and recreational opportunities that will be offered within the Planning Area, development under the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and this impact is less than significant.

Mitigation Measures

None required.

Impact 3.13-3	Development under the Proposed Plan would not require the construction or expansion of recreational facilities which might
---------------	----------------------------------------------------------------------------------------------------------------------------

have an adverse physical effect on the environment. (*Less than Significant*)

As discussed under Impact 3.13-2, the Proposed Plan would result in an incremental increase in population in the Planning Area over the next 20 years, as well as employment opportunities and commercial, institutional, and public uses accessible to the greater region. These changes in the Planning Area would increase demand for recreation facilities and potentially require construction of new or physically altered facilities. Section 3.10: Land Use and Planning details that 12.1 acres of the Planning Area are designated as active open space for parks and recreational use. Future development allowed under the Proposed Plan could therefore include construction of proposed recreational facilities such as children's playgrounds and play areas, picnic areas, multi-use sports fields, an amphitheater or other outdoor performance spaces, and a gym and community center (proposed policies 4-1, 4-5, 4-21, 4-28, 2-1, and 6-7), which might have an adverse physical effect on the environment.

Given that the precise location and design of such facilities cannot be known at this time, potential environmental impacts cannot be determined. However, environmental impacts related to construction emissions, VMT, and biological resources associated with construction or expansion of new recreational facilities are accounted for in technical modeling provided in other chapters of this EIR. Further, any new developments of recreational facilities necessary to serve the Planning Area would be located and constructed on existing urban and built-up land. Proposed policies 5-30 and 5-31 would also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Additionally, future facilities will be able to tier from this EIR to identify and mitigate site-specific impacts if and when design of those facilities is complete. Therefore, overall implementation of the Proposed Plan would have a less-than-significant impact with respect to impacts associated with the construction or expansion of recreational facilities.

Mitigation Measures

None required.

3.14

Transportation

3.14 Transportation

This section presents an evaluation of the potential transportation impacts that could arise from implementation of the Proposed Plan. Consistent with State requirements, the analysis addresses the possible impacts of the Proposed Plan on vehicle miles traveled (VMT), and determines if the Proposed Plan would conflict with adopted policies, plans, and programs, substantially increase hazards due to a design feature or incompatible uses, or result in inadequate emergency access.

There were multiple comments on the Notice of Preparation (NOP) related to transportation:

- The California Department of Transportation (Caltrans) requested an evaluation of project impacts on VMT and the availability of access to non-auto mode facilities. Caltrans also requested assessment of the Proposed Plan's new roadway link between Arnold Drive and State Route 12 (Highway 12), noting that the new connector should not be designed to increase vehicular throughput, since doing so could result in induced auto travel and prior Caltrans studies have indicated that Highway 12 and Arnold Drive already have sufficient capacity to accommodate growth. Several other organizations and commenters also highlighted the need to assess VMT. Impacts of the Proposed Plan on VMT, including induced travel, and access to non-auto modes are discussed in this section.
- Additional comments were received requesting additional details on the new roadway link between Arnold Drive and Highway 12; with respect to the transportation analysis there were requests for traffic volume estimates on the roadway. This information is included in the chapter. For analysis of impacts on emergency evacuation plans, see Section 3.16: Wildfire.
- Several commenters requested assessment of safety and connectivity for bicyclists and pedestrians on Arnold Drive. Sonoma County Regional Parks specifically requested that a new pedestrian-bicycle bridge at Sonoma Creek parallel to the Arnold Drive bridge within the SDC campus be assessed, as well as connectivity to the planned Sonoma Valley Trail that will parallel Highway 12. Regarding transit, several commenters noted a lack of transit service as well as the need for providing additional transit service; several questioned the feasibility of achieving this. Pedestrian and bicycle connectivity is assessed in this chapter. Transit is also discussed, though a feasibility analysis of the viability of future

- transit service increases is beyond the scope of a programmatic CEQA assessment.
- Finally, a substantial number of commenters expressed concern about traffic congestion and impacts to vehicle level of service (LOS). The impacts of the Proposed Plan on traffic congestion are not evaluated in the EIR because State law states that “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment.” (California Public Resources Code, § 21099(b)(2)). While traffic congestion is not analyzed in the EIR, the Proposed Plan includes robust transportation demand management (TDM) requirements intended to reduce auto traffic generation levels as well as VMT. It is noted that a separate, non-CEQA focused traffic analysis has been completed for the project¹¹⁸.

3.13.4 Regulatory Setting

3.14.2.1 State Regulations

Senate Bill 743

Senate Bill (SB) 743, signed into law in 2013, required CEQA lead agencies to shift from using traditional level of service (LOS) standards and automobile delay to determine significant traffic impacts. As a result of SB 743, the State Office of Planning and Research (OPR) updated CEQA guidelines and criteria to use VMT as the metric for evaluating the significance of traffic impacts. Pursuant to Public Resources Code Section 21099(b)(2), “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment.” OPR’s Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR Technical Advisory), published in December 2018, provides details on VMT assessment, methodologies, and suggested metrics.

¹¹⁸ *Focused Traffic Operation Analysis for the SDC Specific Plan*, W-Trans, August 2022

Caltrans

Caltrans has not established formal VMT significance thresholds, though in May 2020 released the VMT-Focused Transportation Impact Study Guide (TISG) that refers to guidance provided in the OPR Technical Advisory, which recommends VMT per capita or per employee thresholds 15 percent below existing city or regional levels. The Caltrans TISG also refers to OPR's guidance on the types of projects that can be presumed to have a less-than-significant transportation impact. Caltrans also reiterates that automobile delay is no longer considered a significant impact on the environment within CEQA transportation analysis, indicating that the agency's Local Development-Intergovernmental Review (LD-IGR) program will focus on VMT, consistent with the CEQA guidelines.

3.14.2.2 Regional Regulations

Metropolitan Transportation Commission (MTC)

Most of the federal, State, and local financing available for transportation projects is allocated at the regional level by MTC, the transportation planning, coordinating, and financing agency for the nine-county Bay Area. Integrated with the Association of Bay Area Government's (ABAG's) regional land use plan, the current regional transportation plan, Plan Bay Area 2050, was adopted by MTC and ABAG in October 2021. Plan Bay Area 2050 is both the Bay Area's Regional Transportation Plan (RTP) as well as its Sustainable Communities Strategy (SCS). Plan Bay Area grew out of "The California Sustainable Communities and Climate Protection Act of 2008," which requires each of the State's 18 metropolitan areas to reduce GHG emissions from cars and light trucks. Accordingly, Plan Bay Area 2050 recommends increasing non-auto travel mode share and reducing VMT per capita and per employee through promoting transit-oriented development, as well as investments in transit and active transportation modes. These strategies seek to not only improve mobility within the region, but also reduce regional and statewide GHG emissions.

Although MTC adopted Plan Bay Area 2050 in October 2021, this analysis relies on Plan Bay Area 2040 because the Sonoma County Transportation Authority (SCTA) travel demand model, which was used to estimate the VMT metrics associated with the Proposed Plan, is based on Plan Bay Area 2040 and has not yet been updated to reflect Plan Bay Area 2050.

3.14.2.3 Local Regulations

Sonoma County Transportation Authority

The SCTA, created in 1990, is governed by a 12-member Board of Directors representing the nine Sonoma County cities and the County. The SCTA serves as the entity responsible for planning and prioritizing transportation improvement projects at a county-wide level. SCTA is also responsible for managing the voter-approved Measure M, the Traffic Relief Act for Sonoma County, which provides direct funding for local transportation projects. In 1997, the SCTA relinquished its position as a formal Congestion Management Agency (CMA) under new State legislation that made this function optional.

There is currently no adopted regional congestion management program in Sonoma County; however, SCTA has adopted and is implementing the Comprehensive Transportation Plan: Moving Forward 2050, which serves as the primary long-term regional transportation planning document for Sonoma County. Moving Forward 2050 establishes goals for a transportation system that is connected and reliable, safe and well-maintained, community-oriented and place-based, and zero emission.

Sonoma County General Plan 2020

Sonoma County adopted its General Plan in September 2008. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth. The Circulation Element also incorporates goals, objectives, and policies established in the 2010 Sonoma County Bicycle and Pedestrian Plan. The following excerpts from the Circulation Element of the General Plan are particularly relevant to transportation and circulation in Sonoma Valley and the Proposed Plan Planning Area.

Circulation Element

GOAL CT-1: Provide a well-integrated and sustainable circulation and transit system that supports a city and community centered growth philosophy through a collaborative effort of all the Cities and the County.

Objective CT-1.4: Reduce the need for future automobile use by a combination of improvements and land development policies that give equal favor to alternate modes as to automobile use.

Objective CT-1.5: Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.

Objective CT-1.6: Require that circulation and transit system improvements be done in a manner that, to the extent practical, is consistent with community and rural character, minimizes disturbance of the natural environment, minimizes air and noise pollution, and helps reduce greenhouse gas emissions.

Objective CT-1.7: Reduce travel demand countywide by striving to provide a jobs/housing balance of approximately 1.5 jobs per household, and encourage creation of jobs and housing in urbanized areas along the SMART passenger rail corridor and other transit centers.

GOAL CT-2: Increase the opportunities, where appropriate, for transit systems, pedestrians, bicycling and other alternative modes to reduce the demand for automobile travel.

Objective CT-2.4: Improve bus headway to 30 minutes or less in the Cities and unincorporated urban areas to support urban centered growth.

Objective CT-2.7: Use Traffic Demand Management measures to reduce peak period congestion.

Objective CT-2.8: Provide bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel.

Policy CT-2d: Require major traffic generating projects on existing or planned transit routes to provide fixed transit facilities, such as bus turnouts, passenger shelters, bike lockers, and seating needed to serve anticipated or potential transit demand from the project.

Policy CT-2e: Require major employment centers and employers to provide facilities and Traffic Demand Management (TDM) programs that support alternative transportation modes, such as bike and shower facilities, telecommuting, flexible schedules, etc. These programs may apply to existing employers as well as to new development. Establish measurable goals for these programs, and utilize a transportation coordinator that will provide information, select TDM measures, and monitor and report on program effectiveness. If voluntary TDM measures do not effectively reduce peak congestion, impose mandatory TDM measures by ordinance.

Policy CT-2n: Provide a system of bus routes that is responsive to intercity commuters, transit dependent groups and persons with low mobility. Select route alignments to provide convenient access to major job centers, retail and recreational areas, high and medium density residential areas, and major health care and educational facilities.

Policy CT-2w: Increase the convenience and comfort of transit riders by providing more amenities at bus stops, including adequately-sized all-weather surfaces for waiting, shelters, trash cans, bike racks, and pedestrian-sized lighting. Required that these improvements be provided as part of nearby public or private development projects.

Policy CT-2x: In unincorporated communities, provide for pedestrian, bicycle, and other alternative transportation mode connections among commercial, service, public (such as schools, libraries, etc.), and transit facilities where compatible with community character and consistent with the Vehicle Code.

GOAL CT-3: Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

Objective CT-3.1: Design, construct and maintain a comprehensive Bikeways Network that links the County's cities, unincorporated communities, and other major activity centers including, but not limited to, schools, public facilities, commercial centers, recreational areas and employment centers.

Objective CT-3.2: Reduce Sonoma County's greenhouse gas emissions by achieving a non-motorized trips mode share of 5% for all trips and 10% for trips under five miles long by 2020.

Objective CT-3.3: Encourage pedestrian, bicycle, and transit-oriented development.

Objective CT-3.4: Increase use of non-motorized modes for commute trips by providing safe, convenient routes and adequate end of trip facilities at workplaces, with an emphasis on facilities that have potential to close gaps in the network and/or reduce shorter trips.

Objective CT-3.5: Provide incentives for business and government to increase the use of walking and bicycling by employees for both commuting and daily operations.

Objective CT-3.7: Provide a diverse range of recreational opportunities through a well-designed network of bikeways, multi-use trails, sidewalks, and related support facilities.

Objective CT-3.8: Increase the safety, convenience, and comfort of all pedestrians and bicyclists, by eliminating the potential obstacles to this mode choice that is associated with the lack of continuous and well-connected pedestrian walkways and bicycle facilities, and the lack of safe crossing facilities, especially focusing on short trips that could result in a decrease in automobile travel.

Policy CT-3a: Use the adopted Sonoma County Bicycle and Pedestrian Plan (Bikeways Plan) as the detailed planning document for existing and proposed bikeways and pedestrian facilities.

GOAL CT-4: Provide and maintain a highway system capacity that serves projected highway travel demand at acceptable levels of service in keeping with the character of rural and urban communities.

Objective CT-4.1: Maintain LOS C or better on roadway segments unless a lower LOS has been adopted as shown on Figure CT-3.

Objective CT-4.2: Maintain LOS D or better at roadway intersections.

Objective CT-4.3: Allow the above levels of service to be exceeded if it is determined to be acceptable due to environmental or community values, or if the project(s) has an overriding public benefit that outweighs lower levels of service and increased congestion.

Objective CT-4.4: Utilize the American Association of State Highway Transportation Officials (AASHTO) functional classification system and guidelines for geometric design for the highway network.

Sonoma Valley Planning Area Policies

Policy CT-7rr: Work with Caltrans in considering signalization, turning lanes, passing lanes, and other traffic management improvements along Highway 12 to reduce congestion, provided that the improvements are consistent with the designated road classifications.

Policy CT-7oo: Coordinate with the City of Sonoma to improve and maintain Highway 12 as the east/west route connecting the City of Santa Rosa and Sonoma Valley.

Policy CT-7pp: Consider traffic calming improvements in the unincorporated communities of Kenwood and Glen Ellen.

Policy CT-7qq: Consider intersection improvements such as signalization and left turn lanes at various intersections along Arnold Drive to reduce congestion, provided that the improvements are consistent with the designated road classifications.

3.14.3 Environmental Setting

3.14.3.1 Physical Setting

Circulation Network

Highway 12

Although generally an east-west route, Highway 12 spans from north to south through Sonoma Valley and forms the eastern edge of much of the Planning Area. Highway 12 is the primary route connecting the City of Sonoma to the south and the City of Santa Rosa to the northwest. Near the Planning Area, Highway 12 has one through travel lane in each direction; the highway includes turn pockets at major intersections as well as a center two-way left-turn lane through the Springs communities. There is no direct connection from the Planning Area to Highway 12. Highway 12 is designated by the Sonoma County General Plan 2020 as an Urban Principal Arterial.

Arnold Drive

Arnold Drive runs in a north-south orientation, generally parallel to Highway 12 in the Planning Area, and provides access to the adjacent communities of Glen Ellen, Eldridge, El Verano, and Temelec. The northern terminus of Arnold Drive intersects Highway 12 just over two miles north of the Planning Area, and the southern terminus intersects Highway 116 just over seven miles to the south. The section of Arnold Drive between Highway 12 and Madrone Road, including through the Planning Area, is designated as an Urban Major Collector in the General Plan. The posted speed limit is 25 mph within the SDC campus area and the community of Glen Ellen, and 40 mph in undeveloped areas. The section of Arnold Drive between Madrone Road and Petaluma Avenue (just west of the City of

Sonoma) is designated as an Urban Minor Arterial and has posted speed limits of 35 to 40 mph, and the section between Petaluma Avenue and Highway 116 is designated a Rural Principal Arterial with posted speed limits of 45 to 50 mph.

Local Streets

The remainder of the streets within the Planning Area are local streets that generally have relatively low volumes (less than 1,000 vehicles per day) and speed limits (30 mph or less). These streets primarily serve adjacent residential uses as well as the various districts of the SDC campus area. Local streets within the Planning Area include Harney Street, Sonoma Street, Holt Road, Grove Street, Wilson Street, Redwood Street, and Railroad Street. **Figure 3.14-1** shows the existing roadway network in the vicinity of the site.

Existing Traffic Volumes

Existing roadway average daily traffic (ADT) volumes on Arnold Drive to the north and south of the Proposed Plan area were obtained using several sources. Recent counts were based on “big data” sources available through the provider Streetlight Data, which uses anonymized personal device data (primarily cell phones and navigation devices) among other sources to estimate traffic volumes. All existing volumes used in this analysis reflect current data obtained during 2021 and early 2022 while area schools were in session. Historical counts spanning back to 1993 were also reviewed; the County of Sonoma Transportation and Public Works Department collects daily traffic volume data on arterial roadways throughout the county, with volumes in any given location typically collected every few years.

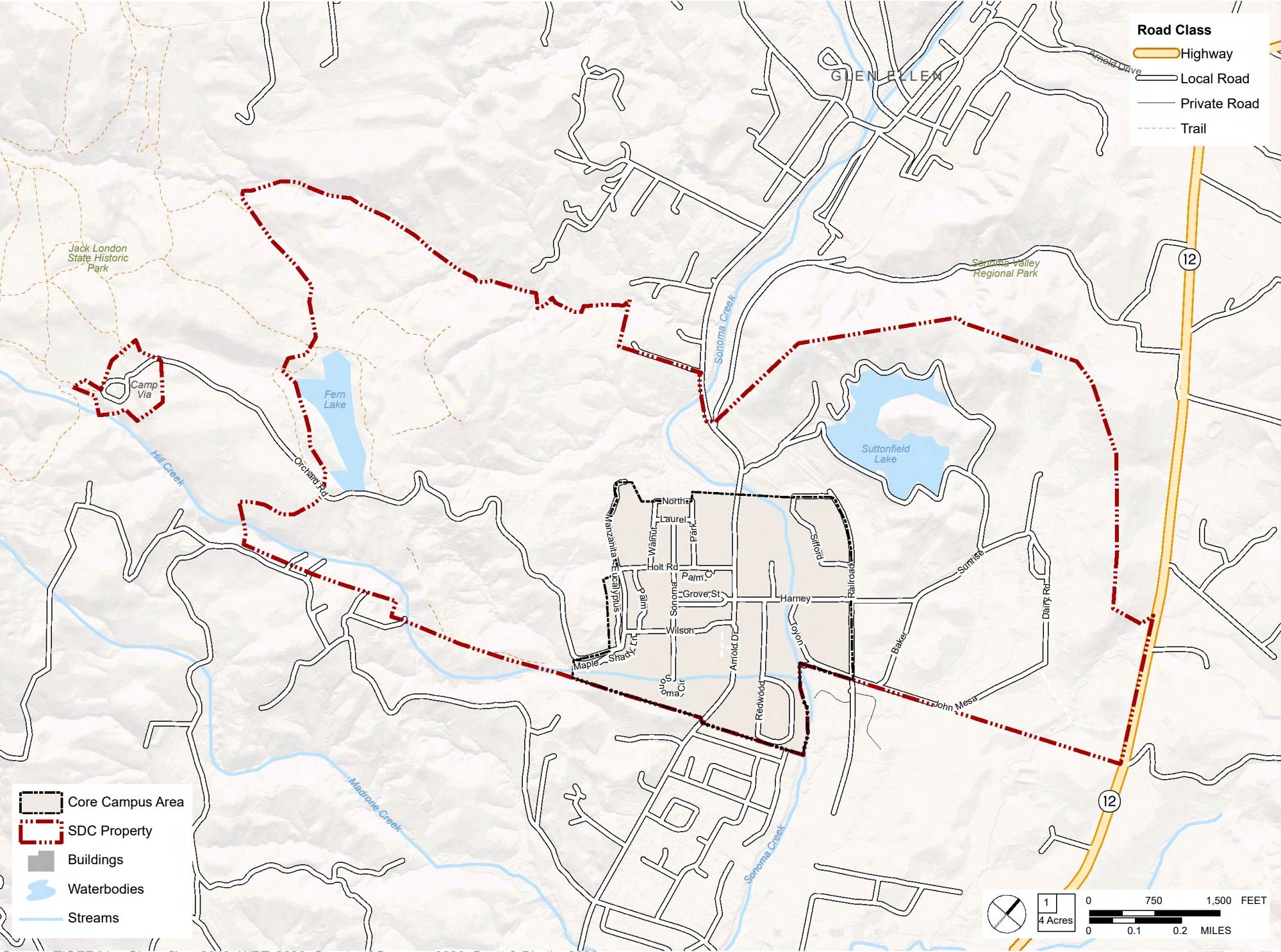
Arnold Drive – North of Proposed Plan Area

The segment of Arnold Drive between Harney Street within the Planning Area and Glen Ellen carried a daily volume of approximately 5,400 vehicles per day in 2021. Daily volumes in 2019 before the COVID-19 pandemic were higher at approximately 6,400 vehicles. Based on historical volumes surveyed by the County, the peak daily traffic volume between the SDC campus and Glen Ellen of approximately 7,600 vehicles was recorded in 2002 when the prior institutional uses were functioning.

Arnold Drive – South of Proposed Plan Area

To the south of the Proposed Plan area between Harney Street and Madrone Road, daily volumes in 2021 were approximately 6,200 vehicles, as compared to approximately 7,100

Figure 3.14-1: Existing Circulation Network



Source: TIGER/Line Shapefiles, 2019; WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

Highway 12

Traffic volumes for the Highway 12 corridor to the north and south of the Planning Area are also provided for reference. Based on Caltrans data published online¹¹⁹, the most recent available volumes for the year 2020 indicate that daily traffic on the highway averages 12,300 vehicles per day to the north of Arnold Drive, and 10,300 vehicles per day through the Springs area south of Agua Caliente Road. The published Caltrans volumes for 2019 are somewhat higher, averaging 14,700 vehicles per day to the north of Arnold Drive and 12,300 vehicles through the Springs area. The differences in volumes are likely due to influences caused by the COVID-19 pandemic.

Existing Transit System

Sonoma County Transit (SCT) provides fixed route bus service in Sonoma County. Route 30 provides regional service to the project site and surrounding communities including Santa Rosa, Oakmont Village, Kenwood, Glen Ellen, Agua Caliente, and Sonoma. The route's northern terminus in Santa Rosa is at Coddington Mall, near the North Santa Rosa SMART commuter rail station. Route 30 stops on the west and east sides of Arnold Drive at Harney and Redwood; both stops include signage, shelters, pedestrian-scale lighting, benches and trash receptacles. In addition, there are several stops along Arnold Drive outside the Proposed Plan boundaries. Route 30 operates eight times daily in each direction, seven days a week. During fiscal year 2018-2019 before the onset of the COVID-19 pandemic, SCT Route 30 served just over 81,800 passengers.

Route 34 provides regional service along the Highway 12 corridor approximately 1.5 miles east of the Planning Area. The route connects communities including Santa Rosa, Kenwood, Glen Ellen, Agua Caliente, Boyes Hot Springs, and Sonoma. Route 34 stops on the west and east sides of Highway 12 at Madrone Road, operating Monday through Friday, with one eastbound run toward Sonoma during the morning commute period and one westbound run toward Santa Rosa during the evening commute period. SCT Route 34 served approximately 4,900 passengers in fiscal year 2018-2019.

Two bicycles can be carried on most SCT buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on SCT buses at the discretion of the driver. Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability.

¹¹⁹ California Department of Transportation, Traffic Census Program, <https://dot.ca.gov/programs/traffic-operations/census>, accessed May 2022.

Sonoma County Paratransit is designed to serve the needs of individuals with disabilities within Sonoma County.

Existing and Planned Bicycle System

The 2010 Sonoma County Bicycle and Pedestrian Plan, as incorporated into General Plan 2020, identifies the following distinct types of bikeway facilities:

- **Class I Bikeway.** This type of facility is also known as a multi-use path. Class I bikeways provide bicycle travel on an all-weather surface within a right-of-way that is for exclusive use by pedestrians, bicyclists and other non-motorized modes. Class I bikeway surface must be compliant with provisions of the Americans with Disabilities Act (ADA). These bikeways are intended to provide superior safety, connectivity, and recreational opportunities compared to facilities that share right-of-way with motor vehicles.
- **Class II Bikeway.** These facilities are often referred to as “bike lanes” and provide a striped and stenciled lane for one-way travel on either side of a street or highway. Unlike Class III bikeways (below), Class II bikeways have specific width and geometric standards.
- **Class III Bikeway.** These facilities are intended to provide continuity to the County bicycle network. Bike routes are established along through routes not served by Class I or II bikeways or to connect discontinuous segments of Class I and/or Class II bikeways.

There are currently no designated bicycle facilities within the Planning Area. In the vicinity of the area, a Class I shared use path exists to the north within Sonoma Valley Regional Park. The Class I path spans from east to west for approximately 1.75 miles. Additionally, Class II bike lanes exist south of the SDC campus on Highway 12 between West Agua Caliente Road and Bernhard Avenue. Class II bike lanes are also present along West Agua Caliente Road between Country Club Drive and Petaluma Avenue.

There are several planned future bicycle facilities in the Planning Area identified in the 2010 Sonoma County Bicycle and Pedestrian Master Plan. The Sonoma Valley Trail is a Class I shared multi-use path between Sonoma and Santa Rosa on Highway 12 (also referred to as the Central Sonoma Valley Trail). In 2016, a detailed feasibility study was completed and adopted by the Board of Supervisors that identifies the Class 1 alignment along the eastern edge of the Planning Area along Highway 12. In addition, Class II bike lanes are proposed for the majority of Highway 12 between the cities of Santa Rosa and

Sonoma. Similarly, Class II bike lanes are proposed for the entirety of Arnold Drive between Glen Ellen and Highway 116.

Figure 3.14-2 shows the existing and proposed bicycle facilities in the Planning Area and surroundings.

Existing Pedestrian System

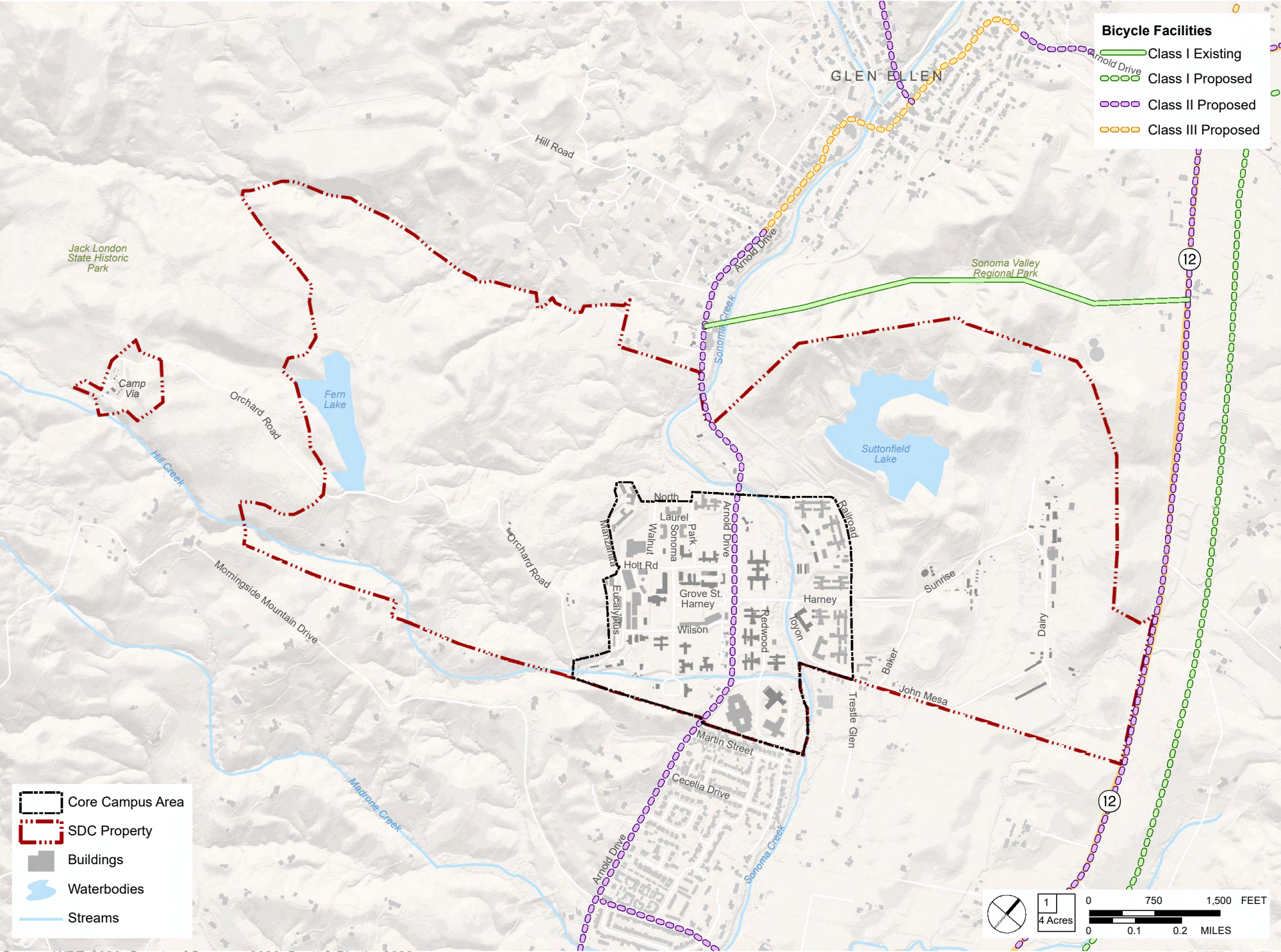
Existing pedestrian facilities within the Planning Area generally consist of sidewalks, curb ramps, crosswalks, and pedestrian-scale lighting. The majority of roadways within the Core Campus include sidewalks on both sides of the street, although some include sidewalk on only one side of the street. These roadways include North, Walnut, Park, Grove, Redwood and Arnold Drive south of Redwood. Further from the existing Core Campus there are several roadways without sidewalks including Orchard Road, Eucalyptus, Manzanita, Baker, and Dairy Road. East of the Core Campus, a painted sidewalk exists along Harney Road between Railroad and Sunrise-Baker, as well as along Sunrise between Baker and John Mesa Dairy. The painted sidewalk is similar in appearance to a Class II bike lane including two parallel solid white stripes approximately six inches in width and five feet apart.

Planned Transportation Network Changes

Several changes are planned for various transportation modes within and near the Planning Area as described below; these projects are included in the Moving Forward 2050 Sonoma County Comprehensive Transportation Plan and are not related to the Proposed Plan. While the CTP identifies funding for these projects, additional funding sources will be required in most cases, and few of the projects currently have final design plans or approvals, and/or full funding. Planned changes for transportation modes are summarized below.

- **Countywide Expansion of Micromobility and First/Last Mile.** Expand bikeshare and other shared micromobility to all communities in Sonoma County. Includes the development of a comprehensive micro-mobility strategy to increase access to clean, affordable, reliable transportation options for rural communities in Sonoma County.

Figure 3.14-2: Existing and Proposed Bicycle Network



Source: WRT, 2020; County of Sonoma, 2020; Dyett & Bhatia, 2022

- **Countywide Microtransit.** Implement Countywide Microtransit (dynamic on-demand transit service using software similar to Uber-pool) program connecting to high frequency transit routes, rail or major destinations.
- **Transportation Management.** Develop a transportation management association to provide a variety of transportation demand management services to individual and groups of employers and institutions including, but not limited to: sales and promotion of TDM and transit products; central information source for VMT reducing options, and management of funding and incentives.
- **Arnold Drive Bikeway.** Construct a 3.47-mile Class II bikeway from Country Club Drive to Chauvet Road.
- **Sonoma Valley Trail (aka Central Sonoma Valley Trail).** Provide a 13.80-mile-long Class I bike path alternative to Highway 12 between Santa Rosa and Sonoma. As of May 2022, 0.42 miles have been completed.
- **Arnold Drive/Madrone Road Intersection Improvements.** Signalize the intersection and provide other associated improvements.
- **Verano Avenue Multimodal Streetscape Improvements.** Provide a center turn lane from Arnold to Highway 12 and construct corridor improvements for pedestrian, bike, and transit modes.
- **Sonoma County Transit Countywide Bus Stop Improvements.** Expand NextBus real-time information panels at bus stops and shelters, provide additional and replacement passenger shelters and benches.
- **Sonoma County Transit Existing Operations.** Maintain SCT's current levels of service for fixed- route and paratransit during the 25-year life of the CTP. While not funded, future increases in service are also identified in the Plan.
- **SCT Expanded Core Intercity Routes.** Expand weekday and weekend service (including paratransit) on "core" intercity Routes 20, 30, 44, 48 and 60.
- **SCT Expanded Local Transit Services.** Expand weekday and/or weekend transit services (including paratransit) on Routes 10, 12, 28, 32 and 68.
- **SCT Local Route Fare-Free Program.** Implement free fares on all SCT local routes and local paratransit trips (replaces respective local city-based funding for fare-free routes).

3.14.3.2 Existing Vehicle Miles Traveled

VMT represents a number of daily miles driven and can be expressed in different ways including total VMT, which is an aggregate value measured in miles, and VMT per capita or VMT per worker, both of which are performance metrics measured in the number of miles driven per person. Many factors affect VMT, including the average distance people commute to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile modes of travel, including transit, tend to generate lower VMT than auto-oriented suburban areas. VMT became the primary metric for analyzing transportation impacts in CEQA in 2020.

VMT is typically an output from travel demand models such as the SCTM19 model maintained and operated by SCTA. Its calculation is based on the estimated number of vehicles multiplied by the distance traveled by each vehicle. This analysis uses the following VMT metrics:

- **Household VMT per capita**, which measures all the VMT by motor vehicles on a typical weekday associated with a residential use, such as trips to work, school, or shopping, and divides that VMT by the number of residents in the Planning Area.
- **Commute VMT per worker**, which measures all of the worker commute VMT by motor vehicles on a typical weekday between homes and workplaces and divides that VMT by the number of workers in the Planning Area.
- **Total VMT per service population**, which measures the total VMT generated by all uses on a typical weekday (including uses other than residential and employment such as neighborhood commercial, hospitality, and recreation), and divides that total VMT by the sum of residents and workers in the Proposed Plan Area.

For purposes of this analysis the SCTA's Travel Demand Model (SCTM19, revised December 2021) was used to estimate the VMT associated with the Specific Plan. Custom runs of the model were used to produce project-specific VMT data. The model estimates the VMT associated with the aggregate land uses in each "traffic analysis zone" (TAZ) within the model, in consideration of the countywide land use patterns and transportation infrastructure, including travel beyond the county's boundary. The Planning Area is encompassed by TAZ 177 in the SCTA model; this TAZ includes the SDC campus area as well the adjacent residential area between the campus and Madrone Road. For the purposes of the VMT assessment, this TAZ is referred to as the Planning Area.

Average VMT performance metrics are available at different geographic levels. The VMT significance thresholds applied to residential and employment uses rely on comparison to a regional average. Regional averages correspond to the nine-county Bay Area, the entirety of which is not included in the SCTM19 model, but are available from models including those operated by MTC (Travel Model Two) as well as the Transportation Authority of Marin TAMDM model. The methodology used by MTC to calculate residential VMT per Capita is consistent with that applied in the SCTM19 model, so was applied in the analysis for the purposes of establishing the residential VMT significance threshold. In contrast, the MTC model's methodology of calculating VMT per worker and total VMT per service population differs from that indicated in the OPR Technical Advisory, so cannot be compared directly to SCTM19 results, which are consistent with OPR guidance. Based on direction from SCTA staff, the year 2019 regional average home-based VMT per worker produced by the TAMDM model, which is consistent with OPR guidance and SCTM19, was used to establish the VMT per worker significance threshold. The regional average total VMT per service population produced by the TAMDM is also consistent with OPR guidance and comparable to the results produced by SCTM19. In summary, the VMT analysis uses the SCTM19 model to determine the Specific Plan's VMT performance metrics, and uses the MTC and TAMDM models for the purposes of establishing regional significance thresholds.

For the purposes of establishing existing VMT performance metrics for the Planning Area, the institutional uses associated with the former SDC facility (now vacant) were removed from the SCTM19 model's existing land use database.

Table 3.14-1 presents the existing VMT efficiency metrics for the Planning Area along with a comparison to the countywide and regionwide averages.

Table 3.14-1: Existing VMT Summary

<i>Geography</i>	<i>Average VMT (miles)</i>		
	<i>Household (per Capita)</i>	<i>Commute (per Worker)</i>	<i>Total (per Service Population)</i>
Planning Area ^a	20.0	7.1	26.9
Bay Area Region	15.5 ^b	16.9 ^c	27.2 ^c

Notes:

a. Comprised of TAZ 177 in SCTM19.

b. MTC

c. TAMDM as cited in the San Rafael General Plan 2040 and Downtown Precise Plan Draft EIR.

Source: W-Trans, 2022; MTC; City of San Rafael, June 2021

As shown in **Table 3.14-1**, the existing average household VMT per capita for the Planning Area is higher than the regional average. The existing average commute VMT per worker is lower than the regional average, and total VMT per service population slightly lower than the regional average.

3.14.3.3 Historical Use

Historical Trip Generation

The amount of traffic historically generated at the SDC campus has fluctuated over the years as the numbers of residents and employees changed. While precise data on the site's historic trip generation is not available, several data sources exist that provide some insight. Traffic generation estimates sourced using "big data" are available for the past several years (big data refers to millions of anonymized data points associated with devices such as cell phones and navigation devices which can be analyzed to extract travel patterns for specific geographic areas during specified time periods).

Based on the oldest data available from the provider Streetlight Data, which is for the year 2017, it is estimated that the site was generating approximately 1,620 daily vehicle trips, though it is noted that SDC was operating at well below peak levels at this time. By examining the site's 2017 trip rates using big data, analyzing historical traffic counts on Arnold Drive, and referencing trip generation rates for common land uses available in the Institute of Transportation Engineers (ITE) Trip Generation Manual, the campus is

estimated to have generated approximately 3,800 vehicle trips per day in 2015 when it was fully operational.

Historical Traffic Volumes on Arnold Drive

The County of Sonoma obtained traffic counts at key locations on the countywide road network every few years until 2017. On the segment of Arnold Drive between Glen Ellen and SDC, the highest volumes surveyed by the County were in 2002 at approximately 7,600 daily vehicles. In 2015, the County counted approximately 5,700 vehicles on the segment. The County collected fewer historical counts on the Arnold Drive segment between the SDC campus and Madrone Road. In 2014, the surveyed volume was approximately 8,000 daily vehicles, which was the highest of available counts spanning back to 2008.

Historical VMT

A prior version of the SCTA travel demand model reflecting 2015 land use inventories was reviewed to obtain historic VMT rates for the SDC campus planning area. The VMT estimates reflected full occupancy of institutional uses at SDC. In 2015, the traffic analysis zone containing SDC was estimated to be generating approximately 18.0 home-based VMT per capita and 6.2 home-based commute VMT per employee.

3.14.4 Impact Analysis

3.14.4.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities;**
- Criterion 2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b);**
- Criterion 3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment); or**

Criterion 4: Result in inadequate emergency access.

3.14.4.2 Methodology and Assumptions

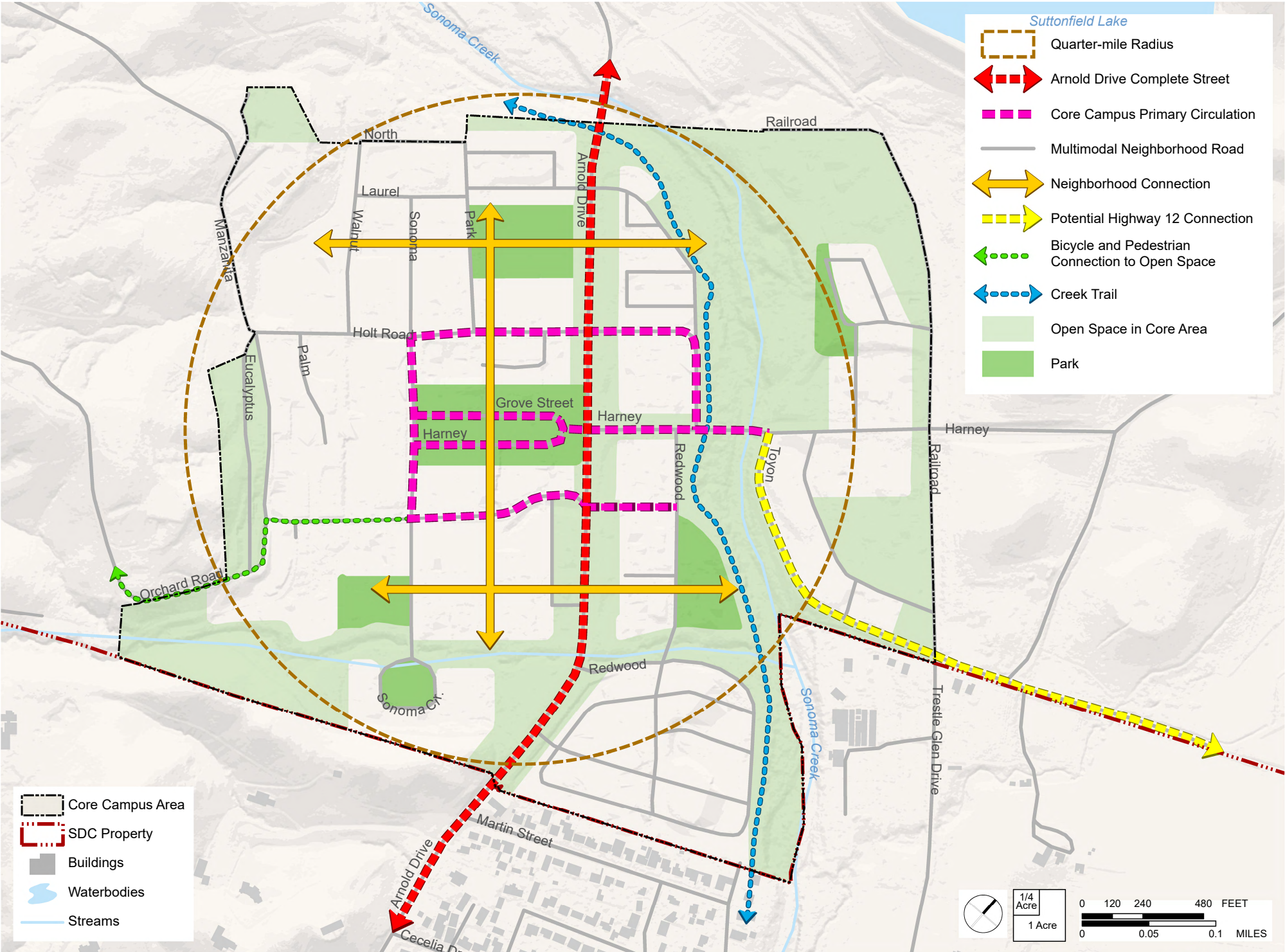
Land Use and Transportation Network Assumptions

Consistent with Chapter 2: Project Description, the analysis presented in this section is based on an assumption that implementation of the Proposed Plan would result in 1,000 residential units with State and County density bonuses, including 435 single family units, 345 multifamily units, and 220 senior housing units. The Proposed Plan also includes 40,000 square feet of commercial/retail space, 190,000 square feet of office uses (likely including a mix of office, research and development, and other employment-based functions), 70,000 square feet of institutional uses (including work and meeting spaces including a conference center), a 120-room hotel, and 12.1 acres of recreational uses. In total, buildout of the Proposed Plan is estimated to result in an added population of 2,400 persons and 940 jobs at buildout.ad

The Proposed Plan also includes new and improved roadway links designed to accommodate all travel modes (auto, bike, pedestrian); reconfiguration of Arnold Drive within the site as a complete street with bike lanes, pedestrian paths, and enhanced transit facilities; completion of an offsite community bikeway connecting to Glen Ellen; and implementation of a new multimodal roadway link between the central campus area and Highway 12.

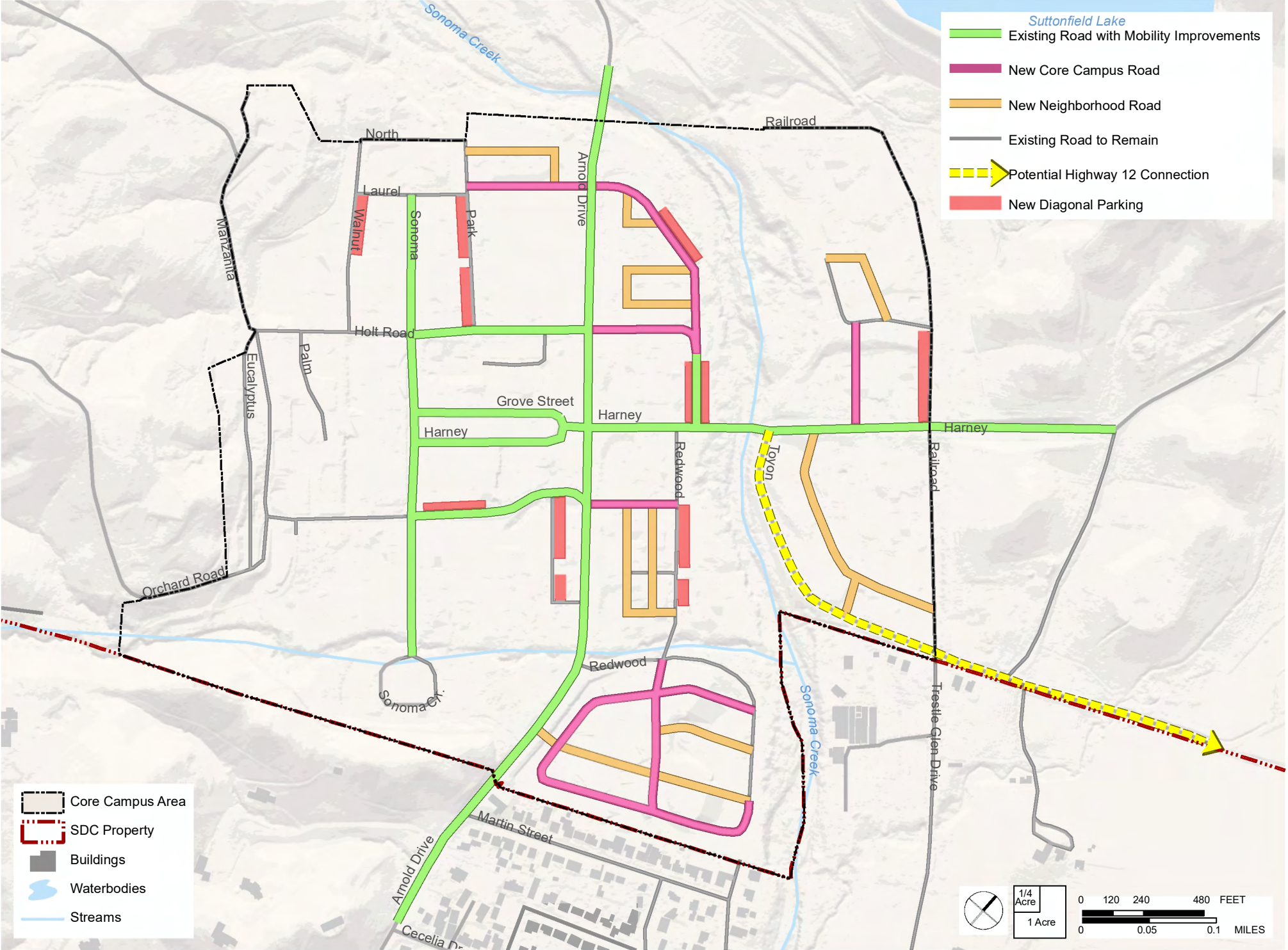
A diagram from the Proposed Plan depicting the mobility framework, including key multimodal circulation modifications and connections, is shown in **Figure 3.14-3**, and a diagram showing street typologies is shown in **Figure 3.14-4**.

Figure 3.14-3: Proposed Mobility Framework



Source: Page & Turnbull, 2021; County of Sonoma, 2020; Dyett & Bhatia, 2022

Figure 3.14-4: Proposed Street Network



Source: Page & Turnbull, 2021; County of Sonoma, 2020; Dyett & Bhatia, 2022

VMT Estimation

The SCTM19 travel demand model version released in December 2021 was used to estimate VMT efficiency metrics. The SCTM19 model incorporates existing countywide land use and transportation infrastructure tied to a 2019 base year. The model's 2040 cumulative year includes growth that is consistent with adopted general plans within the County and with regional projections contained in Plan Bay Area 2040. Although MTC adopted Plan Bay Area 2050 in October 2021, this analysis relies on Plan Bay Area 2040 because SCTA has not yet updated the SCTM model to be consistent with Plan Bay Area 2050.

The SCTM19 model includes detailed land use and multimodal network coding within the County of Sonoma. The model includes gateway adjustments that account for regional travel and VMT extending beyond the County, allowing comparison to regional VMT metrics produced by the MTC and TAMDM models.

VMT estimates were developed for the following scenarios:

- **Baseline (2019) Conditions.** This scenario represents the land uses and transportation network within the County under current conditions¹²⁰ and assumes existing buildings within the SDC campus to be vacant.
- **Baseline Plus Plan Conditions.** This scenario adds full buildout of the land uses identified in the Proposed Plan to existing conditions, and includes completion of the Plan's proposed Highway 12 connector; while this is a hypothetical condition since complete buildout of the entire Plan would not occur in a near-term timeframe, it allows the Proposed Plan's discrete effect on VMT to be distinguished for CEQA purposes.
- **2040 No SDC Development Conditions.** This scenario assumes the buildout of regional land uses and planned infrastructure improvements throughout Sonoma County, but assumes the SDC campus to remain vacant.

¹²⁰ Current conditions for VMT are based on the most current SCTA travel demand model, which accounts for 2019 land use inventories throughout Sonoma County; existing uses within the SDC campus were removed from the 2019 land use inventory to reflect non-operation of the facility

- **2040 Plus Plan Conditions.** This scenario adds full buildout of the land uses identified in the Proposed Plan to 2040 conditions, including the Plan's proposed Highway 12 connector.

VMT Thresholds of Significance

Based on the assumptions and methodology above, the following thresholds were used to analyze the environmental impacts of the Proposed Plan due to transportation.

VMT Associated with Proposed Plan Land Uses

VMT thresholds for this analysis were established by the County of Sonoma based on guidance provided in the OPR Technical Advisory. The applied significance thresholds are as follows.

A significant VMT impact would occur if the Plan results in:

- Residential VMT per Capita within the Planning Area exceeding a level of 15 percent below the regional average VMT per capita; or
- Employment VMT per worker within the Planning Area exceeding a level of 15 percent below the existing regional average VMT per worker; or
- Total VMT per Service Population within the Planning Area exceeding a level of 15 percent below the existing regional average Total VMT per Service Population.

Based on modeling completed by MTC, the existing average home-based VMT per capita in the nine-county Bay Area is 15.5. The applicable significance threshold is 15 percent below this value, or 13.2 home-based VMT per capita. The TAMDM model indicates that the average home-based commute VMT in the nine-county Bay Area is 16.9 VMT per worker, which translates to a significance threshold of 14.4 home-based commute VMT per worker. TAMDM indicates that the regional average total VMT per service population is 27.2 miles, which translates to a significance threshold of 23.1 total VMT per service population.

The potential VMT impacts associated with implementation of the Proposed Plan were considered in the context of baseline conditions using efficiency metrics including VMT per capita, VMT per worker, and total VMT per service population, consistent with guidance provided in the OPR Technical Advisory. With respect to cumulative impacts, the Technical Advisory states, "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-

significant project impact would imply a less-than-significant cumulative impact, and vice versa.” While the VMT impact determination is established by comparing to the baseline condition, VMT performance metrics for buildout of the Proposed Plan under a year 2040 cumulative condition were also assessed.

It should be noted that some future development projects in the Planning Area would qualify for VMT screening, which is a process described in the OPR Technical Advisory that identifies certain types of projects that can be presumed to result in a less-than-significant VMT impact and thereby do not need a VMT analysis. Such projects would include 100-percent-affordable residential developments, local-serving retail uses under 50,000 square feet, and projects that are expected to generate fewer than 110 automobile trips per day. Given the programmatic nature of the Proposed Plan, all potential future development within the Proposed Plan boundaries is included in the VMT analysis. In other words, no “screening” has been assumed even though some of the future development may, individually, qualify for screening from VMT analysis.

VMT Associated with Proposed Plan Transportation Improvements

The VMT associated with transportation projects must be considered in CEQA evaluations. Roadway projects that substantially increase vehicular capacity, particularly on arterial roadways and freeways, have been shown to increase VMT through induced demand and should be analyzed quantitatively per guidance contained in the OPR Technical Advisory. A transportation project that results in an increase in VMT is considered to have a significant impact.

The OPR Technical Advisory also provides a list of transportation project types that would not likely lead to a substantial or measurable increase in vehicle travel, including installation of traffic control devices (signals, stop signs, etc.) or turning lanes, and improvements relating to non-auto modes including those for bicyclists, pedestrians, and transit users. All transportation improvements within the Core Campus area of the Proposed Plan would be focused on improving non-auto modes, with no additional roadway capacity resulting from new travel lanes; they are thereby screened from VMT analysis. Beyond the core area, the Proposed Plan includes implementation of a new roadway connection to Highway 12. While this connection would function as a low speed (35 mph or less) local or collector street rather than a high-speed/high-capacity highway, it is possible that it could result in a modest amount of long-term induced vehicle travel. Accordingly, an induced demand assessment was completed for the roadway.

The phenomenon of induced VMT is influenced by behavioral variables that are not typically addressed by travel demand models including SCTM19. For this reason, the induced VMT was calculated using a tool developed by the National Center for Sustainable Transportation (NCST), which is based on substantial research that analyzed the elasticities of VMT in relation to vehicle lane miles. It is acknowledged that the NCST tool is focused on the induced demand associated with additional capacity on freeways, highways, and major arterials, rather than on streets that function more as a collector such as the Highway 12 connector identified in the Proposed Plan. The induced travel assessment and significance determination should therefore be considered very conservative, since the Highway 12 connector itself is unlikely to induce more regional auto travel than would have otherwise occurred without the link.

Summary of Applied VMT Thresholds of Significance

Table 3.14-2 provides a summary of the applied VMT thresholds of significance discussed above.

Table 3.14-2: Applied VMT Thresholds of Significance

<i>VMT Threshold</i>	<i>Measurement</i>	<i>Regional Average</i>	<i>Threshold¹</i>
Residential	Home-Based VMT per Capita	15.5	13.2
Employment	Home-Based Commute VMT per Worker	16.9	14.4
Total	Total VMT per Service Population	27.2	23.1
Induced ²	Total Network VMT	-	Increase

Notes:

1. 15 percent below the year 2019 baseline regional average.
2. Induced VMT effects associated with construction of new roadway.

Source: W-Trans, 2022.

3.14.4.3 Relevant Policies and Implementation Actions

The following relevant policies and implementing actions of the Proposed Plan address transportation:

Mobility and Access

Goals

- 3-A Street network: Enhance the existing street network to create a walkable and pedestrian-friendly environment that provides connections both within the Core Campus and to surrounding communities and regional trail systems.
- 3-B Regional connections: Develop and support greater connectivity between SDC and the surrounding areas, including through a direct connection to Highway 12.
- 3-C Complete Streets: Ensure the street network balances the needs of pedestrians, bicyclists, transit users, and drivers, prioritizing safety, comfort, and car-free transportation connections.
- 3-D Bicycle Connections: Improve bicycle connectivity within and beyond the SDC site and foster an accessible and safe street environment for bicyclists.
- 3-E Pedestrian Connections: Develop a network of sidewalks and pedestrian paths that promote greater and more direct connections within the campus, and opportunities for recreation and connections to nature.
- 3-F Transit Connections: Connect the site to the greater region through existing and future transit networks, with reliable, comfortable and safe public transit service that is responsive to the diverse needs of the residents, employees and visitors of the SDC area.
- 3-G Parking: Manage parking resources as a coordinated, shared system to efficiently and flexibly serve the needs of residents, employees, and visitors.

- 3-H Parking: Provide parking in amounts that balance the needs of residents and workers without overburdening development with parking, and promote alternative transportation options.
- 3-I Transportation Demand Management: Reduce reliance on single-occupant vehicles (SOV) and limit the number of SOV trips made by residents and visitors by supporting alternative modes of transportation, ridesharing, and on-site services.

Policies

- 3-1 Ensure that new development provides a tight, fine-grained street grid that connects to the existing street grid, as shown in Figure 3.2-1: Street Network. Streets should be narrow with short blocks and provide multiple route options that emphasize pedestrian and bicycle connectivity to key destinations on the site such as the Central Green, baseball fields, community centers, and recreational amenities.
- 3-2 No gaps in the sidewalk network to maintain continuous pedestrian access through the Core Campus and into neighboring communities.
- 3-4 Establish new pedestrian and bicycle corridors within the SDC to facilitate connectivity throughout the site and link to neighboring communities.
- 3-5 Reuse existing street network to the greatest extent feasible. Improve multi-modal access from the SDC to SR 12 by exploring the feasibility of providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities.
- 3-7 Add two new intersections on Arnold Drive immediately north and south of the Main Entry Road to improve connectivity to the entire SDC site, as shown on Figure 3.1-1.
- 3-9 Limit vehicle speeds within the Core Campus to 25 miles per hour or less through both posted speed limits and street design, in order

to reduce the risk of collisions involving cars, bicycles, pedestrians, and local wildlife.

- 3-11 Implement the National Association of City and Transportation Officials (NACTO) Urban Street Design Guide to design streets and incorporate traffic calming measures like textured crosswalks, curb bulb-outs, pedestrian-oriented lighting, and high-visibility striping and signage.
- 3-12 Ensure that pedestrian and bicycle connections, alleyways, and other circulation routes internal to blocks are ADA compliant, have visible entries from streets, and are otherwise designed for pedestrian comfort.
- 3-13 Design Arnold Drive as a complete street, maintaining one vehicle travel lane in each direction and including bicycle facilities, quality pedestrian paths and sidewalks with appropriate seating and lighting, and transit facilities that provide shelter, lighting, and updated information for riders.
- 3-14 Within the Core Campus, visually highlight crosswalks and heighten pedestrian comfort with curb bulb-outs, changes in paving material or striping, signage, and signalization.
- 3-15 Establish a new community bikeway connecting Railroad in Eldridge to Carmel Avenue in Glen Ellen by removing barriers and installing appropriate signage and crossings.
- 3-16 Create a multi-use creek trail running parallel to Arnold Drive that connects to a greater Glen Ellen-Eldridge community bikeway.
- 3-22 Work with Sonoma County Transit for expansion of transit service and a transit pass subsidy for new residents and employees.
 - a. Work with Sonoma County Transit to establish an express bus service to and from the cities of Sonoma and Santa Rosa that would utilize a new connector road between the SDC Core Campus and Highway 12; or

- b. Work with Sonoma County Transit to extend the fare-free Route 32 shuttle from the City of Sonoma to the SDC site, maintaining the regular intercity Route 30 bus service as well.
- 3-23 Add an additional bus stop along Arnold Drive at the north end of the Core Campus.
- 3-24 Provide high-quality amenities at all bus stops including shelter, seating, lighting, waste receptacles, signage and information, drinking fountains, secure bicycle parking facilities, shade trees, and landscaping at all bus stops. Design bus stops to complement the historic architecture at the site.
- 3-25 Collaborate with Sonoma County Transit to provide real-time system updates and arrival times to improve user convenience at all bus stops.
- 3-27 Provide no free parking within campus.
- 3-28 Establish minimum parking requirements that do not exceed average peak parking demand rates observed in the Institute for Transportation Engineers Parking Generation manual. Plan for shared parking facilities to serve multiple uses and destinations.
- 3-29 Provide lower minimum parking requirements when parking facilities are shared with other users or made publicly-accessible to maximize the efficiency and use of spaces.
- 3-31 Allow residential uses to apply “unbundled parking” pricing, which separates the cost of parking from the price of housing.
- 3-32 Explore the feasibility of partnering with a carshare company or creating an SDC-specific carshare program to provide rentable shared vehicles on-site.
- 3-41 Require all development to reduce vehicle trips by at least 15 percent below rates listed by the Institute of Transportation Engineers Trip Generation manual using transportation demand management strategies. Potential strategies may include subsidies

for not driving alone, transit passes, parking cash-out, rideshare matching, telecommute or alternative work scheduling, upgraded bicycle facilities, and other measures proven to reduce vehicle trips and VMT.

- 3-42 Establish a Transportation Management Association (TMA) for the entire SDC to create a cost-effective and coordinated approach to reducing single-occupancy vehicle travel. The TMA can implement a variety of programs to assist individual developments in meeting their vehicle trip reduction goals. Potential TMA programs could include the overseeing of a subsidized transit pass program, carpool or vanpool ride-matching services, marketing and education to residents and businesses, and other measures.

3.14.4.4 Transportation Data

Following is a summary of trip generation and traffic volume data obtained from the transportation modeling that was performed for the Proposed Plan (see Appendix F: Traffic Model Data). This information is not directly relied upon for the transportation CEQA analysis but is used in the preparation of other CEQA topic areas addressed in this document.

Trip Generation

Based on modeling results from the SCTM19 travel demand model, buildout of the Proposed Plan is estimated to generate an average of 5,736 daily trips. Of these trips, 24.4 percent (1,398) are projected to be captured within the campus itself. While a portion of these internal campus trips could be made by driving, the majority are expected to be made by walking and biking given the small geographic area where development would occur, as well as the Plan's robust emphasis on provision of walking and bicycling facilities. After accounting for internal trips, the project is estimated to generate an average of 4,338 vehicle trips onto the roadway network beyond the Plan area. For informational purposes, it is estimated that the Sonoma Developmental Center historically generated approximately 3,800 daily vehicle trips, suggesting that the Proposed Plan would generate approximately 13 percent more vehicular traffic than historical uses.

Traffic Volumes

Table 3.14-3 provides a summary of daily, a.m. peak hour, and p.m. peak hour traffic volumes on key roadway segments in the Plan Area. Projections are shown for existing and future conditions without the Proposed Plan, with the Proposed Plan, and both with and without the proposed roadway connector between Arnold Drive and Highway 12.

Table 3.14-3: Projected Traffic Volumes in Plan Area

<i>Roadway/Scenario</i>	<i>Daily</i>	<i>AM Peak Hour</i>	<i>PM Peak Hour</i>
Arnold Drive - Harney to Glen Ellen			
Existing No Project	6,330	420	630
Existing + Project	6,220	400	630
Existing + Project (no Hwy 12 connector)	7,400	510	730
Future No SDC Development	6,730	460	690
Future + Project	6,310	400	630
Future + Project (no Hwy 12 connector)	7,410	500	730
Arnold Drive - Harney to Madrone Road			
Existing No Project	7,150	500	730
Existing + Project	9,940	700	970
Existing + Project (no Hwy 12 connector)	9,490	680	930
Future No SDC Development	7,670	560	800
Future + Project	9,960	710	970
Future + Project (no Hwy 12 connector)	9,640	690	940
Highway 12 Connector			
Existing + Project	1,390	120	130
Future + Project	1,450	130	130

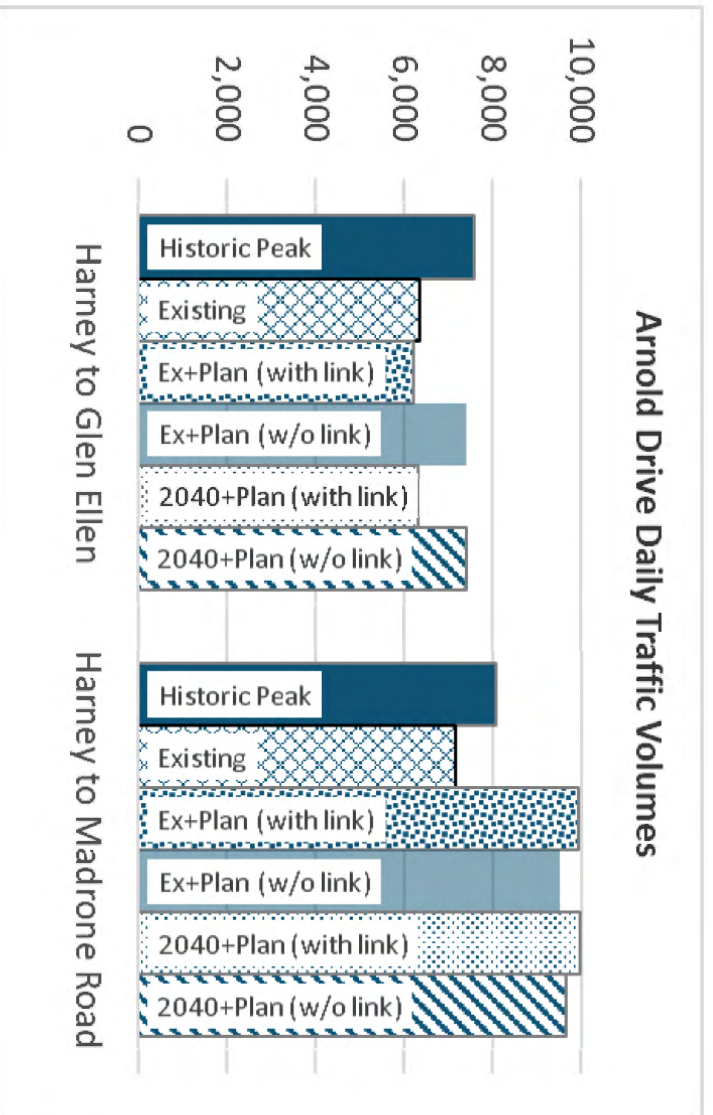
Source: W-Trans, 2022

The proposed connector road linking the Core Campus area to Highway 12 is projected to carry approximately 1,400 vehicles per day, including 120 to 130 vehicles during peak hours. Volumes on Arnold Drive to the north of the Planning Area through Glen Ellen are projected to be approximately 1,100 fewer daily vehicles with the new roadway link compared to conditions without it. On Arnold Drive to the south of the Planning Area, there

are projected to be approximately 320 fewer daily vehicles with the new roadway link compared to without.

Traffic volumes on Arnold Drive to the north and south of Harney are depicted graphically in **Figure 3.14-5**. Also shown for comparative purposes are peak historical volumes obtained by the County of Sonoma on these segments (2002 for the segment north of Harney and 2014 for the segment south of Harney). On the Arnold Drive segment to the north of the Planning Area through Glen Ellen, future daily volumes with implementation of the Proposed Plan are expected to be approximately 15 percent below their historic peak. To the south of the Planning Area toward Madrone Road, future daily volumes are projected to be approximately 25 percent higher than their historic peak.

Figure 3.14-5: Average Daily Traffic Volumes on Arnold Drive



Source: W-Trans, 2022

3.14.4.5 Impacts

Impact 3.14-1 Implementation of the Proposed Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities. (*Less than Significant*)

The Mobility chapter of the Proposed Plan includes several goals that are supportive of goals, objectives, and policies contained in Sonoma County General Plan 2020. Proposed goals 3-A and 3-C emphasize creating complete streets that emphasize the effectiveness and safety of pedestrian, bicycle, and transit modes. These goals are supported by Policy 3-1 which calls for a fine-grained street grid emphasizing pedestrian and bicycle connectivity; policies 3-2, 3-4, 3-15, and 3-16, which eliminate gaps in the pedestrian network and establish new pedestrian and bicycle corridors; Policy 3-11 which addresses incorporation of traffic calming measures; and Policy 3-13 which indicates that Arnold Drive within the Plan Area shall be designed as a complete street. These goals and policies are consistent with Sonoma County General Plan Goals CT-1 and CT-3 as supported by Objectives CT-1.4, CT-2.8, CT-3.1, and CT-3.3, which address providing a sustainable circulation system that reduces the need for future automobile use, encouraging pedestrian, bicycle, and transit-oriented development and the improvement of facilities to serve these modes.

General Plan Objective CT-3.8 calls for increasing the safety, convenience, and comfort of pedestrians and bicyclists by eliminating obstacles and providing well-connected facilities and safe crossings. The Proposed Plan is consistent with this Objective, as it includes Policy 3-2 which calls for establishing a new community bikeway between Railroad in Eldridge and Carmel Avenue in Glen Ellen by removing barriers, and Policy 3-16 which calls for creating a multi-use creek trail running parallel to Arnold Drive that connects to the Glen Ellen-Eldridge community bikeway. These connections would strengthen pedestrian and bicycle linkages between SDC and Glen Ellen, providing a viable alternative to travel along existing shoulders and intermittent sidewalks on Arnold Drive. Closing this key gap in the pedestrian and bicycle network along Arnold Drive between the Core Campus area and existing multi-use path in Sonoma Valley Regional Park will also provide seamless connectivity to the planned Sonoma Valley Trail linking Santa Rosa and Sonoma along the Highway 12 corridor. Further improving connectivity to the existing and planned bike network, a project identified in the SCTA Comprehensive Transportation Plan includes construction of a 3.47-mile Class II bikeway from Country Club Drive to Chauvet Road, which is consistent with the Proposed Plan and will improve bicycle connectivity to the south of the SDC campus.

With respect to transit, the Proposed Plan addresses transit facilities in Goal 3-F as supported by Policies 3-22, 3-23, and 3-25 which cover improving transit connectivity to the Plan area including expansion of existing Sonoma County Transit services, consideration of subsidized transit passes for SDC residents and employees, and provision of amenities at bus stops. These are consistent with Sonoma County General Plan Goal CT-2 and Objective CT-2.4, which call for increasing opportunities for travel by non-auto modes including transit.

Goals and policies that are intended to reduce auto travel and VMT through TDM strategies are also identified in the Proposed Plan. Specific Plan Goal 3-I specifies that TDM shall be used to reduce reliance on single-occupant vehicles and encourage non-auto travel modes. This goal is supported by Policy 3-41, which requires all development to reduce vehicle trips by at least 15 percent below typical levels through use of TDM strategies, as well as Policy 3-42 which requires establishment of a Transportation Management Association to oversee vehicle trip reduction programs for the entire campus. These policies are consistent with Sonoma County General Plan Objective CT-2.7 and Policy CT-2e, which call for the use of TDM to reduce congestion and support non-auto mode travel, particularly at major employment centers.

Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS targets would be exceeded, either individually as a result of the project or (more typically) by contributing to cumulative LOS target deficiencies. Such effects are no longer considered in CEQA per PRC section 21099 (b)(2), which states “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment.” Accordingly, while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan’s CEQA assessment this would not be considered an adverse environmental impact. This is not to suggest that future development will not be required to complete transportation improvements to maintain LOS standards; such improvements will continue to be assessed by DTPW through review of traffic impact studies during the entitlement review process, and applicable conditions of approval established.

Considering that the Proposed Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities, impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.14-2 Implementation of the Proposed Plan would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) pertaining to Vehicle Miles Traveled. (*Significant and Unavoidable*)

Land Use VMT Assessment

Assessment analyzing household VMT, employment VMT, and service population VMT was completed and is presented below.

Household VMT. The VMT modeling results produced by the SCTM19 travel demand model indicate that residential uses in the Plan area with implementation of the Proposed Plan would on average generate 15.2 VMT per capita, which is a decrease from the existing average of 20.0 VMT per capita. Under future conditions with buildout of the Proposed Plan, the VMT per capita would further reduce to 14.9. While these metrics indicate improvement in residential VMT per capita compared to existing development, they fall short of the applied 13.2 VMT per capita threshold of significance. This would be a *significant impact*.

Employment VMT modeling results indicate that employment-based uses in the Planning Area would on average generate 4.8 home-based commute VMT per worker with implementation of the Proposed Plan both under Baseline plus Project and Future plus Project conditions, which is a decrease from the existing average of 7.1 VMT per worker. This falls below the applied 14.4 VMT per worker threshold of significance and is therefore considered to be a *less-than-significant impact*.

The total **VMT per service population** performance metric captures both work and non-work-related trips, as well as visitor and non-home-based trips including those associated with lodging, retail/commercial, community-serving, and recreational uses. The total VMT per service population in the Planning Area would average 17.9 with implementation of the Proposed Plan. Under Future plus Project conditions, the performance metric would decrease slightly to 17.7 VMT per service population. These levels are a decrease from the existing average of 26.9 VMT per service population and fall below the applied

significance threshold of 23.1 VMT. The impact would therefore be considered *less than significant*.

Table 3.14-4 summarizes the VMT efficiency metrics discussed above for the Planning Area, including comparison of the VMT efficiency metrics to countywide averages as well as the regional averages used to establish thresholds of significance. Note that as discussed in the VMT thresholds of significance section above, when efficiency-based VMT metrics are analyzed, a project's cumulative impact would be the same as the near-term project impact.

Table 3.14-4: Planning Area VMT Metrics

	<i>Home-Based VMT per Capita</i>	<i>Home-Work VMT per Worker</i>	<i>Total VMT per Service Population</i>
Geographic Averages and Thresholds			
Planning Area Baseline Average	20.0	7.1	26.9
Countywide Baseline Average	16.6	12.4	30.2
Regional Baseline Average	15.5	16.9	27.2
15% below Regional Average (Threshold of Significance)	13.2	14.4	23.1
Proposed Plan			
Baseline plus Proposed Plan	15.2	4.8	17.9
2040 plus Proposed Plan	14.9	4.8	17.7
Significant Impact?	Yes	No	No
Proposed Plan with 15% TDM Reduction¹			
Baseline plus Proposed Plan	12.9	4.1	15.2
2040 plus Proposed Plan	12.7	4.1	15.0

Notes: **bold** indicates threshold of significance would be exceeded; ¹ these projections are provided for informational purposes and reflect a theoretical 15% reduction in VMT associated with required TDM measures.

Source: W-Trans, 2022.

Note that the VMT metrics presented in **Table 3.14-4** are based on the SCTM19 Model, which is a regional travel demand model and only accounts for the built environment variables to which the model is sensitive. Additional Proposed Plan policies supporting

VTM-reduction variables the model is not sensitive to (such as presence and configuration of bicycle and pedestrian facilities within the campus, parking limits and pricing, and transportation demand management (TDM) measures) are not fully reflected in these estimates. Thus, it is likely that actual VMT will be less than the projections above.

For informational purposes as shown at the bottom of **Table 3.14-4**, the project's VMT performance metrics were reduced by 15 percent to provide a broad estimate of how the overall project would perform if all development within the SDC site were able to achieve a 15 percent reduction in vehicle trips as required by Policy 3-41 (recognizing that trip reductions should in theory translate to roughly equivalent VMT reductions). The results suggest that such reductions would reduce VMT impacts to less than significant levels. However, the ability for individual development projects to achieve a 15 percent reduction in VMT is uncertain, particularly during the years before Plan buildout when synergies related to the onsite jobs/housing balance may vary. These uncertainties are discussed further below in the VMT findings section.

Transportation VMT Assessment

The Proposed Plan includes implementation of a new roadway connection between the Core Campus area and Highway 12. While this connection is intended to function as a collector street providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities, rather than a high-speed/high-capacity highway, the potential exists for the added traffic capacity it provides to result in induced VMT. Induced VMT was calculated using a tool developed by the NCST¹²¹. Induced vehicle travel effects are not fully accounted for in travel demand models, so for the purposes of this evaluation are considered separately from the land use VMT assessment described above.

Applying the criteria used in the NCST calculator, the new roadway connection would be classified as a Class 3 facility in the County of Sonoma, with 0.78 added lane miles. Based on output from the calculator, the roadway is estimated to result in 2.6 million additional VMT per year, or approximately 7,120 daily VMT. This would be considered a significant impact.

¹²¹ National Center for Sustainable Transportation, California Induced Travel Calculator, University of California, Davis, <https://travelcalculator.ncst.ucdavis.edu/>, accessed May 10, 2022.

Proposed Policies Reducing VMT Impact

The Proposed Plan includes two policies that have been specifically developed to reduce vehicle trips and VMT associated with future development. Policy 3-41 requires all development to implement TDM strategies that will reduce vehicle trip generation by at least 15 percent below conventional rates (as published by ITE). This policy would apply to all development projects, including non-residential uses that are not projected to have adverse VMT impacts, helping to reduce the site's overall VMT levels. This TDM policy is supported by Policy 3-42, which calls for establishment of a TMA to oversee VMT and trip reduction strategies and programs for the entire SDC site. TMAs can be particularly effective since they are able to administer and monitor VMT reduction programs at a broader scale, making strategies such as ride matching services and transit pass programs (for example) viable where they may not be at an individual development project scale.

The Proposed Plan also places a strong emphasis on reducing auto trips by providing pedestrian and bicycle linkages within the site (policies 3-1, 3-2, 3-3, 3-6, and 3-9) and providing new connections to the surrounding bicycle network (policies 3-4, 3-5, 3-13, and 3-15). The Proposed Plan also includes policies to enhance transit services, including the potential for transit pass subsidies (Policy 3-22). These combined measures can be expected to shift travel away from single-occupant vehicles and help to reduce the site's overall VMT.

Auto travel is also deemphasized through parking policies that are part of the Proposed Plan, including avoiding free parking and "right sizing" parking supplies to ensure that parking surpluses do not encourage auto travel (policies 3-27, 3-28, and 3-29), as well as allowing unbundled parking which separates the cost of parking from the price of housing (Policy 3-31). These combined parking policies would be expected to play a supporting role in reducing the total VMT generated by the Proposed Plan.

VMT Findings

Although the implementation of the above policies and strategies can be expected to reduce the total VMT generated by uses in the Planning Area, reducing development-related VMT impacts as well as offsetting induced VMT, their effectiveness cannot be accurately estimated since performance would vary according to the specific attributes of individual development projects and the synergies existing among them, which will evolve over time. The effectiveness of the required 15 percent reduction in development project VMT also cannot be guaranteed, and will need to be monitored over time, with ongoing

adjustments made by the TMA in response to observed effectiveness and changes in uses that occur over the years. It may be particularly difficult for the earliest development projects within the Plan area to achieve TDM reductions sufficient to reduce VMT impacts to less than significant levels since it may take some time before aspects such as jobs/housing balances materialize, and since the number of feasible TDM strategies may be limited until a sufficient amount of development within the campus has occurred. Thus, this EIR conservatively assumes that the VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than-significant levels. Therefore, this impact would be significant and unavoidable both at the project level and cumulatively.

The program-level VMT impact described above does not preclude the finding of a less-than-significant impact for future development projects that achieve VMT below the applicable thresholds of significance, including those that qualify for VMT screening. It is also noted that implementation of the Proposed Plan would result in household VMT per resident, commute VMT per worker, and total VMT per service population measures that are lower than the current County of Sonoma averages and would therefore help to reduce VMT performance metrics at the countywide level.

As described above, policies in the Proposed Plan are designed to reduce VMT in the Planning Area through required TDM reductions, establishment of a TMA to oversee VMT reduction strategies and programs, multi-modal transportation improvements, and parking-related demand management strategies. While these VMT reduction measures can be expected to reduce VMT, their effectiveness cannot be guaranteed, and they may be insufficient to reduce residential VMT per capita in the Planning Area below the applicable significance threshold or fully offset the effects of induced VMT. There are no other feasible mitigation measures available. Impacts would be significant and unavoidable. Further, these impacts would be cumulatively considerable.

Mitigation Measures

None required.

Impact 3.14-3 Implementation of the Proposed Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment). (*Less than Significant*)

Newly constructed and upgraded roadways needed to accommodate new development would need to be designed according to applicable State and local design standards, with design reviews and approvals overseen by the County of Sonoma, which maintains standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. Through the design and engineering review process, County staff will evaluate development proposals as well as modifications to the existing transportation facilities and new proposed facilities to ensure public health and safety by requiring appropriate pedestrian and bicycle facilities, reviewing roadway configurations to confirm that no design hazards would occur, implementing or modifying traffic control devices to ensure safety, and reviewing to ensure that sight distance requirements would be met, among other measures.

The Proposed Plan includes a policy to prioritize multimodal safety (Policy 3-C) as well as a policy to limit speeds within the central campus area to 25 mph or less (Policy 3-9). Both of these policies are supportive of minimizing the potential for safety conflicts to occur within the Planning Area.

The Proposed Plan would enable construction of new developments and new transportation facilities, as well as modifications to existing transportation facilities. Since the Proposed Plan is a program-level document, the design elements of individual future developments and new transportation facilities are not known. However, all future public and private improvement projects and transportation facilities would be subject to additional review and approval by the County of Sonoma to ensure safety. Considering that the Proposed Plan would not substantially increase hazards due to design features and that specific infrastructure designs and development projects would be reviewed for conformance with adopted safety standards, impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.14-4 Implementation of the Proposed Plan would not result in inadequate emergency access. (*Less than Significant*)

The Proposed Plan includes construction of new streets and minor intersections as well as a new connection to Highway 12. The Plan would result in modifications to existing roadways and intersections related to adding bicycle facilities and pedestrian crossing enhancements. Roadway modifications will need to be designed consistent with applicable regulations to accommodate emergency vehicles, including turns at intersections. Roads and emergency access requirements are governed by existing State and local law. Development in the State Responsibility Area (SRA) is governed by the State Board of Forestry and Fire Protection Regulations (14 CCR 1270 et seq.) and development in the Local Responsibility Area (LRA) is governed by the County's Fire Safe Standards (Sonoma County Code Chapter 13 Article V) (see more in Section 3.16: Wildfire). Regulations govern road surfaces, grades, curves, intersections, and widths and provide specific requirements for two-way, one-way, and dead-end roads. Roadways in the Planning Area will need to be designed to meet these requirements.

Policy 3-1 calls for new development in the Plan to include a fine-grained street grid that provides multiple route options, and Policy 3-6 prohibits new cul-de-sacs. These policies will allow emergency responders to access existing and future developments from multiple directions. Emergency vehicles would continue to use existing streets as well as new streets to access all areas within the Planning Area. Beyond the Core Campus area where development would occur, the Plan includes a new connection to Highway 12 that will also improve accessibility to the Planning Area by emergency responders, as well as an additional evacuation route during emergencies.

The Proposed Plan is a program-level plan that does not directly address project-level components that will be required to provide adequate emergency access. Considering the Proposed Plan's accommodation of emergency vehicles in existing and future streets, and the established procedures for reviewing project-level emergency access needs and compliance with State and local law as part of the entitlement process, impacts would be less than significant.

Mitigation Measures

None required.

3.15

Utilities and Service Systems

3.15 Utilities and Service Systems

This section assesses potential environmental impacts from future development under the Proposed Plan as related to public utilities, including water, wastewater, and stormwater systems, and solid waste services. This section describes existing water, wastewater, stormwater, and solid waste infrastructure and services in the Planning Area, as well as relevant federal, State, and local regulations and programs.

The Notice of Preparation (NOP) responses included the following relevant topics which are addressed in the Impact Analysis below:

- Analysis of whether there are adequate water supplies to reliably meet demand on the campus under the Specific Plan and alternatives into the future.
- Considering how development at SDC will increase future water demand at the regional scale, and analyze the resulting ecological impacts from such water use.
- Considering including the projected amount and set a limit of solid waste.
- Continue using the existing underground utilities without removal.
- A confirmation that "will serve" letters have been, or will be, received from the public and private agencies affirming that energy, water, and sanitation services are readily available for all of the various development scenarios to be assessed in the EIR.
- An assessment as to whether public service needs projections will account for likely future climate change issues and scenarios related to access to energy, water, and sanitation services, including additional, foreseeable development within Sonoma Valley.
- An assessment of a site-specific electrical microgrid system as an alternative to a centralized electrical grid power provided such as PG&E.
- An assessment of potential locations within the SDC development plan designated for potential alternative on-site sources for water, energy and sanitation resources.
- Including an assessment of the numerous other housing, hotel, resort, and commercial projects that are moving ahead or are considered likely to move ahead within Sonoma Valley
- Protecting water quality, groundwater recharge, needs of salmonid species and other species, protection from erosion of existing waterways, protection of riparian plant communities, and reduction or at least no increase in impermeable surfaces.
- Providing a study of the adequacy of public services including water, sewage, electricity, WIFI, gas and electricity, and postal services plus potential for access

to readily available private services commensurate with the number of houses built.

3.15.2 Regulatory Setting

3.15.2.1 Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the U.S. Environmental Protection Agency (EPA) in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, the U.S. EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Department of Public Health administers the regulations contained in the SDWA in the State of California.

United States Environmental Protection Agency

The 1986 amendments to the Safe Drinking Water Act and the 1987 amendments to the Clean Water Act (CWA) established the EPA as the primary authority for water programs. The EPA is the federal agency responsible for providing clean and safe surface water, groundwater, and drinking water, and protecting and restoring aquatic ecosystems. The planning area is in EPA Region 9 (Pacific Southwest), which includes Arizona, California, Hawaii, Nevada, Pacific Islands, and Tribal Nations.

Federal Water Pollution Control Act of 1972 (Clean Water Act)

The CWA establishes the basic structure for regulating discharges of pollutants into "waters of the United States." The CWA specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Some of these tools include Total Maximum Daily Loads (TMDLs), water quality certification, and regulations on discharge of dredge or fill material. For more details, see Section 3.8: Hydrology and Water Quality.

National Pollutant Discharge Elimination System

The CWA was amended in 1987 to include urban and stormwater runoff, which required many cities to obtain a National Pollution Discharge Elimination System (NPDES) permit

for stormwater conveyance system discharges. Section 402(p) of the CWA prohibits discharges of pollutants contained in stormwater runoff, except in compliance with a NPDES permit. For more details, see Section 3.8: Hydrology and Water Quality.

3.15.2.2 State Regulations

California Porter–Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the State Water Resources Control Board (SWRCB) and nine regional water quality control boards to address water quality and rights regulation. The five-member SWRCB protects water quality by setting statewide policy, coordinating and supporting the Regional Water Quality Control Board (RWQCB) efforts, and reviewing petitions that contest RWQCB actions. The SWRCB is also solely responsible for allocating surface water rights. Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions. The planning area lies within the jurisdiction of the San Francisco RWQCB.

The Act authorizes the SWRCB to enact state policies regarding water quality in accordance with CWA 303. In addition, the Act authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge to State waters. SWRCB Order No. 2006-0003 provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a sewer system management plan.

The Porter-Cologne Water Quality Control Act further requires the SWRCB or the RWQCBs adopt water quality control plans (basin plans) for the protection of water quality. Basin plans also provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. For more details, see Chapter 3.8: Hydrology and Water Quality.

The SWRCB also manages the Division of Drinking Water (DDW), which regulates public water supply systems. Regulatory responsibilities include the enforcement of the federal and State Safe Drinking Water Acts, the regulatory oversight of public water systems, issuance of water treatment permits, and certification of drinking water treatment and distribution operators. State regulations for potable water are contained primarily within

the Food and Agricultural Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the California Code of Regulations.

Recycled water programs are also regulated by the SWRCB. The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations. Issues related to treatment and distribution of recycled water are generally under the influence of the SWRCB.

California Department of Water Resources

DWR is also responsible for overseeing the statewide process of developing and updating the California Water Plan (Bulletin 160 series); protecting and restoring the Sacramento–San Joaquin Delta; regulating dams, providing flood protection, and assisting in emergency management; educating the public about the importance of water and its proper use; and providing technical assistance to service local water needs.

Senate Bills 610 and 221

Enacted in 2002, SB 610, which was codified in the State Water Code beginning with section 10910, requires the preparation of a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain large development projects is required, the water agency that is to serve the development must complete a WSA to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with a proposed project. The final WSA was prepared by the Valley of the Moon Water District in July 2022 for the proposed plan is included as Appendix G of this Draft EIR.

Enacted in 2001, SB 221, which was codified in the State Water Code beginning with section 10910, requires that the legislative body of a city or county, which is empowered to approve, disapprove, or conditionally approve a subdivision map, must condition such approval upon proof of sufficient water supply. The term "sufficient water supply" is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including agricultural and industrial uses.

The Water Conservation Act of 2009 (SB X7-7)

California legislation enacted in 2009 as SB 7 of the 7th Special Legislative Session (SB X7-7) instituted a new set of urban water conservation requirements known as "20 Percent By 2020." These requirements stipulate that urban water agencies reduce per-capita water use within their service areas by 20 percent relative to their use over the previous 10 to 15 years.

Green Building Code and Title 24 Updates

The California Green Building Standards Code (CALGreen) (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 California Code of Regulations). Part 11 established voluntary standards that became mandatory under the 2010 edition of the code. These involved sustainable site development, energy efficiency (in excess of California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were adopted in 2019 and took effect on January 1, 2020.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881 (2006))

The State Legislature adopted the Water Conservation in Landscaping Act of 2006 (AB 1881) requiring the Department of Water Resources to update the State Model Water Efficient Landscape Ordinance (MWELO). All local land use agencies are required to adopt the MWELO, or develop an ordinance that is at least as effective by January 1, 2010. The State updated MWELO again in 2015, increasing efficiency standards from the previous version. The State requires cities and counties to adopt landscape water conservation ordinances by July 15, 2015.

California Urban Water Management Planning Act

The California Legislature enacted the Urban Water Management Planning Act of 1983 (California Water Code Sections 10610 through 10656) to support conservation and efficient use of urban water supplies at the local level. The act requires every urban water supplier that provides water to 3,000 or more customers, or over 3,000 AF of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The act requires that total projected water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single- and multiple-dry water years, and that plans include a water recycling analysis that incorporates a description of

the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.

Applicable urban water suppliers within California are required by the Water Code to prepare and adopt a UWMP and update it every five years. A UWMP is required in order for a water supplier to be eligible for the DWR-administered state grants, loans, and drought assistance. A UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices (BMPs), and water shortage contingency planning for a specified service area or territory.

California Emergency Graywater Regulations

In 2009, as part of the Governor's declared State of Emergency, Chapter 16A "Nonpotable Water Reuse Systems" was incorporated into the 2007 California Plumbing Code. Chapter 16A establishes minimum requirements for the installation of graywater systems in residential occupancies regulated by the California Department of Housing and Community Development, providing guidance and flexibility designed to encourage the use of graywater. The standards allow small graywater systems to be installed in homes without a construction permit, substantially reducing the barriers to installing small residential graywater systems in California. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of discharge for irrigation and/or indoor use; to reduce the number of noncompliant graywater systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems.

Assembly Bill (AB) 1668 and Senate Bill (SB) 606

Passed in 2018, AB 1668 and SB 606 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include:

- Establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses.
- Providing incentives for water suppliers to recycle water.

- Identifying small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and providing recommendations for drought planning.
- Requiring both urban and agricultural water suppliers to set annual water budgets and prepare for drought.

According to the fact sheet, each urban water supplier, starting in November of 2023, will calculate its own objective based on the water needed in its service area for efficient indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters and reasonable amounts of system water loss from leaks. In determining their objectives, water suppliers will also consider other unique local uses and credits for potable water reuse, based on standards adopted by the state water board.

California's Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) is the State's leading authority on recycling, waste reduction, and product reuse. CalRecycle plays an important role in the stewardship of California's vast resources and promotes innovation in technology to encourage economic and environmental sustainability. CalRecycle brings together the State's recycling and waste management programs and continues a tradition of environmental stewardship. Mandated responsibilities of CalRecycle are to reduce waste, promote the management of all materials to their highest and best use, and protect public health and safety and the environment.

California Integrated Waste Management Act (AB 939)

Assembly Bill 939, California's Integrated Waste Management Act of 1989, mandates that 50 percent of solid waste be diverted by the year 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. This requires each region to prepare a source reduction and recycling element to be submitted to CalRecycle, which administers programs formerly managed by the state's Integrated Waste Management Board and Division of Recycling.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327)

AB 1327 was established in 1991, which required CalRecycle to develop a model ordinance for the adoption of recyclable materials in development projects. Local agencies

were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Disposal Measurement System Act of 2008 (SB 1016)

SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, while establishing revised calculations for those entities that did not meet the 50 percent diversion rate. SB 1016 also established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal-based indicator—the per capita disposal rate—uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Solid Waste Diversion (AB 341)

Effective July 1, 2012, AB 341 established a policy goal for the state that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. This report, as directed by the Legislature, provides strategies to achieve that 75 percent goal. A Report to the Legislature accompanied the passage of AB 341 and outlined five strategies and three additional focus areas as potential pathways that can be pursued to achieve this goal. Subsequent reports on the State of Recycling and Disposal were published in 2015, 2016, and 2017.

AB 341 also requires commercial enterprises that generate four cubic yards or more of solid waste weekly participate in recycling programs. This requirement includes multifamily housing complexes of five units or more, regardless of the amount of solid waste generated each week.

Assembly Bill 1826

Adopted in 2016, Assembly Bill 1826 (AB 1826) requires state agencies, businesses, and multifamily complexes that generate specific quantities of organic or solid waste each week enroll in organic recycling programs through an applicable solid waste disposal company. Organic recycling programs may take the form of composting, mulching, or anaerobic digestion. Businesses and multifamily residential housing complexes that generate the following quantities are required to implement organic or solid waste recycling programs under AB 1826:

- Eight or more cubic yards of organic waste per week as of April 1, 2016;
- Four or more cubic yards of organic waste per week as of January 1, 2017; and

- Four or more cubic yards of solid waste per week as of January 1, 2019.

CalRecycle is currently evaluating whether California has achieved its statewide organic disposal goal of reducing organic waste disposal to 50 percent of 2014 levels by 2020. If this goal is not achieved, organic composting and recycling requirements will be expanded such that businesses that generate two or more cubic yards of solid waste per week must comply.

SB 1383: Short-Lived Climate Pollutants

In 2016, Governor Brown signed Senate Bill 1383 into California law, establishing statewide greenhouse gas emission reduction goals:

- By 2020, reduce the amount of organic material disposed in landfills by 50% from the 2014 level, and
- By 2025, reduce the amount of organic material disposed in landfills by 75% from the 2014 level.
- By 2025, no less than 20% of edible food currently disposed must also be recovered for human consumption.

This law expands upon the requirements of AB 341: Mandatory Commercial Recycling and AB 1826: Mandatory Commercial Organics. However, SB 1383 is unique in that it impacts residents in addition to businesses, and it requires some businesses to donate excess edible food to feed people in addition to diverting organic materials from the garbage. As the most aggressive waste reduction law to be adopted in California for the past 30 years, SB 1383 includes significant penalties for non-compliance.

The State has committed to reduce greenhouse gas emissions, improve human health, and create clean jobs that support resilient local economies. Implementing the statewide plan under SB 1383 will reduce short-lived, harmful, super pollutants with significant global warming impacts, and is essential to achieving California's climate goals. Organic waste in landfills emit 20% of the state's methane, a climate super pollutant 84 times more potent than carbon dioxide.

3.15.2.3 Local Regulations

Sonoma Valley County Sanitation District (SVCSD) Sewer System Management Plan (SSMP)

The Sonoma Valley County Sanitation District (SVCSD) is managed and operated by the Sonoma County Water Agency (Sonoma Water). The Sonoma County Water Agency Sanitation Code Ordinance governs (1) The Use of Sanitation Facilities of the Sonoma County Water Agency, (2) The Construction of Sanitation Facilities, (3) A Source Control Program, (4) A Grease, Oil, and Sand Interceptor Program, (5) An Enforcement Program, (6) Various Administrative Procedures and Related Matters, and (7) Repealing Certain Existing Related Ordinances.

The SVCSD is located in Sonoma Valley and service area comprises 4,500 acres and serves a population of approximately 45,000 (17,609 single-family dwelling unit equivalents). The collection system was constructed over the past 100+ years with the largest percentage constructed in the 1940s and 1950s. It includes 161.6 miles of sewers (132 miles of gravity sewer mains ranging in size from 4 to 42 inches, 0.1 miles of force mains, and 29.5 miles of service laterals for which the District is responsible), 2 pump stations and a treatment plant.

To regulate sanitary sewer systems, the Sewer System Management Plan (SSMP) complies with requirements of the California State Water Resources Control Board (SWRCB) promulgated waste discharge requirements as of May 2, 2006. This permit is known as SWRCB Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR). On July 30, 2013, Order Attachment A was promulgated and became effective on September 9, 2013, and is known as SWRCB Order No. WQO 2013-0058-EXEC, amending the Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system to reduce and prevent sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur

The goals of the Sonoma Valley County Sanitation District SSMP are to:

- Properly manage, operate and maintain all parts of the wastewater collection system;
- Provide adequate capacity to convey peak design flows;
- Mitigate the impact of SSOs;

- Protect the health and safety of the residents of the Sonoma Valley;
- Maintain cost effectiveness while maintaining high efficiency;
- Be responsive to customers.

Valley of The Moon Water District Codes

The District operates under Valley of The Moon Water District Codes that regulate applications and permits under which water service will be supplied to the customers of the Valley of the Moon Water District.

Sonoma County Waste, Recyclables, and Organics Regulations Ordinance

The Sonoma County Waste, Recyclables, and Organics Ordinance regulates the collection and disposal of solid waste, recyclables, organics, and other materials from residential and commercial premises in the unincorporated area, to provide for the issuance of exclusive franchises for the removal of solid waste, recyclable materials, and organic waste (with specified exceptions) and to establish other regulatory requirements in connection with these purposes. The California Integrated Waste Management Act governs the management of solid waste and recyclable materials.

SB-1383 focuses on the elimination of methane gas created by organic materials in landfills and requires that clean streams of organic material be collected, recovered, and recycled into new end-products like compost or biofuel. SB-1383 makes it unlawful to throw food waste in the garbage and imposes requirements on local jurisdictions such as the County of Sonoma, its businesses and residents, and local haulers.

Sonoma County 2020 General Plan

Sonoma County General Plan 2020 (GP 2020) carries forward the major goals and policy framework of the 1989 Plan and retains the overall format. The primary purpose of the revised plan was to conduct a policy review focused upon specific issues of paramount importance to the community.

The broad purpose of GP 2020 is to express policies which will guide decisions on future growth, development, and conservation of resources through 2020 in a manner consistent with the goals and quality of life desired by the county's residents. Under State law many actions on private land development, such as Specific Plans, Area Plans, zonings, subdivisions, public agency projects and other decisions, must be consistent with the General Plan. The Goals, Objectives, and Policies set forth in the plan will be applied in a manner to insure their constitutionality.

Water Efficient Landscape Ordinance

The Water Efficient Landscape Ordinance of Sonoma County Code of Ordinance (Chapter 7D3) was adopted on December 15, 2009 and went into effect on January 15, 2010. The ordinance includes requirements for landscape water budgets, landscape and irrigation design, and irrigation scheduling. The ordinance is located in Section 7D3 of the Sonoma County Code (Building Regulations). An update to the County ordinance was adopted by Sonoma County on December 8th, 2015 to align with the current State MWELO requirements.

Sonoma County Green Building Regulations

The County of Sonoma has adopted CALGreen and the California Energy Code. CALGreen is California's Green Building Standards code and applies to all newly constructed buildings as well as additions and certain alterations.

Sonoma Water Flood Management Plan

Sonoma Water is a regional leader in water resources management. Sonoma Water strives to look forward, beyond today's issues, to anticipate ways to advance its mission. Additionally, Sonoma Water continues to adapt its mission in response to changing opportunities, keeping Sonoma Water at the forefront of developments in the water industry.

The Flood Management Design Manual (FMDM) is intended to guide public agencies and private entities in Sonoma County that are planning, designing, constructing or maintaining waterways, channels, closed conduits or culverts. It provides methods and criteria for analyzing storm drain systems and facilities necessary to convey rainfall run-off due to large storm events.

3.15.3 Environmental Setting

3.15.3.1 Physical Setting

Water System

Water sources are available in the Planning Area to support the planned growth, however despite certain infrastructure that can be salvaged most of the existing raw water conveyance and treated water distribution piping will need to be rebuilt.

The Planning Area is located within the Valley of the Moon Water District's Sphere of Influence. The District's most recently adopted Urban Water Management Plan (UWMP) acknowledges the District's plans to annex and serve the Proposed Project site. It is assumed the Planning Area will be served by local, on-site surface water sources, and the District will be the water service provider.¹²²

SDC Pre-Closure Conditions

Before the SDC closed in 2018, the SDC water distribution system was an independent, stand-alone, permitted public water distribution system. The system includes water supply sources, a raw water conveyance system, a 1.8-million gallon per day (MGD) surface water treatment plant (WTP), potable water storage tanks, and a potable water distribution system. The SDC water supply system included a series of surface water reservoirs, springs, and creeks.

There are five existing points of diversion (POD) on the property, (1) Asbury Creek, (2) Hill/Mill Creek, (3) Roulette Springs, (4) Sonoma Creek, and (5) an unnamed stream adjacent to Suttonfield Lake. Asbury Creek and Hill Creek run generally along the north and south borders of the property, respectively. At Asbury Creek and Hill/Mill Creek, there exists a piped POD, weir structure, gages, and monitoring equipment.¹²³ The water diverted from these creeks is conveyed via a series of gravity-fed pipes to Fern Lake, located near the western boundary of the property.

The POD at Sonoma Creek is comprised of a diversion sump, 6-feet by 6-feet by 14-feet deep, within Sonoma Creek in the core area from which water was pumped to Suttonfield Lake or to the WTP for direct use. The Sonoma Creek Pump Station above the creek bank behind the Butler Building houses five pumps between 25 and 50 horsepower each. By operating appropriate valves, water was pumped from or to Suttonfield Lake to the WTP. Withdrawals were made to ensure adequate water supplies stored in the lakes during drought and times of high fire threat.²

Water from the unnamed stream was diverted directly to Suttonfield Lake. Fern Lake and Suttonfield Lake collectively provide 840 acre-feet of raw water storage. Water diverted from a group of seeps known as Roulette Springs was piped directly to the

¹²² Water Supply Assessment for the SDC Specific Plan. EKI / VOTMWD July 2022.

¹²³ SDC Existing Conditions Report. Hydrology & Site Infrastructure. Sherwood Design Engineers Jan 8, 2018.

WTP². The SDC Property also includes four groundwater supply wells that are all currently inactive.

All riparian water rights shall remain with the property. The state owns riparian water rights and pre-1914 and post-1914 appropriative water rights and owns and operates a municipal water supply, treatment, and distribution system on the property. These rights may be held by the state for existing and future domestic uses on the property. The riparian and appropriative water rights limit water use for onsite purposes and no offsite use is allowed under current water rights. In addition, riparian claims cannot be stored for later use or used on another parcel that is not adjacent to the POD.

Based on WTP production data provided by DGS from 1969 to 2007, a period during which the SDC was operating at or near full capacity, water use averaged 622 acre-feet per year (AFY) and peaked at 1,143 AFY in 1986. The high historical SDC production including the peak in 1986 was possible because a dam was installed directly downstream of the Sonoma Creek POD. The dam was removed in the late 1980s due to a broken fish ladder. Subsequent Sonoma Creek withdrawals from this POD were limited to periods when the creek stage was high enough to inundate the diversion sump.

Through active management of the local surface water sources on the SDC property and storage capacity in Fern Lake and Suttonfield Lake, the SDC historically provided reliable, year-round domestic water to the entire campus. More recently, around 10-years ago, VOMWD entered into an agreement with SDC where SDC could provide limited supplies (two weeks) during an emergency to serve as a back-up water supply source for Sonoma County to mitigate water service disruption to retail customers in the Sonoma Valley. VOMWD is required to replace water after the emergency within a defined time period.

Existing Site Conditions

In 2019, the WTP at the SDC was shut down due to a lack of certified treatment and distribution operators and the permit to operate as a public water system was revoked. Since that time, portions of the SDC water distribution system have remained in operation to serve existing users through the State of California/SDC's water supply agreement with Sonoma Water and its connection to Sonoma Water's aqueduct, which SDC has relied on in the past due to disruptions to their own water supply facilities.

Supply & Distribution Piping

While the lakes provide water storage, the water treatment plant has been shut down and most of the water transmission and distribution systems (piping) are described as beyond

useful life and obsolete by previous studies. Raw water transmission lines from the Sonoma Creek diversion and pump house to Suttonfield Lake, the lakes to the treatment plant, and water transmission lines between transfer tanks may need to be replaced based on the age of the piping, however an assessment of their condition is needed to determine if they can continue to be used to serve the Planning Area. The water treatment plant will be evaluated for re-use by the water system operator.

The majority of the water distribution mains will need to be replaced as stated in the Sherwood report. Notable exceptions are about 8,500-feet of PVC C900 water mains running through Arnold Drive south of Holt Road, Hearney, Holt, Sonoma, Wilson north of Sonoma, and Eucalyptus streets installed in 1995 that should be able to be preserved as the Sherwood report states these pipelines will have a useful life for another 50 years. The length of water distribution main replacements can be approximated at 25,000-feet based on Exhibit 4.2 in the Sherwood report and roughly follows the existing street layout, excluding the dual water supply lines originally built for non-potable use.

Table 3.15-1: Water Demand Estimates

Proposed Project Water Demand Estimates

Sonoma Developmental Center Specific Plan, Sonoma County, California

Project	Land Use	Water Use Factor (a)	Water Use Factor Units	Estimated Water Use (AFY) (b)				
				2025	2030	2035	2040	2045
Sonoma Developmental Center Specific Plan	Single Family Residential	244	gpd/du	0	11	25	41	68
	Multi-Family Residential	100	gpd/du	0	0	9.0	29	56
	Missing Middle Residential	172	gpd/du	0	7.7	17	29	48
	Hotel	0.16	AFY/employee	0	28	28	28	28
	General Commercial	1.79	AFY/100 sf	0	2.7	4.5	5.4	7.2
	Office	1.79	AFY/100 sf	0	3.6	7.2	16	23
	Public / Institutional	1.79	AFY/100 sf	0	4.5	13	18	28
	Research & Development	2.35	AFY/100 sf	0	0	6	24	30
	Total Open Space	--	--	--	--	--	--	--
	Irrigated Park Area	(c)	--	0	3.5	10	14	21
	Other Irrigated Common Space Areas	(c)	--	0	0	1.4	1.9	2.9
System Water Losses (d)	N/A	9.5%	--	0.0	5.8	12	19	30
Total (e)				0	67	133	225	342

Abbreviations:

"AFY" = acre-feet per year

"du" = dwelling units

"MAWA" = Maximum Applied Water Allowance

"MWELO" = Model Water Efficient Landscaping Ordinance

"sf" = square feet

"VOMWD" = Valley of the Moon Water District

Notes and references for Table 3-15.1

Notes:

- (a) Single Family Residential and Multi-Family Residential, General Commercial, Office, and Public/Institutional water use factors are based on the factors developed for VOMWD in Reference 2. The "Missing Middle" Residential water use factor is assumed to equal the average between Multi-Family and Single Family Residential water use factors. The Hotel water use factor is based on Reference 3 and an assumed 167 employees per Reference 1. The Research and Development Water Use Factor is based on factors developed by Redwood City, California in Reference 4.
- (b) Estimated Water Use equals the land use estimates provided in Table 1 (based on Reference 1) multiplied by the water use factors for each land use.
- (c) Estimates of landscape irrigation are based on MWELO MAWA calculations per Reference 6. See Table 3 for MWELO
- (d) Estimated distribution system water loss is calculated using the VOMWD's fiscal year 2020-2021 DWR Water Audit Report percent non-revenue water (i.e., 9.5% of project demands), per Reference 6 and includes both real and apparent losses and other non-revenue consumption.
- (e) Totals may not sum due to rounding.

References:

1. Sonoma County Permit & Resource Management Department via email April 2022.
2. 2020 Urban Water Management Plan, VOMWD, dated June 2021.
3. Pacific Institute, 2003. Waste Not, Want Not: The Potential for Urban Water Conservation in California, November 2003.
4. Redwood City, 2019. Engineering Standards Volume 3. Water Demand Projection Worksheet.
5. DWR, 2021. WUEdata - Water Audit Report Data website, accessed 28 April 2021, (https://wuedata.water.ca.gov/awwa_plans).
6. California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.

The WSA concludes all future demands within its service area can be met, inclusive of the Proposed Project in normal and multiple dry hydrologic years from 2025 through 2045.¹ Single dry year shortfalls noted in the WSA are for the District's service area outside of the SDC. The SDC site has sufficient onsite supplies to meet projected onsite demands. This water supply will be available to new development once the onsite water treatment facilities and raw water transmission piping are evaluated and reactivated by the water provider.

Wastewater

Sewer Mains & Facilities

The July 2021 Wood Rogers report describes substantial inflow and Infiltration (I&I) from the SDC site's sewer collection system consisting of primarily vitrified clay and cast-iron pipe built in the 1920s and 30s. Work has been done to minimize the volume of inflow entering the wastewater collection system. However, SVCSD continues to receive a high volume of inflow into the sewer collection system from the SDC campus. I&I has been

partially reduced by replacement of many of the sewer lines in the early 1990s with PVC piping, the disconnection of storm sewers to the sewer system, abandonment of severely damaged sewer mains, and also reduction in water use following the closure of the SDC campus. The existing sewer mains primarily run cross-country between and under buildings and do not follow the street layout. Portions of other sewer mains do run along Wilson Street and Arnold Drive within or adjacent to the streets, but are noted in the July 2021 Wood Rogers report to be abandoned or have structural defects. Around 33,500-feet are estimated for the length of existing streets, roughly corresponding to new sewer main installations. New sewer mains will be installed in the alignments of new or existing streets as development of individual projects proceed. Disconnection and abandonment of the existing sewer system may occur within a shorter timeframe than the build-out of the Planning Area.

The condition of the 18-inch diameter SVCSD main trunk sewer within the site that runs along Arnold Drive to the south end of Redwood Drive was not assessed in the July 29, 2021 Wood Rogers Memo. An analysis of the capacity of SVCSD trunk sewer to serve the SDC at full buildout needs to be completed. Also, a portion of the SDC Core Campus is outside of the SVCSD service area and will need to be annexed into the SVCSD.

The existing sewer lift station near the south end of Redwood Street should not be needed to maintain gravity flow to the SVCSD main sewer line if a second tie-in to the SVCSD main sewer can be made at a lower elevation on the south end of the site. An existing lift station at a bar screen and main collection point of the site's sewer system where it ties into the SVCSD main sewer main is likely still needed. Previous reports show sewer lines from the east side of the campus gravity flow across the Hearney Street Bridge to the west side of the campus where the SVCSD main sewer is located. However, a second, new lift station southeast of the Hearney Street bridge is likely needed to be able to raise the sewer going across the bridge up above the bridge soffit to protect it from damage from debris during flood events.

A Wastewater Generation Estimate is summarized in **Table 3.15-2** below.

Table 3.15-2: Wastewater Generation in the Planning Area

<i>Wastewater Generation</i>	<i>Average Gallons per day (GPD)</i>	<i>Acre-feet per year (AFY)</i>
2015 Wastewater Flows to SVCSD	284,753	319
2020 Wastewater Flows to SVCSD	10,000	11
2045 Total Wastewater Demand	336,000	376

The 2045 wastewater demand is calculated based on Proposed Plan buildout water use estimates in the WSA with a 10% allowance for inflows and infiltration.

Source: Wood Rogers, 2021 & July 2022 WSA,

The above wastewater generation estimate for buildout of the Planning Area is an average flow. Assuming a peak factor of 2.5, peak flow over a given day could be on the order of 0.85 MGD.

Additional studies are needed to evaluate alternatives for rehabilitation and replacement of existing sewer lines described in the 2021 Wood Rogers report and to evaluate the timing of when work can be done in advance of future buildout to reduce infiltration and inflows.

Stormwater

Sonoma County will maintain the public storm drain system, which includes all of the storm drains, pipes, catch basins, and manholes within future County right-of-way or easements. The outfalls, channels, creeks, including Sonoma Creek adjacent to the SDC campus fall within the property extents. All storm drains flow outfall to nearby creeks and to Sonoma Creek and ultimately to the San Pablo Bay.

Sonoma County conducts storm water event inspections of construction sites, and receives and investigates complaints about illicit discharges into the public storm drain system.

Garbage, Recycling, and Organics Collection Service

Solid waste collection services in Sonoma County are provided pursuant to the County's agreement with Recology. Collection vehicles will deliver material collected to the Sonoma Transfer Station at 4376 Stage Gulch Road in Sonoma. The solid waste is then transferred to long-haul transport trucks and delivered to the Sonoma County Central Landfill which contains the Central Transfer Station and Central Disposal Site. The Central Disposal Site has a maximum permit capacity of 32,650,000 cubic yards with 9,181,519 cubic yards of remaining capacity. Commercial and residential organics are processed at the Central Transfer Station. Weekly curbside collection of residential recyclables is provided by Recology. Single stream recycling allows residents to place cans, bottles, paper, plastics, etc. in the same receptacle for weekly collection. Materials collected for recycling are taken to the Central Transfer Station and ultimately processed at the Recology facility at 3417 Standish Ave in Santa Rosa.

The permitted capacity of the primary solid waste disposal facilities that serve the Planning Area are provided in **Table 3.15-3** below.

Table 3.15-3. Primary Solid Waste Disposal Facilities Serving the Planning Area

<i>Facility Name</i>	<i>SWIS Number</i>	<i>Maximum Permitted Capacity (tons per day)</i>
Sonoma Transfer Station	49-AA-0144	760
Central Disposal Site	49-AA-0001	2,500
Central Transfer Station	49-AA-404	1,500

Source: CalRecycle, 2022. Available: <https://www2.calrecycle.ca.gov/SolidWaste/Site/Search>. Accessed: June 21, 2022

Electricity, Natural Gas, and Telecommunications

Pacific Gas and Electric (PG&E) maintains all public natural gas and electric infrastructure in the area. A will serve letter has been received from PG&E with confirmation that PG&E can serve the buildout of the Planning Area.

Sonoma Clean Power provides electricity to customers in Sonoma County using PG&E infrastructure; customers can choose between SCP and PG&E for electric generation

service. PG&E provides natural gas to the project site. All buildings within the Planning Area slated for adaptive reuse have existing connections to infrastructure; the vacant areas do not. Existing overhead and underground electrical lines extend throughout the Planning Area. These lines have been installed to serve the variety of land uses currently in this area. Natural gas is supplied via a low-pressure pipe network that runs throughout the Planning Area.

There are numerous telecommunication providers in the County for DSL, wireless, cable, and fiber optic services. Of the approximately nine internet service providers in Eldridge, four offer residential services and 9 offer business services.¹²⁴ Service providers such as AT&T, XFINITY from Comcast, Sonic, and EarthLink, among others, provide telecommunication services to residents and businesses in the County. New underground conduits for telecommunications are expected to use the same trench for new electrical services.

3.15.4 Impact Analysis

3.15.4.1 Significance Criteria

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;**
- Criterion 2: Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;**

¹²⁴ BroadBandNow. 2022. Internet Providers in Sonoma County, California. Available: <https://broadbandnow.com/California/>. Accessed: June 15, 2022.

- Criterion 3:** Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Criterion 4:** Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Criterion 5:** Conflict with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.15.4.2 Methodology and Assumptions

Potential impacts on utilities and service systems are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, the Sonoma County Municipal Code, and the policies included in the Proposed Plan.

As described in Chapter 2: Project Description, implementation of the Proposed Plan would result in the development of 1,000 residential units, 40,000 square feet of commercial space, 90,000 square feet of new hotel space, 190,000 square feet of office space, 30,000 square feet of new public building space, 40,000 square feet of institutional space, and 20,000 square feet of utility building space.

As described therein, the analysis presented throughout this EIR adequately accounts for the potential environmental impacts of the new residential units and non-residential square footage. Project water and sewer demands were analyzed by comparing SDC pre-closure conditions to conditions expected with buildout of the Planning Area as they are similar in magnitude with respect to usage of available onsite water sources and capacity of existing downstream sewer facilities.

A Water Supply Assessment was prepared for the Proposed Plan; this document is referenced in the analysis and included as an Appendix. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are determined to be less than significant.

3.15.4.3 Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address utilities and service systems:

Public Facilities, Services, and Infrastructure

Goals

6-A Community Facilities: Provide high-quality community facilities and spaces to serve new residents of the SDC site and the greater Sonoma Valley.

6-B Parks and Recreation: Maintain and increase the park spaces at SDC to provide recreational spaces for active play, gatherings, and leisure, including facilities to serve the needs of people of different ages, interests, and abilities.

6-C Transformative Climate-Forward Community: Promote a climate-resilient community that models the future of the Sonoma Valley by generating its own energy, reducing waste, and designing for resiliency in a changing climate.

6-D Utilities and Infrastructure: Ensure that infrastructure, including water, wastewater, stormwater, power, and telecommunications, can adequately, sustainably, and resiliently accommodate the needs of future residents and businesses.

6-E Water Supplies: Safeguard SDC's water supplies and water rights, ensuring adequate availability of water for residents, businesses, fire suppression needs, ecosystem services, and groundwater recharge.

Policies

- 6-1 Expand an existing Sonoma County fire district to serve SDC, and identify a location for the fire district to construct a new fire station within the Core Campus. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.
- 6-2 Work closely with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools.

- 6-3 Ensure that the existing baseball and soccer fields as shown in Figure 6.2-1 are retained and maintained with continued public access.
- 6-4 Provide a fenced off-leash dog park within the Core Campus at least 200 feet from any creeks or wildlife corridors, with amenities such as benches, shade trees, and drinking water access.
- 6-5 Provide park spaces east of Arnold Drive on both sides of Sonoma creek with easy access from adjacent residential developments.
- 6-6 Ensure that parks and public spaces in the Core Campus offer a diverse range of amenities for a diverse range of park users, such as children’s playgrounds and play areas, picnic areas, multi-use sports fields, an amphitheater or other outdoor performance spaces, areas for quiet contemplation, night sky viewing areas, and support facilities to enhance user comfort, including restrooms, drinking fountains, shade trees, and benches.
- 6-7 Allocate space for a local non-profit or other operator, in collaboration with Sonoma County Regional Parks Department, to build and operate a gym and community center to serve the wider Sonoma Valley community.
- 6-8 Install dedicated irrigation meters for both new and existing commercial, industrial, and institutional landscaping.
- 6-9 Work with Sonoma Valley County Sanitation District (SVCSD) to explore the feasibility of establishing a recycled water facility on-site to offset the use of potable water by providing recycled water for non-potable uses such as landscape irrigation .
- 6-10 Implement greywater systems in new residential and commercial facilities to reduce potable water use for landscape irrigation, toilet flushing, and other appropriate uses, in order to conserve potable water and reduce water waste.
- 6-11 Apply for state, federal, and private grants for installation of recycled water infrastructure and greywater building systems. Explore

opportunities to partner with other agencies and the feasibility of issuing bonds for this purpose.

- 6-12 Construct of new sewer laterals and mains to meet Sonoma County Water Agency Sanitation Standards and maintain these pipelines and appurtenances to ensure that inflow and infiltration is not a problem for the SVCSD in the future.
- 6-13 Provide sufficient wastewater conveyance, pumping, and treatment capacity for peak sewer flows .
- 6-14 Continue to clean and video inspect the sewer infrastructure to mitigate sanitary sewer overflows, locate deficiencies, and reduce inflow and infiltration.
- 6-15 Ensure that indoor plumbing fixtures in all new and retrofitted buildings meet or exceed CALGreen Tier 2 standards.
- 6-16 Minimize impervious surfaces and use pervious pavements where possible, retaining and providing new pervious surfaces such as landscape areas, crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt. At least 50 percent of new ground floor private parking spaces and non-primary access paving are required to be surfaced with permeable paving to encourage stormwater infiltration and disperse runoff from roofs or pavement to vegetated areas where possible.
- 6-17 Maintain high water quality in lakes and streams by creating opportunities for rainwater capture such as roof drainage capture systems, installing trash screens in stormwater inlets, prohibiting use of pesticides in landscaping, and using bioretention facilities to clean stormwater before it reaches lakes and creeks in order to remove pollutants and enhance water quality through natural processes.
- 6-18 Incorporate site design measures and Low Impact Development (LID) features such as bioretention facilities in accordance with the Bay Area Stormwater Management Agencies Association (BASMAA) Manual or otherwise required by the Grading and Stormwater Division of Permit Sonoma. The bioretention facilities

should have a surface area of at least 4 percent of the tributary impervious area.

- 6-19 Connect each building within the Core Campus to a microgrid:
 - a. Work with local distributed energy resources (DERs) installation groups and advocates to build enough on-site energy generation, such as solar, wind, geothermal, and methane gas cogeneration, to power the Planning Area in case of emergency;
 - b. Connect to PG&E's grid through the Community Microgrid Enablement Program or an equivalent, with isolation devices that allow SDC to fully connect or disconnect from PG&E's system.
- 6-20 Prohibit new natural gas lines to all new buildings and require new and adaptively reused buildings to be fully powered by electricity.
- 6-21 Build all new utility lines underground and bury existing utility lines to improve safety and reduce visual clutter in accordance with Sonoma County Code Sec. 25-44.
- 6-22 Work with local farming groups to start an on-site composting program for food, landscape trimmings, and farm waste to provide on-site jobs, sequester carbon, and provide valuable soil for agricultural production.
- 6-23 Explore opportunities and partnerships to collect off-gassing methane from on-site solid, farm, and food waste to be utilized as an energy resource, using technologies such as anaerobic digestion, aerobic digestion, and combined heat and power (CHP) cogeneration.
- 6-24 Work with Recology and developers to create standards for shared trash enclosures.
- 6-25 Connect all new and adaptively reused buildings to broadband internet.
- 6-26 Ensure the SDC site's water rights are retained for uses within the core campus and for habitat preservation, ecological services,

groundwater recharge in the open space area, and to increase the reliability of the regional water supply.

- 6-27 Maintain water supply and filtration at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency.
- 6-28 Use water from SVCSD's Recycled Water Trucking Program for construction site activities, including dust control, cement mixing, soil compaction, to the greatest extent feasible.
- 6-29 Ensure that development does not result in an increase in water temperatures in receiving streams resulting from runoff of warm storm water from the site.
- 6-30 Ensure that development does not result in a net increase in withdrawals or diversions from area springs and streams, including Roulette Springs, Hill Creek, Asbury Creek, and Sonoma Creek, within critical low-flow periods, including summer, fall, and drought conditions, or as annual averages.

3.15.4.4 Impacts

Impact 3.15-1 Full Buildout of the Proposed Project would not require or result in the relocation or construction of new or expanded water, wastewater and stormwater drainage conveyance systems, and electric power, natural gas, and telecommunications distribution facilities, the construction or relocation of which could cause significant environmental effects. (*Less than Significant*)

Water

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan will:

A: Require or result in the construction or relocation of new or expanded water facilities, including treatment and conveyance systems, the construction or relocation of which could cause significant environmental effects.

Potable water is presumed to be provided to the Planning Area by the Valley of the Moon Water District by treating onsite sources of water and distributing it for use within the

Planning Area. Given constraints in water rights, export of onsite water supplies is not allowed with the exception of limited short-term periods of time during emergency events. Valley of the Moon Water District also separately serves unincorporated areas of Sonoma County in and around the communities of Eldridge, Glen Ellen, El Verano, and Boyes Hot Springs. Additionally, since the early 1960's, water supply has been provided on occasion to the SDC site from the Sonoma Water Aqueduct as a backup supply when onsite facilities are not able to meet water needs at the site.

The estimated full build-out water use within the Planning Area of 342 acre-feet/year is less than the average water use of 622 acre-feet/year during the historical period the SDC was operating at or near full capacity. This can be attributed to a reduction in resident population which was as high as 13,400 in 1968.¹²⁶ Other contributing factors in the water use reduction are green building standards and water-efficient landscaping ordinances adopted by Sonoma County requiring water-efficient features, including low-flow lavatory faucets, kitchen faucets, toilets, and urinals and low-water use landscaping and high-efficiency irrigation systems to minimize outdoor water use.

If the projected demand of the Planning Area build-out were added to the projected District demands, but without considering the surface water supplies available at the SDC Property; the District would have sufficient supplies to meet projected demands in normal years through 2045. However, during single dry years, the District is projected to have a shortfall starting in 2030, which increases from a 3% shortfall (99 AF) in 2030 to a 28% shortfall (836 AF) in 2045. During multiple dry years, the District is projected to have shortfalls of up to 7% (241 AF) starting in 2045 for each of the consecutive dry years.¹

Within the Planning Area, water is delivered through distribution mains in most of the major streets. Development projects pursuant to the Proposed Plan would be required to install new water mains within the street network to serve fire and domestic water needs. Final sizing of any particular line will be subject to modeling of the system that must rely on water use parameters of any particular project or group of projects once those details are known.

The land use and population projections developed for the Proposed Plan and used as the basis for technical modeling in this EIR account for the construction of this new local conveyance infrastructure. Therefore, the environmental impacts related to construction period traffic, noise, and air quality and GHG emissions have been considered throughout

¹²⁶ SDC Closure Plan. CA HHSA DDS 2015.

this EIR at a programmatic level. Distribution mains would be installed within the Street Network Figure of the Proposed Plan and where new streets are to be constructed; installation of the mains will be done concurrently with roadway construction. Further, construction would be subject to separate project-level CEQA review at the time specific projects are proposed in order to identify and mitigate project-specific impacts as appropriate. As such, compliance with existing regulations and implementation of Proposed Plan policies would reduce impacts to the maximum extent practicable. Overall, buildout of the Proposed Plan would result in less than significant impacts related to the provision of water treatment and conveyance facilities.

Wastewater

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan will:

- A. Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.
- B. Result in a determination by the waste water treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The Planning Area is within the service area of the Sonoma Valley County Sanitation District (SVCSD) and is currently served by a gravity main in Arnold Drive, which carries wastewater flows from Glen Ellen south through the Planning Area and to the SVCSD Treatment Plant approximately 8-miles to the south. Between May 1 and October 31, the recycled water is used for irrigation and wetland habitat enhancement. Between November 1 and April 30, tertiary recycled water can be discharged into Schell Slough.

Implementation of the Proposed Plan would result in the development of 1,000 residential units, 40,000 square feet of commercial space, 90,000 square feet of new hotel space, 190,000 square feet of office space, 30,000 square feet of new public building space, 40,000 square feet of institutional space, and 20,000 square feet of utility building space.

Existing and projected wastewater generation for the Planning Area is shown in gallons per day and acre-feet per year in **Table 3.15-2**. The SVCSD Treatment Plant is permitted to discharge an average dry weather flow of 3 MGD. Additionally, the SVCSD Treatment Plant can treat, up to 16 MGD and has the ability to discharge 11 MGD. The SVCSD Treatment Plant also has 35 million gallons of equalization storage. Infiltration and inflow are significant issues within SVCSD and within the SDC.

As shown in **Table 3.15-2**, estimated average wet-weather sewer flow with buildout of the Proposed Plan in 2045 is 0.3 MGD, which represents approximately 2 percent of total available capacity in 2045. Therefore, the Treatment Plant will have adequate capacity to serve the 2045 service population of the Planning Area.

Excessive infiltration and inflows from structurally deficient sewer pipes and structures can contribute to sewer system backups and overflows. Given the poor condition of much of the site sewer lines, it is important that damaged portions of the existing sewer system continue to be disconnected and abandoned as soon as possible. Should the abandonment work continue prior to buildout of the Planning Area, the risk of sanitary sewer overflows will be minimized.

To minimize ground disturbance from construction of new sewer mains, these utilities should be installed concurrently with the construction or reconstruction of roadways.

If the SVCSD trunk sewer capacity is found to be adequate to convey the increase in flows from buildout of the Planning Area, implementation of the Proposed Plan will have a less than significant impact on wastewater facilities as no new wastewater treatment facilities aside from a small-scale recycled water or individual greywater systems have been determined to be required or are proposed to serve the Planning Area.

Stormwater

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan will:

- A. Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.

Crossover from Hydrology and Water Quality Chapter:

- B. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality.
- C. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

To minimize ground disturbance from construction of new stormwater drainage facilities and the associated potential environmental effects of their construction, these utilities should be installed concurrently with the construction or reconstruction of roadways.

Future developments within the Planning Area must meet the requirements of Sonoma County's MS4 permit with the California State Water Board. These include stormwater

treatment regulations, hydromodification requirements, as well as trash capture regulations. Guidelines for implementing these regulations are detailed in the BASMAA Manual and are reviewed and permitted by Sonoma County. Projects within the Planning Area will be required to comply with these requirements, which will reduce pollutants carried by stormwater runoff and minimize stormwater runoff during light precipitation events.

Policy 6-16 requires new development to minimize impervious surfaces, consistent with stormwater Low Impact Development permit requirements. Minimizing the amount of impervious surfaces has a substantial effect on stormwater runoff. Stormwater detention basins, oversized pipes and underground tanks may also be used to detain stormwater to meter and record design flows, if required by Permit Sonoma drainage reviews for evaluating conformance of new developments with the criteria of the Sonoma Water Flood Management Design Manual.

Therefore, through phasing construction of storm drains with other development work, conformance with the Sonoma Water Flood Management Design Manual and BASMAA Manual, there would be a less than significant impact due to construction of new or expanded storm water drainage facilities.

Power and Telecommunications

For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

- A. Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Electric service by Pacific Gas and Electric Company (PG&E) is available to the area surrounding 15000 Arnold Drive. Service to this facility will be made in accordance with PG&E's Electric Rules and Tariffs on file with the State of California Public Utilities Commission at the time the Applicant applies for service and in accordance with any required Land and Environmental reviews. **This does not guarantee electric capacity is available to service the development until PG&E electric planning review is completed.**¹²⁷

Proposed Plan Policy 6-19 will require each building within the Core Campus to connect to a microgrid to power the Planning Area in case of emergency. Policy 6-20 prohibits new natural gas lines to all new buildings and requires new and adaptively reused buildings to

¹²⁷ PG&E will serve statement received via email June 17, 2022.

be fully powered by electricity. Policy 6-21 requires new development to install utility distribution lines underground. High voltage transmission electric lines and pad mounted transformers and other electrical equipment may still be required to be installed above ground. The land use and population projections developed for the Proposed Plan and used as the basis for technical modeling in this EIR account for the extension of power and telecommunications infrastructure needed for implementation of the Proposed Plan.

Therefore, the environmental impacts related to construction period traffic, noise, and air quality and GHG emissions have been considered throughout this EIR at a programmatic level. Underground power distribution lines would be installed within the street network, shown on the Street Network Figure of the Proposed Plan. Where new streets are to be constructed, installation of the power lines would be done concurrently with roadway construction. Further, construction would be subject to separate project-level CEQA review at the time specific projects are proposed in order to identify and mitigate project-specific impacts as appropriate. As such, compliance with existing regulations and implementation of Proposed Plan policies would reduce impacts to the maximum extent practicable. Overall, buildout of the Proposed Plan would result in less than significant impacts related to the provisions of power and telecommunications facilities.

Mitigation Measures

None required.

Impact 3.15-2 Development under the Proposed Plan would have sufficient water supplies available to serve the Planning Area and reasonably foreseeable future development during normal, dry and multiple dry years. *(Less than Significant)*

Water service to the Planning Area is presumed to be provided by the Valley of the Moon Water District through the utilization of onsite water sources. A significant impact would occur if the District would not have sufficient water supplies available to serve the Planning Area during normal, dry, and multiple dry years through 2045. Implementation of the Proposed Plan would not increase water demand within the Planning Area from historical peak amounts. Further, the Proposed Plan includes multiple policies that support water conservation and efficiency to minimize additional demand, including policies 6-10, 6-11, and 6-15. These policies would further reduce demand by implementing measures such as greywater systems and water efficient plumbing fixtures. Sonoma County's General Plan, and Municipal Code also include multiple provisions that support water conservation.

Therefore, based on the findings of the WSA and implementation of **the mitigation measures** described below, the District will have sufficient water supplies available to serve development pursuant to the Proposed Plan during normal, dry, and multiple dry years. As such, impacts would be less than significant with the following Standard Conditions of Approval incorporated.

Standard Conditions of Approval

Policies

- UTIL-1** The existing raw water conveyance system shall be surveyed to identify its alignment through the core area and beyond to connections at the onsite water sources, storage tanks, and WTP. An evaluation of the condition of the piping through CCTV and other non-invasive methods will be required to determine the adequacy of the piping to be re-used or the extent of repairs need.
- UTIL-2** Once a condition assessment of the existing raw water transmission piping has been completed, the Valley of the Moon Water District shall prepare an estimate for the repair, replacement, refurbishment, or relocation of the raw water transmission piping needed to utilize the onsite water sources and agree to improvement and maintenance of these pipelines needed to ensure the water supply conveyance to treatment facilities and subsequently to customers.
- UTIL-3** Complete an analysis of the capacity of SVCSO trunk sewer to serve the SDC at full buildout.
- UTIL-4** Annex the portion of the SDC Core Campus outside of the SVCSO service area into the SVCSO.
- COM-1** **Water Efficiency Measures for New Developments.** New residential and commercial development in the Planning Area shall be designed to incorporate CALGreen and the Sonoma County **Water Efficient Landscape Ordinance (Chapter 7D3 of the Sonoma County Code)** requirements as required in order to ensure compliance with federal and State requirements for water efficiency. These requirements include but are not limited to use of low-flow plumbing fixtures in buildings, and inclusion of low-water use landscaping and high-efficiency irrigation systems to minimize outdoor water use.

Mitigation Measures

None required.

Impact 3.15-3 Development under the Proposed Plan would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant*)

A significant impact would occur if the SVCSD Treatment Plant would not have adequate capacity to serve the Proposed Plan's projected demand in addition to SVCSD's existing commitments. As shown in **Table 3.15-2**, at build-out, the Proposed Plan is estimated to generate about 0.3 MGD of wastewater, well within the treatment plant's existing capacity. SVCSD staff has confirmed for the projected build-out of the Proposed Plan that there will be sufficient capacity to serve buildout of the Proposed Plan in 2045. As a result, impacts will be less than significant.

Mitigation Measures

None required.

Impact 3.15-4 Development under the Proposed Plan would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (*Less than Significant*)

Impact 3.15-5 Development under the Proposed Plan would not conflict with federal, state, and local management and reduction statutes and regulations related to solid waste. (*Less than Significant*)

Construction

A significant impact would occur if development under the Proposed Plan generates solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Demolition and construction activities associated with implementation of the Proposed Plan would result in a temporary increase in solid waste generation periodically during construction. However, the increase would be minimal and temporary. Standard Conditions of Approval UTIL-5 is included to ensure preservation of topsoil removed during construction for reuse in revegetation. The Proposed Plan would not generate solid

waste in excess of State or local standards or in excess of the capacity of local infrastructure during construction. This impact would be less than significant.

Operation

Solid waste from the SDC site will be routed to Central Disposal Site. As shown below in **Table 3.15-4**, Sonoma County has disposed between 37,408 and 42,523 tons of solid waste during the five-year period between 2016 and 2020. These volumes account for all waste generated by all sources within the County, including both residential, commercial, and industrial waste. Using these reported volumes of solid waste, and the population of Sonoma County during each of these years, a per capita solid waste disposal rate was calculated for Sonoma County. As shown in the table, the average per capita solid waste disposal rate in Sonoma County, in recent years, is approximately 1 ton per year per person. As discussed in Chapter 2: Project Description, implementation of the Proposed Plan will increase the Planning Area’s population by 2,400 residents compared to existing conditions. Thus, the Proposed Plan would result in a net increase in solid waste generation of approximately 2,400 tons per year, or 6.6 tons per day.

Table 3.15-4: Annual Solid Waste Disposal Per Capita (Sonoma County)

<i>Report Year</i>	<i>Solid Waste Disposal Originating from Sonoma County (annual tons)</i>	<i>Population</i>	<i>Solid Waste Disposal Per Capita (annual tons)</i>
2016	420,865.46	502,604	0.84
2017	479,500.89	504,613	0.95
2018	376,585.82	502,866	0.75
2019	468,938.79	500,675	0.94
2020	423,425.95	491,354	0.86

Source: CalRecycle, 2022. Available:

<https://www2.calrecycle.ca.gov/LGCentral/Home/slcp/capacityplanning/recycling>. Accessed: June 15, 2022.

As shown in **Table 3.15-3**, the permitted capacity of the Central Disposal Site is 2,500 tons per day. Thus, the daily solid waste generated by the Proposed Plan would be approximately 0.27 percent of the permitted daily capacity of the landfill. The Proposed Plan would not be a substantial contributor to the County’s solid waste at the Central Disposal Site.

Further, businesses and residences within the Planning Area would be required to recycle materials that are recyclable. Development projects under the Proposed Plan would be required to comply with State and local laws mandating recycling of recyclable materials. There will still be residual waste requiring landfill disposal, but the incremental increase in solid waste sent to the Central Landfill would have an imperceptible effect on landfill capacity. Therefore, implementation of the Proposed Plan would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure during operation, and this impact would be less than significant.

A significant impact would occur if development under the Proposed Plan would violate any federal, State, or local statutes or regulations related to solid waste. As described under the Physical Setting section, waste collection services in the Planning Area are provided by Recology. Recology collects and transports solid waste, including trash, recyclables, and organic materials. Recology also provides weekly collection of single-stream residential recyclables. Hazardous and e-waste is managed by the Sonoma County Household Hazardous Waste program, which operates household hazardous and electronic waste disposal drop-off facilities Central Landfill off Meham Road.

Federal, State, and local statutes and regulations related to solid waste include AB 939, AB 1327, SB 1016, AB 341, AB 1826, AB 2020 (CA beverage container recycling & litter prevention), AB 3056 (bottle redemption value), and SB 1383 (reduction in organic in landfills). Any development of future land uses under the Proposed Project would be required to comply with federal, State, and local statutes and regulations related to solid waste. Therefore, the impact would be less than significant.

Standard Conditions of Approval

Policies

UTIL-5 Topsoil removed in preparation for construction grading and drainage shall be stored on or near the site and protected to prevent soil loss while the work is underway. Topsoil shall not be stored on top of root systems of trees intended to be preserved. Topsoil shall be restored to disturbed surfaces prior to revegetation. See also CALGreen residential mandatory measures and Sonoma County Code Section 11.14.080.

Mitigation Measures

None required.

3.16

Wildfire

3.16 Wildfire

This section describes the environmental and regulatory setting for wildfires. It also describes events related to wildfires that have already occurred in the Planning Area and that could occur during implementation of the Proposed Plan. A wildland fire is a fire in which the primary fuel is natural vegetation and can consume thousands of acres of vegetation, timber and agricultural lands, as well as developed properties located in or adjacent to susceptible areas. Wildfires can be caused by human actions as well as natural events, such as lightening or high winds.

There were 42 comments in response to the Notice of Preparation (NOP) pertaining to topics covered in this section. Specifically, the Sierra Club, Sonoma Mountain Preservation, Sonoma Land Trust, Sonoma County Conservation Action, Center for Biological Diversity, Community Alliance with Family Farmers, Sonoma Valley Collaborative, and several other community members requested analysis of wildfire risk impacts, including on the safety of the local and regional population, ecological value of the Planning Area, and evacuation routes. Other comments requested analysis of impacts from employing fire-ready community design principles. These topics related to wildfire impacts are addressed in the Impact Analysis below.

3.16.1.1 Regulatory Setting

16.1.1.1. Federal Regulations

The Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires a state-level mitigation plan as a condition of disaster assistance. There are two different levels of state disaster plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act also established new requirements for local mitigation plans.

National Fire Plan

The National Fire Plan was developed in August 2000, following a historic wildfire season. Its intent is to establish plans for active response to severe wildfires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

16.1.1.2. State Regulations

California Office of Emergency Services (OES)

Under the California Emergency Services Act, the State developed an emergency response plan to coordinate emergency services provided by all governmental agencies. The plan is administered by the California Office of Emergency Services (OES). OES coordinates the responses of other agencies, including EPA, the Federal Emergency Management Agency (FEMA), the California Highway Patrol (CHP), regional water quality control boards, air quality management districts, and county disaster response offices. Local emergency response teams, including fire, police, and sheriff's departments, provide most of the services to protect public health.

OES prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 for the State to receive Federal funding. The Disaster Mitigation Act of 2000 requires a state mitigation plan as a condition of disaster assistance.

California Public Resources Code—State Responsibility Area

The California Public Resources Code (PRC) requires the designation of State Responsibility Areas (SRAs), which are identified based on cover, beneficial water uses, probable erosion damage, and fire risks and hazards. The financial responsibility of preventing and suppressing fires in an SRA is primarily the responsibility of the state. Fire protection in areas outside SRAs are the responsibilities of local or federal jurisdictions and are referred to as local responsibility areas and federal responsibility areas, respectively.

California Public Resources Code Sections 4201–4204

This portion of the PRC, most recently amended by AB 9 in 2021, requires the State Fire Marshal to classify Fire Hazard Severity Zones within SRAs. Lands within SRAs are classified in accordance with the severity of fire hazard present to identify measures to be used to retard the rate of spreading and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Very High Fire Hazard Severity Zones

Government Code Section 51178 requires CAL FIRE to identify very high Fire Hazard Severity Zones in the state. Very high Fire Hazard Severity Zones shall be based on fuel loading, slope, fire weather, and other relevant factors including areas where Santa Ana,

Mono, and Diablo winds have been identified by CAL FIRE as a major cause of wildfire spread. Government Code Section 51179 requires a local agency to designate, by ordinance, very high Fire Hazard Severity Zones in its jurisdiction. CAL FIRE has designated the eastern portion of the Planning Area as a very high Fire Hazard Severity Zone.

California Board of Forestry

The Board of Forestry maintains fire safe road regulations, as part of Title 14 of the California Code of Regulations (CCR). This includes requirements for road width, surface treatments, grade, radius, turnarounds, turnouts, structures, driveways, and gate entrances. These regulations are intended to ensure safe access for emergency wildland fire equipment and civilian evacuation.

California Fire and Building Codes (2019)

The California Fire Code is Chapter 9 of CCR Title 24. It establishes the minimum requirements consistent with nationally recognized good practices to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the California Building Code (CBC) use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification. The provisions of this Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

More specifically, the Fire Code is included in Title 24 of the CCR. Title 24, part 9, Chapter 7 addresses fire-resistances-rated construction; CBC (Part 2), Chapter 7A addresses materials and construction methods for exterior wildfire exposure; Fire Code Chapter 8 addresses fire related Interior finishes; Fire Code Chapter 9 addresses fire protection

systems; and Fire Code Chapter 10 addresses fire related means of egress, including fire apparatus access road width requirements. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures. These requirements establish minimum standards to protect buildings located in Fire Hazard Severity Zones (FHSZs) within SRAs and Wildland-Urban Interface (WUI) Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

Wildland-Urban Interface Building Standards

On September 20, 2007, the Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the CCR Title 24, Part 2, known as the 2007 CBC. These codes include provisions for ignition-resistant construction standards in the WUI.

Interface zones are areas with dense housing adjacent to vegetation that can burn and meeting the following criteria:

- Housing density class 2 (one house per 20 acres to one house per 5 acres), 3 (more than one house per 5 acres to one house per acre), or 4 (more than one house per acre)

- In moderate, high, or very high Fire Hazard Severity Zone

- Not dominated by wildland vegetation (i.e., lifeform not herbaceous, hardwood, conifer, or shrub)

- Spatially contiguous groups of 30-meter cells¹²⁸ that are 10 acres and larger

Intermix zones are housing development interspersed in an area dominated by wildland vegetation and must meet the following criteria:

- Not interface

- Housing density class 2

- Housing density class 3 or 4, dominated by wildland vegetation

- In moderate, high, or very high Fire Hazard Severity Zone

- Improved parcels only

¹²⁸ Note that "30-meter cells" refers to raster data, and indicates data is presented as 30-meter by 30-meter squares.

Spatially contiguous groups of 30-meter cells 25 acres and larger

Influence zones have wildfire-susceptible vegetation up to 1.5 miles from an interface zone or intermix zone.¹²⁹

The California Fire Plan

The Strategic Fire Plan for California is the State's road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018 and directs each CAL FIRE Unit to revise and update its locally-specific Fire Management Plan. These plans assess the fire situation within each of the 21 CAL FIRE units and six contract counties. These plans address wildfire protection areas, initial attack success, assets and infrastructure at risk, pre-fire management strategies, and accountability within their geographical boundaries.

State Emergency Plan

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code Sections 8555–8561) requires signatories to the agreement to prepare operational plans to use within their jurisdiction, and outside their area. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. The State of California, all State agencies, all political subdivisions, and all fire districts signed this agreement in 1950.

The "California Emergency Services Act," in Section 8568 of the California Government Code, states that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The Act provides the basic authorities for conducting emergency operations following the proclamations of emergencies by the Governor or appropriate local authority, such as a City Manager or County Administrator. The provisions of the act are further reflected and expanded on by

¹²⁹ CAL FIRE 2019b.

appropriate local emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the State of California Emergency Plan. The State Emergency Plan conforms to the requirements of California's Standardized Emergency Management System (SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies. The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and state. OES divides the state into several mutual aid regions. The County of Sonoma is located in Mutual Aid Region II, which includes Del Norte, Humboldt, Mendocino, Sonoma, Lake, Napa, Marin, Solano, Contra Costa, San Francisco, San Mateo, Alameda, Santa Clara, Santa Cruz, San Benito, and Monterey Counties.

Government Code Sections 65302 and 65302.5, Senate Bill 1241 (Kehoe) of 2012

Senate Bill (SB) 1241 requires cities and counties to address fire risk in SRAs and Very High FHSZs in the safety element of their general plans. The bill also amended CEQA to direct amendments to the CEQA Guidelines Appendix G environmental checklist to include questions related to fire hazard impacts for projects located in or near lands classified as SRAs and Very High FHSZs. In adopting these Guidelines amendments, the Governor's Office of Planning and Research recognized that generally, low-density, leapfrog development may create higher wildfire risks than high-density, infill development.¹³⁰

California Public Utilities Commission General Order 166

General Order 166 Standard 1.E requires that investor-owned utilities (IOU) develop a Fire Prevention Plan which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural

¹³⁰ "Leapfrog development" describes the construction of new development at a distance from existing developed areas, with undeveloped land between the existing and new development.

design standards of the line during a Red Flag Warning in a high fire threat area. Fire Prevention Plans created by IOUs are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 11 requires that utilities report annually to the California Public Utilities Commission (CPUC) regarding compliance with General Order 166. In compliance with Standard 1.E of this General Order, Pacific Gas and Electric Company (PG&E) adopted a 2022 Wildfire Mitigation Plan Update dated February 25, 2022. PG&E developed a High Fire Risk Area (HFRA) map that designates most of Sonoma County under Tier 2 and Tier 3 High Fire Threat Districts (HFTD). Tier 2 and Tier 3 HFTDs are intended to identify areas where stricter fire-safety regulations are to be applied from wildfires associated with overhead utility power lines and overhead utility power-line facilities.

16.1.1.3. Regional and Local Regulations

Sonoma County Community Wildfire Protection Plan

The 2016 Sonoma County Community Wildfire Protection Plan was developed with input from many organizations, including state and local fire departments, federal agencies, community groups, and land management agencies. The purpose of the Sonoma County Community Wildfire Protection Plan is to help reduce the potential loss of human life and damage to property, natural and cultural resources within Sonoma County due to wildfire. The plan describes the wildfire risk and potential throughout the County, designates Wildland Urban Interface (WUI) areas, discusses assets at risk throughout the County, provides mitigation strategies, and discusses resources available.

Sonoma County Multijurisdictional Hazard Mitigation Plan

The 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan defines measures to reduce risks from natural disasters in the Sonoma County Operational Area, which consists of the entire county, including unincorporated areas, incorporated cities, and special purpose districts. The plan complies with federal and state hazard mitigation planning requirements to establish eligibility for funding under Federal Emergency Management Agency (FEMA) grant programs for all planning partners. It updates the County's previous plan, the 2016 Sonoma County Operational Area Hazard Mitigation Plan.

Sonoma County Emergency Operations Plan (EOP)

The 2022 County's Emergency Operations Plan is a guidebook for the Sonoma County Operational Area (OA) to utilize during phases of an all-hazards emergency management

process which include preparedness, response, recovery, and mitigation. The EOP is intended to facilitate coordination between agencies and jurisdictions within Sonoma County while ensuring the protection of life, property, and the environment during disasters. In accordance with California's Standardized Emergency Management System (SEMS), this Plan provides the framework for a coordinated effort between partners and provides stability and coordination during a disaster.

Sonoma County 2020 General Plan

The 2020 General Plan includes the following goals and policies associated with wildfires:

Goal PS-3: Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

Objective PS-3.1 Continue to use complete data on wildland and urban fire hazards.

Objective PS-3.2: Regulate new development to reduce the risks of damage and injury from known fire hazards to acceptable levels.

Objective PS-3.3: Use the Sonoma County Hazard Mitigation Plan to help reduce damages from wildland fire hazards.

Policy PS-3a: Continue to use available information on wildland and structural fire hazards.

Policy PS-3b: Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with the Public Safety Element in the review of projects.

Policy PS-3c: Continue to adopt revisions to the Uniform Fire and Building Codes and other standards which address fire safety as they are approved by inspection organizations and the State of California. Review, revise, and/or adopt existing or new local codes, ordinances, and Fire Safe Standards to reflect contemporary fire safe practices.

Policy PS-3d: Refer projects and code revisions to the County Department of Fire and Emergency Services and responsible fire protection agencies for their review and comment.

Policy PS-3e: The County Department of Fire and Emergency Services shall offer assistance to local agencies in adoption and enforcement of fire safety regulations and shall work with local agencies to develop proposed improvements to County codes and standards.

Policy PS-3f: Encourage strong enforcement of State requirements for fire safety by the California Department of Forestry and Fire Protection.

Policy PS-3g: Encourage continued operation of California Department of Forestry and Fire Protection (CalFire) programs for fuel breaks, brush management, controlled burning, revegetation, and fire roads.

Policy PS-3h: Develop a program to improve and standardize the County street addressing system in order to reduce emergency service response times. Where applicable, coordinate the program with the cities.

Policy PS-3i: Encourage and promote fire safe practices and the distribution of fire safe educational materials to the general public, permit applicants, and local planning agencies.

Policy PS-3j: Provide fire hazard information signs in very high or high Fire Hazard Severity Zones in a manner consistent with Area Plans and that does not degrade Scenic Corridors and scenic views.

Policy PS-3k: Work with the California Department of Forestry and Fire Protection (CalFire) to identify areas of high fire fuel loads and take advantage of opportunities to reduce those fuel loads, particularly in very high or high Fire Hazard Severity Zones.

Policy PS-3l: Require automatic fire sprinkler systems or other on-site fire detection and suppression systems in all new residential and commercial structures, with exceptions for detached utility buildings, garages, and agricultural exempt buildings.

Policy PS-3m: Consider additional impact or mitigation fees, or a benefit assessment, to offset the impact of new development on fire services.

Sonoma County Fire Prevention Division

The Sonoma County Fire Prevention Division is responsible for programs, procedures, and projects for preventing the outbreak of fires within the unincorporated areas of the

county. The goal of this Division is to minimize the danger to persons and damage to property caused by fires that do occur. In addition to code enforcement, Fire Prevention Division staff are responsible for hazardous materials incident response, fire investigations, emergency scene management support at emergencies, and review of new development permit applications.

Sonoma County Department of Emergency Management

The Sonoma County Department of Emergency Management is responsible for the mitigation, preparedness, planning, coordination of response, and recovery activities related to county emergencies and disasters. The Department serves as the primary coordination point for emergency management's activities affecting more than one jurisdiction, and the unincorporated areas of the county. The Department became an independent county department in July 2019.

Sonoma County Code

Chapter 13, Sonoma County Fire Safety Ordinance, outlines the California Fire Code adopted with local amendments. Further, Article V of the chapter establishes minimum fire safe standards for development within the unincorporated area of the county. The county fire warden/fire marshal shall determine whether to grant, deny, or modify any application for an exception or mitigated practice filed in connection with the issuance of any building permit. The planning commission, board of zoning adjustments, project review and advisory committee, or design review committee shall determine whether to grant, deny, or modify any application for an exception or mitigated practice filed in connection with any development approval under their respective jurisdictions. Modification of an application for an exception or mitigated practice by the county fire warden/fire marshal, planning commission, board of zoning adjustments, project review and advisory committee, or design review committee shall be limited to the alternate fire protection measures specified in Section 13-62.

Section 7A-34 requires fire sprinklers in residential developments and to remove hazardous vegetation and combustible material from around the exterior of improvements in unincorporated areas of the county. Fire sprinklers are required in structures greater than 640 square feet using a pressurized water delivery system.

3.16.1.2 Environmental Setting

16.1.2.1. Physical Setting

Sonoma County is an area with a long history of wildland fires. A wildland fire is a fire in which the primary fuel is natural vegetation and can consume thousands of acres of vegetation, timber and agricultural lands, as well as developed properties located in or adjacent to susceptible areas. Wildfires can be caused by natural events, such as lightening or high winds. Overall, only five percent of wildfires in California are caused by lightning strikes; the majority—95 percent—are caused by human activity. Major causes of wildfires in Sonoma County include lightning strikes, wind-damaged electrical transmission lines, power equipment use, burning of debris, vehicles driven over dry grass or brush, arson, campfires, and others. The combination of highly flammable fuel (dead and dry vegetation), long dry summers and steep slopes create a significant natural hazard of large wildland fires. When strong winds blow periodically in the spring, summer and fall, the hazard is increased greatly. Drought years also increase the hazard by creating more dead and dry vegetation which can act as a fuel source.¹³¹

Historically, the most common months for wildfires were in August, September and October, but with the effects of climate change and seasonal droughts, wildland fires can occur over a more extensive portion of the year. High temperatures and low humidity from May to October increase the fire hazard, and elevation can also play a major role. Low-lying areas near the coast often experience fog in the summer, but inland areas such as the Planning Area do not have extensive summer fog. However, low-lying areas near year-round creeks such as Sonoma Creek have higher moisture contents reducing fire potential. In upland areas, slopes tend to become drier and more likely to be a wildfire hazard earlier and for more of the year. Fire suppression activities since the 1950s

¹³¹ The County of Sonoma. September 2020. SDC Specific Plan Profile and Background Report. Available:

<https://www.dropbox.com/s/qzc0v3ibt3v6b8z/SDC%20Specific%20Plan%20Profile%20and%20Background%20Report.pdf?dl=0>. Accessed: July 28, 2022.

increased the fuel loads in some areas, leading to burns that are harder to contain. Climate change and increasing temperatures have also led to larger and more frequent wildfires.¹³²

Slope and Aspect

According to CAL FIRE, sloping land increases susceptibility to wildfire because fire typically burns faster up steep slopes and they may hinder firefighting efforts.¹³³ Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation; thus, they are warmer and the vegetation drier than on slopes facing a northerly to northeasterly direction, increasing the potential for wildfire ignition and spread.¹³⁴

According to Wallace Roberts & Todd's (WRT's) 2018 Sonoma Developmental Center Existing Conditions Assessment, the SDC property forms a swath across the Sonoma Valley, extending from Highway 12 on the east and up the slope of Sonoma Mountain on the west. This eastern part of the site is undulating small hills with a valley that begins in the northeastern corner of the property and broadens as it slopes downward toward the south. Suttonfield Lake is a reservoir formed among the hills in the northeast corner of the site. These hills form a small ridge between the "Farm" area of the site to the east (at approximately 230 feet) and the east side of the Core Campus. The east side of the Core Campus (approximate elevation 200 feet) is a flat area between this low ridge and Sonoma Creek. Sonoma Creek cuts across the midsection of the property with an average water surface elevation of roughly 170 feet. West of the creek, the campus is flat for a few blocks of broad manicured lawns, including sports fields and a broad parade ground up to Sonoma Road. West of Sonoma Road, the grade increases as you continue across the rest of the main campus. By the time one reaches Manzanita Street at elevation of 250

¹³² Wallace, Roberts, & Todd (WRT). August 2018. Sonoma Developmental Center Existing Conditions Assessment. Available: <https://transformsdc.com/sonoma-developmental-center-existing-conditions-assessment-wrt-august-2018/>. Accessed: July 15, 2022.

¹³³ CAL FIRE 2007b.

¹³⁴ Anthony Leroy Westerling, UC Merced. August 2018. Wildfire Simulations for California's Fourth Climate Change Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate. Available: https://www.energy.ca.gov/sites/default/files/2019-11/Projections_CCCA4-CEC-2018-014_ADA.pdf. Accessed : July 19, 2022.

feet, the grade increases noticeably. Roughly a third of the property is west of the main campus with slopes from 10 percent to well above 20 percent. As shown in **Figure 3.16-1**, slopes within the Core Campus are minimal, primarily below 5.9 percent with percentages increasing to greater than 10 percent outside the boundaries of the Core Campus. Steeper slopes (greater than 15 percent) are more likely to experience fast wildfire spread, while flatter slopes (5 percent or less) are not as likely to experience fast wildfire spread.

Historical Wildfires

Between 1964 and 2015, Sonoma County experienced 18 large or costly wildfires.¹³⁵ Most recently, the Sonoma Complex fires in 2017 burned much of the area that had been included by the California Department of Forestry and Fire Protection (CAL FIRE), in the zone of high to very high hazard severity, including a large portion of the eastern part of the SDC Planning Area outside of the Core Campus, east of Railroad Street. The Nuns Fire (part of the Sonoma Complex fires) also burned buildings and portions of the northwestern part of the Planning Area around Suttonfield Lake that had been indicated to have a moderate fire hazards severity. The Nuns Fire in 2017 burned 56,566 acres, destroyed 1,355 structures, damaged 172 structures, and killed three people; it has been considered California's 9th most destructive fire in history.¹³⁶ In total, the 2017 Sonoma Complex Fires caused 24 deaths, burned over 112,000 acres, and destroyed about 5,300 homes; the 2018 Kincade Fire burned 77,758 acres, destroyed 374 structures, including 174 residences, and damaged 60 additional structures, including 34 residences; the Glass Fire of 2020 burned over 67,000 acres, destroyed 1,555 structures, and damaged an additional 282 structures across both Napa and Sonoma counties; and the LNU Lightning Complex fires of 2020 burned over 355,000 acres, destroyed 159 residences, and damaged an additional 10 residences in Sonoma County. A previous fire in Nuns Canyon in 1964 burned 10,400 acres and destroyed 27 structures.

¹³⁵ Sonoma County. October 2021. Sonoma County Multijurisdictional Hazard Mitigation Plan Update. Available: <https://permitsonoma.org/longrangeplans/proposedlong-rangeplans/hazardmitigationupdate>. Accessed: July 20, 2022.

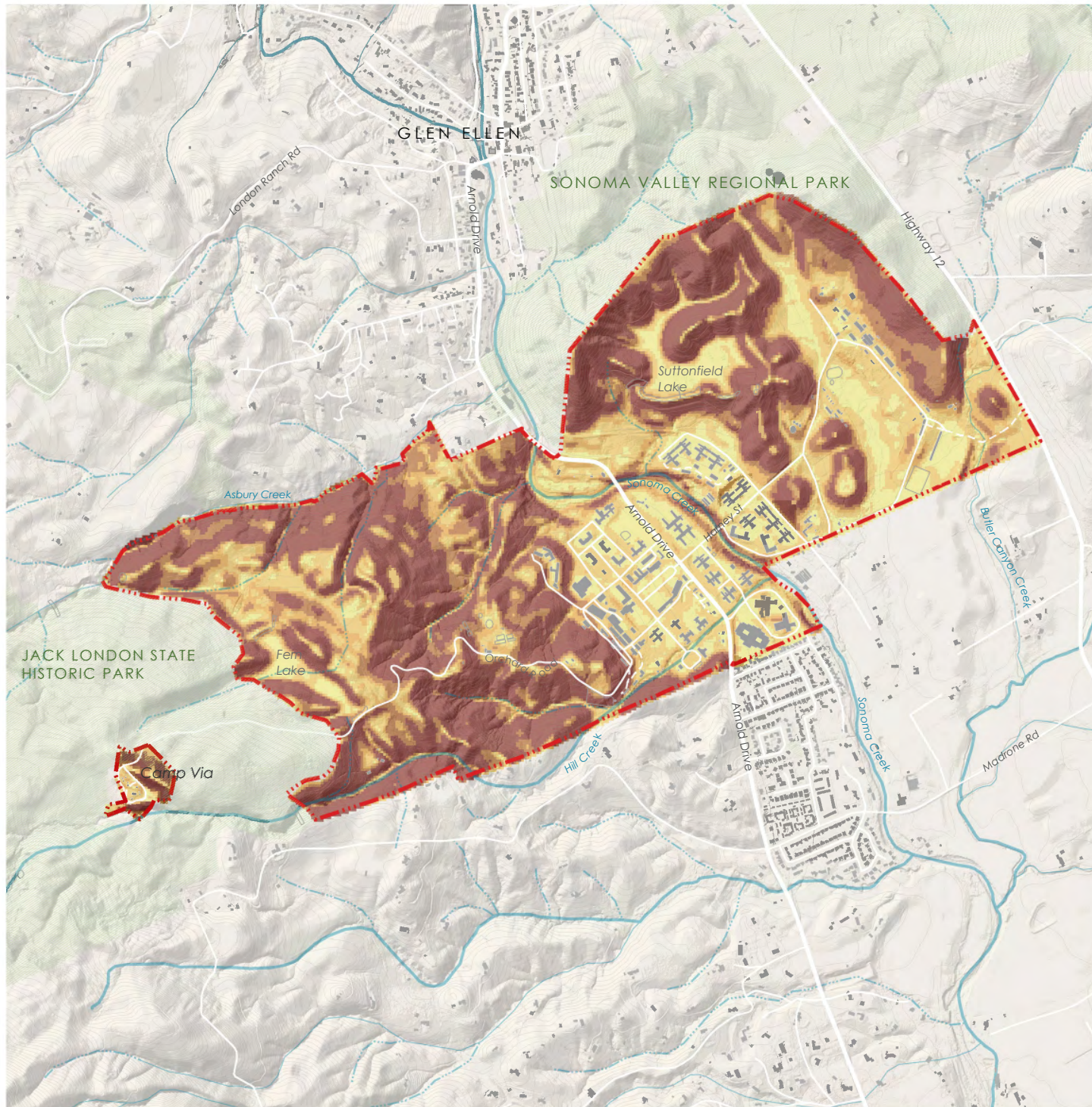
¹³⁶ Ibid.






16.1.2.2. Wildfire Hazards






Primary responsibility for preventing and suppressing wildland fires in Sonoma County is divided between local firefighting agencies and the State of California, Department of Forestry and Fire Protection. The SDC Planning Area is currently located in an area identified as a State Responsibility Area (SRA). Fire management in the SDC Planning Area is located in the Sonoma-Lake-Napa Unit SRA.

Government Code Sections 51175-89 advises CAL FIRE, to identify areas, or zones, of very high fire hazard severity potential under the Fire and Resources Assessment Program (FRAP). These zones are mapped and identified based on expected burn probabilities, potential fuels over a 30–50-year time period, and their correlated expected fire behavior, to better predict the possible vegetation fire exposure to buildings and developments. Under the FRAP, the Planning Area is located in the Sonoma Creek watershed and includes areas of high to very high Fire Hazard Severity Zones west of Highway 12, areas of high fire hazard severity in the hills, and areas of moderate fire hazards severity zones in the vicinity of Suttonfield Lake and Fern Lake (**Figure 3.16-2**). The Core Campus is not included in any of these FHSZs. The figure also shows the extent of the 2017 Nuns Fire as well as Wildland Urban Interface (WUI) zones within the Core Campus and the northern and southern portions of the Planning Area.

Figure 3.16-1:
SLOPE



-  SDC Property line
-  Protected and Public Lands
-  Ephemeral Streams
-  Perennial Streams
-  Intermittent Streams

- Slopes (%)
-  0 - 2.9%
 -  3 - 5.9%
 -  6 - 7.9%
 -  8 - 10%
 -  > 10%

Source
USGS, GreenInfo Network,
Sonoma Ecology Center

Extent of the 2017 Nuns Fire

Fire Hazard Severity Zones

- Moderate
- High
- Very High

Wildland Urban Interface

- Interface (Lower density)
- Intermix (Higher density)

Legend

- Core Campus Area
- SDC Property
- Buildings
- Waterbodies
- Streams
- Regional Park

Scale

0 750 1,500 FEET

0 0.1 0.2 MILES

DYETT & BHATIA
Urban and Regional Planners

3.16.1.3 Impact Analysis

16.1.3.1. Significance Criteria

Appendix G of the CEQA Guidelines contains analysis guidelines related to the assessment of wildfire hazards impacts. For the purposes of this EIR, a significant impact would occur if implementation of the Proposed Plan would result in the following:

- Criterion 1: Substantially impair an adopted emergency response plan or emergency evacuation plan;**
- Criterion 2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;**
- Criterion 3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or**
- Criterion 4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

16.1.3.2. Methodology and Assumptions

Impacts related to wildfire hazards and risks were evaluated using a review of FHSZ mapping for the Planning Area, Wallace Roberts & Todd's 2018 Sonoma Developmental Center Existing Conditions Assessment, an evacuation analysis for this EIR prepared by Kittelson & Associates, and database research prepared in compliance with federal, state, and local ordinances and regulations and professional standards pertaining to wildfire. CEQA does not generally require an agency to consider the effects of existing environmental conditions on a project's future users or residents. Consequently, impacts under the thresholds identified below would only be considered significant if the Proposed Plan risks exacerbating those existing environmental conditions.

16.1.3.3. Relevant Policies and Implementing Actions

The following relevant policies and implementing actions of the Proposed Plan address wildfire:

Open Space and Resources and Hazards

Goals

- 2-F Wildfire Hazards: Provide protections at the site against the growing risk of climate change exacerbated wildfire hazards and limit the potential impacts of wildfire to development through intelligent site and building design, and open space management.

Policies

- 2-31 Construct and maintain a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer.
- 2-32 Dead and dying woody surface fuels and aerial fuels within the managed landscape buffer shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a depth of 3 inches, in order to ensure the removal of trees, bushes, shrubs, and surface debris that are completely dead, or with substantial amounts of dead branches or leaves/needles that would readily burn.
- 2-33 Downed logs or stumps anywhere within 100 feet from a building or structure, when embedded in the soil, may be retained when isolated from other vegetation. Occasional (approximately one per acre) standing dead trees (snags) that are well-spaced from other vegetation and which will not fall on buildings or structures or on roadways/driveways may be retained.
- 2-34 Within the managed landscape buffer, one of the following fuel management methods must be implemented. Combinations of the methods may be acceptable as long as the intent of the policy is met.

a. Fuel Separation

Minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically. Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content, etc.). Properties with greater fire hazards will require greater separation between fuels. Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of 8 feet can be “grouped” and considered as one plant.

b. Defensible Space with Continuous Tree Canopy

To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy, apply the following treatments:

- Generally, remove all surface fuels greater than 4 inches in height. Single specimens of trees or other vegetation may be retained, provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
- Remove lower limbs of trees (prune) to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.

c. Irrigated Agriculture

Irrigated agricultural plantings, such as row crops, berries, or small orchard trees may be planted in the ground or in raised beds, with the following conditions:

- Raised beds or planter areas may not be constructed of wood.
- Orchard trees should be spaced in accordance with the Fuel Separation guidance above.
- Agricultural plantings must be actively managed and regularly harvested or pruned, as appropriate, in order to avoid becoming overgrown.

- Irrigation must be regularly applied during months with little or no rainfall.
- 2-35 All new landscaping at the site must be fire resilient in line with guidance from the California Native Plant Society.
- 2-36 All developments must include a five-foot buffer of defensible space around buildings that excludes all flammable materials such as dry brush and shrubs, mulch, wooden structures and other materials that might aid the spread of wildfire.
- 2-37 Prohibit wooden fencing in the Planning Area.
- 2-38 Require all new construction and roof-retrofitting of existing buildings to use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows.
- 2-39 Prohibit the storage of flammable materials under decks or porches.
- 2-40 To reduce ember ignitions and fire spread, trim branches that overhang the home, porch, and deck and prune branches of large trees up to 6 to 10 feet (depending on their height) from the ground. Remove dead vegetation and debris from under decks and porches and between deck board joints.
- 2-41 Cover all building vent openings with wire mesh screens to prevent infiltration from embers or sparks.
- 2-42 Ensure that all property owners are informed about wildfire resiliency requirements at the site at the time of purchase. Ensure that all property owners and tenants have access to educational resources on wildfire prevention and site requirements including posted materials, and regular training and information sessions.
- 2-54 Ensure that the project sponsor proactively plans for emergency wildfire safety by:
 - a. Developing an Emergency Preparedness and Evacuation Plan that complies with Sonoma County evacuation plans and servicing fire

- department procedures and identifies emergency access routes and procedures;
- b. Building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public, prior to construction of the 200th housing unit, with specifications for the facility to be included as part of the Emergency Preparedness and Evacuation Plan;
- c. Ensuring that every parcel within the Core Campus has two routes for ingress and egress during an emergency;
- d. Posting signage for designated evacuation routes throughout the site and along Arnold Drive.

Public Facilities, Services, and Infrastructure

Policies

- 6-1 Expand an existing Sonoma County fire district to serve SDC, and identify a location for the construction of a new a new fire station within the Core Campus. Ensure easy and proximate emergency access to Arnold Drive with minimal crossings of pedestrian and bicycle routes.
- 6-19 Connect each building within the Core Campus to a microgrid:
 - a. Work with local distributed energy resources (DERs) installation groups and advocates to build enough on-site energy generation, such as solar, wind, geothermal, and methane gas cogeneration, to power the Planning Area in case of emergency;
 - b. Connect to PG&E's grid through the Community Microgrid Enablement Program or an equivalent, with isolation devices that allow SDC to fully connect or disconnect from PG&E's system.
- 6-21 Build all new utility lines underground and bury existing utility lines to improve safety and reduce visual clutter in accordance with Sonoma County Code Sec. 25-44.
- 6-27 Maintain water supply and filtration at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency, including fire suppression needs.

16.1.3.4. Impacts

Impact 3.16-1 Development under the Proposed Plan would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

As shown in Figure 3.16-1, CAL FIRE has mapped the moderate, high, and very high Fire Hazard Severity Zones (FHSZs) within the Planning Area. The Proposed Plan would result in the construction of low to medium density residential developments as well as commercial, institutional, and public uses within the Core Campus, which is not located within any of these FHSZs. Main transportation routes are identified in the County's Emergency Operations Plan (2022), including State Route 12 (Highway 12 or SR 12) which comprises the western boundary of the Planning Area. The Planning Area would be accessed by preexisting roadways and would also explore the feasibility of providing an additional east-west emergency access connection from the site to SR 12 in order to improve access to the emergency evacuation route (Policy 3-5). To further mitigate potential impacts, Policy 2-54 requires that the project sponsor proactively plan for emergency wildfire safety by: a) developing an Emergency Preparedness and Evacuation Plan that complies with Sonoma County evacuation plans and servicing fire department procedures and identifies emergency access routes and procedures; b) building or designating an on-site shelter-in-place facility, to be open to both SDC residents and the general public, prior to construction of the 200th housing unit, with specifications for the facility to be included as part of the Emergency Preparedness and Evacuation Plan; c) ensuring that every parcel within the Core Campus has two routes for ingress and egress during an emergency; and d) posting signage for designated evacuation routes throughout the site and along Arnold Drive.

Additionally, as described in Section 3.13: Public Services and Recreation, it is anticipated that fire protection services will still be provided in coordination with neighboring Sonoma County fire districts including SVFRA, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District in order to maintain standards of response coverage benchmarks under the Proposed Plan. The Proposed Plan will also expand the existing Sonoma County fire district to serve the Planning Area and identify a location for the fire district to construct a new fire station within the Core Campus in order to meet the needs of the population under buildout (proposed Policy 6-1). The new location of the fire station will be within the Core Campus to ensure easy and proximate emergency access to Arnold Drive. Therefore, the implementation and operation of the Proposed Plan would not substantially impair of emergency response procedures. Furthermore, the Proposed Plan

will result in new infrastructure and piping that will ensure that adequate water capacity and pressures are maintained to help with firefighting.

The County's Emergency Operations Plan establishes the emergency management organization for emergency response, establishes operational concepts associated with emergency management, and provides a flexible platform for planning emergency response in the county. Development facilitated by the Proposed Plan would be constructed in accordance with federal, state, regional, and local requirements, which are intended to ensure the safety of county residents and structures to the extent feasible. Compliance with these standard regulations would be consistent with the County's Emergency Operations Plan.

Wildfire Evacuation

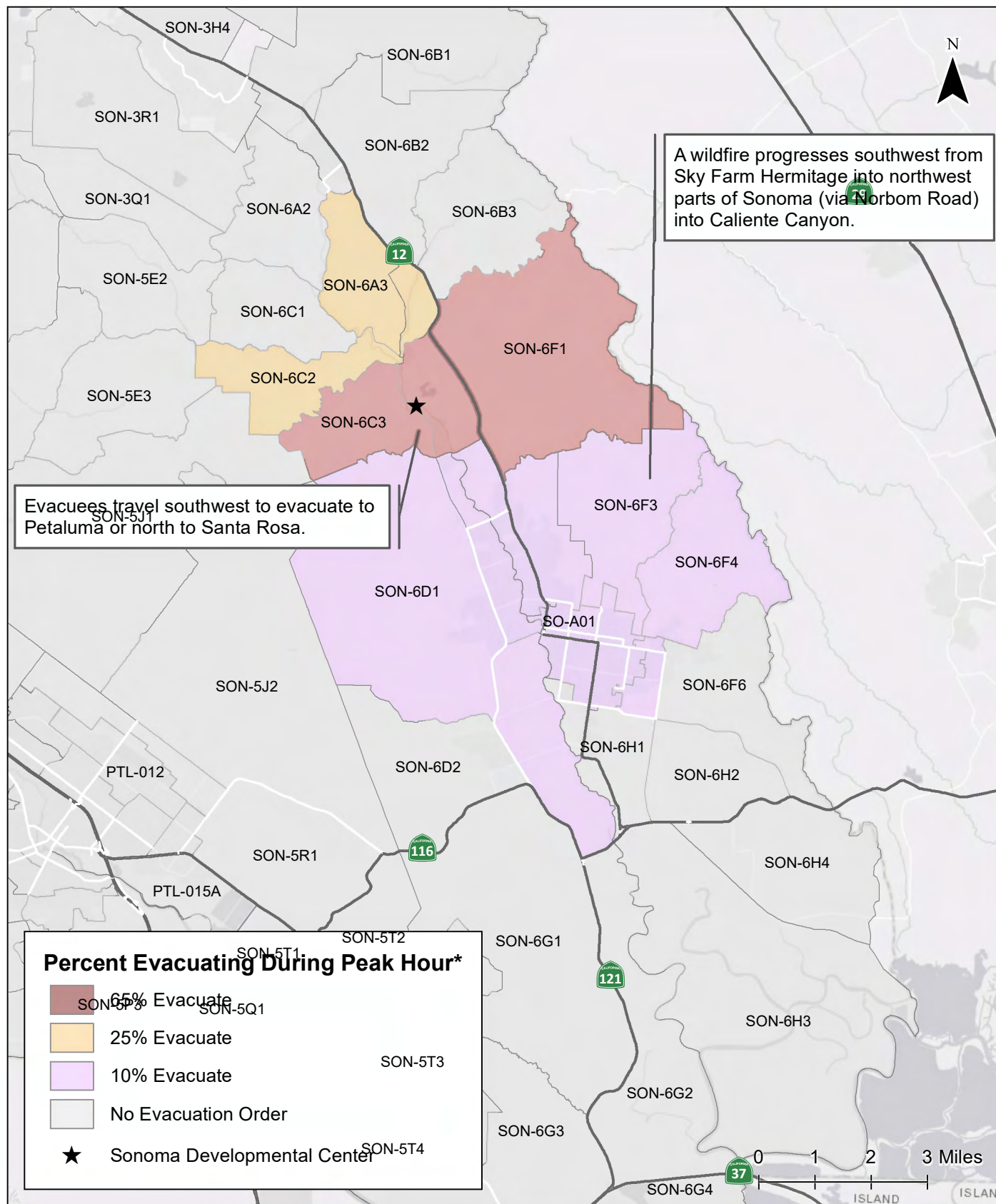
An analysis of evacuation travel times in the Planning Area was conducted for conditions without and with the Proposed Plan. The analysis used the Sonoma County regional travel model maintained by the Sonoma County Transportation Authority. The travel model includes tabulations of housing and employment in each part of Sonoma County, compiled by transportation analysis zones (TAZs). The travel model estimates traffic generated by land uses and tracks traffic volumes relative to road capacities to calculate the associated levels of congestion and congested speeds. The travel model represents a typical weekday peak hour, so additional assumptions were used to override the typical weekday traffic in the Planning Area and add the potential evacuation traffic.

Two potential fire scenarios were considered as shown in **Figure 3.16-3** and **Figure 3.16-4**:

- From the northeast, first approaching Kenwood and Glen Ellen
- From the southeast, first approaching Sonoma and Boyes Hot Springs

Figure
3.16-3

**Note: analysis assumes evacuation one hour after evacuation orders are given for the SDC area.*



**Evacuation Analysis - Scenario 2
SDC Specific Plan EIR
Sonoma County, CA**

**Figure
3.16-4**

**Note: analysis assumes evacuation four hours after evacuation orders are given for the SDC area.*

These fire scenarios were selected as representative of the most likely potential fires to impact Sonoma Valley given the valley's previous fire history, and considering such variables including but not limited to wind speeds, direction, humidity, topography, and rate of advancement. Historically, a fire approaching from the west may be less likely, and therefore did not warrant further specific analysis. Evacuation patterns for each of the fire scenarios were provided by the Sonoma Valley Fire District and the Sonoma County Emergency Management Department. The evacuation patterns noted which Sonoma County evacuation zones would be under Evacuation Orders or Evacuation Warning during each hour after identification of fire conditions. The percentages of residents and employees who would evacuate under each condition were derived from a study on surveyed resident behavior during recent wildfires¹³⁷:

- 25 percent of residents and employees were assumed to evacuate during the hour they receive an Evacuation Warning
- 65 percent of residents and employees were assumed to evacuate during the hour they receive an Evacuation Order
- 10 percent of residents and employees were assumed to evacuate in the hour following the Evacuation Order

The selected peak hour for potential impacts would be when the evacuation zone containing the Proposed Plan would receive Evacuation Orders.

If a fire occurs during the night, most residents would be home, but most employees would not be at their workplace. If a fire occurs during the workday, most employees would be at their workplace, but many residents would not be at their homes. The evacuation analysis conservatively assumes that 75 percent of residents and 75 percent of employees would need to evacuate during a fire event. Each household is assumed to use two vehicles and each employee is assumed to use one vehicle.

Four representative portions of the Planning Area were selected to measure potential evacuation time impacts:

- Glen Ellen

137 Wong, S., Broader, J. and Shaheen, P., 2022. Review of California Wildfire Evacuations from 2017 to 2019. [online] Escholarship.org. Available at: <<https://escholarship.org/uc/item/5w85z07g>>

- Madrone/Proposed Plan area
- Boyes Hot Springs
- Sonoma Plaza

For each of the two fire scenarios, representative evacuation destinations were selected based on input from Sonoma County staff and locations used as evacuation centers during the 2018 Kincade Fire.¹³⁸ For Scenario 1 Northeast, the representative destinations would be the Sears Point race-track to the southwest and various locations in the City of Napa to the east. For Scenario 2 Southeast, the representative destinations would be the Sonoma County Fairgrounds in Santa Rosa to the northwest and various locations in the City of Petaluma to the west.

The peak hour evacuation traffic was calculated for TAZs under evacuation orders or warnings, and this traffic was added to the typical weekday PM peak hour traffic already represented in the traffic model. For the TAZs under evacuation orders or warnings, it was assumed that 75 percent of typical weekday activity would not occur at the same time. The traffic volumes on each road segment were evaluated for level of congestion for three conditions:

- Typical weekday PM peak hour, no evacuation
- Peak hour with evacuation, no Proposed Plan
- Peak hour with evacuation, plus Proposed Plan

Travel times for the evacuation areas were measured from the origin TAZ to the first TAZ along the route to the evacuation destination that would be out of the potential evacuation area (areas that would be under evacuation orders or warnings during any hour). This travel time represents the time for residents and employees to reach safe conditions, even if there may be additional time required to reach the ultimate evacuation destination. The travel time results are listed in Table 3.16-1.

Evacuation traffic without the Proposed Plan would increase travel times to most destinations, particularly towards the City of Napa. Evacuation traffic added by the Proposed Plan would increase travel times to areas beyond the evacuation areas by up to 1.2 minutes and by up to five percent, although the average increase will be 0.2 minutes (less than 15 seconds) and one percent. The Proposed Plan would reduce some travel times from the Madrone/Proposed Plan area due to the planned additional connection to

138 <https://www.sanderjacobs.com/disaster-claim-resources>

SR 12. The estimated changes in travel times caused by the Proposed Plan would not require changes in current evacuation routes or plans.

Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.

Table 3.16-1: Peak Hour Travel Times with Fire Evacuation

<i>Evacuation Area</i>	<i>Travel Time: No Evacuation (minutes)</i>	<i>Travel Time: Evacuation without Proposed Plan (minutes)</i>	<i>Travel Time: Evacuation with Proposed Plan (minutes)</i>	<i>Travel Time Difference with Proposed Plan (minutes)</i>	<i>Travel Time Percent Change with Proposed Plan</i>
Fire Scenario 1: From Northeast					
<i>Evacuation Towards Sears Point to South Edge of Evacuation Area</i>					
Glen Ellen	14.7	15.1	15.9	0.8	5%
Madrone/SDC	9.8	10.1	10.0	-0.1	-1%
Boyes Hot Springs	5.3	5.4	5.6	0.2	4%
Sonoma Plaza	4.9	4.9	4.9	0.0	0%
<i>Evacuation To Napa</i>					
Glen Ellen	34.8	35.8	37.0	1.2	3%
Madrone/SDC	30.9	32.0	31.1	-0.9	-3%
Boyes Hot Springs	25.4	26.1	26.7	0.6	2%
Sonoma Plaza	21.6	21.9	22.0	0.1	0%
Fire Scenario 2: From Southeast					
<i>Evacuation Towards Santa Rosa to North Edge of Evacuation Area</i>					
Glen Ellen	15.6	15.7	15.9	0.2	1%
Madrone/SDC	15.9	16.0	15.7	-0.3	-2%
Boyes Hot Springs	19.0	19.1	19.6	0.5	3%
Sonoma Plaza	22.1	22.2	22.7	0.5	2%

Evacuation Towards Petaluma to West Edge of Evacuation Area

Glen Ellen	19.5	19.8	19.9	0.1	1%
Madrone/SDC	13.9	14.2	14.2	0.0	0%
Boyes Hot Springs	10.3	10.6	10.7	0.1	1%
Sonoma Plaza	9.6	9.7	9.7	0.0	0%

Mitigation Measures

None required.

Impact 3.16-2 Development under the Proposed Plan would not exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. *(Less than Significant)*

As shown in Figure 3.16-1, CAL FIRE has mapped the moderate, high, and very high Fire Hazard Severity Zones (FHSZs) within the Planning Area. The Proposed Plan would result in the construction of low to medium density residential developments as well as commercial, institutional, and public uses within the Core Campus, which is not located within any of these FHSZs. While the Core Campus is a previously developed area, the SDC site is located in the rural setting of the Sonoma Valley region and surrounded by approximately 755 acres of preserved open space where fuels are more abundant. Thus, development under the Proposed Plan could result in potentially significant impacts from exacerbating wildfire risks.

New construction under the Proposed Plan would be subject to the California Fire Code, which include safety measures to minimize the threat of fire, including ignition-resistant construction with exterior walls of noncombustible or ignition resistant material from the surface of the ground to the roof system and sealing any gaps around doors, windows, eaves and vents to prevent intrusion by flame or embers. Fire sprinklers would be required in residential developments (with some exceptions) per the Sonoma County Code, including the Fire Safety Ordinance (Chapter 13). Construction would also be required to meet CBC requirements, including CCR Title 24, Part 2, which includes specific requirements related to exterior wildfire exposure. The Board of Forestry, via CCR Title 14, sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards. The codes and regulations would reduce the risk of loss,

injury, or death from wildfire for new developments encouraged by the Proposed Plan, but not entirely.

As existing codes and regulations cannot fully prevent wildfires from damaging structures or occupants, the Proposed Plan would increase the exposure of new development, occupants, and visitors to wildfire risk. Therefore, several proposed policies have been incorporated into the Proposed Plan to reduce the risk of wildfire for future construction and operational activities in the Planning Area. Goal 2-F requires the Proposed Plan to provide protections at the site against the growing risk of climate change exacerbated wildfire hazards and limit the potential impacts of wildfire to development through intelligent site and building design, and open space management. Associated policies 2-31 through 2-42 provide several actional measures to mitigate this risk. Such policies require the Proposed Plan to construct and maintain a managed landscape buffer to aid in fire defense; enhance creek buffers; remove surface and aerial fuels; implement fuel management methods (such as fuel separation, defensible space with continuous tree canopy, and irrigated agriculture); plant fire resilient landscaping; include a five-foot buffer of defensible space around all developments; prohibit wooden fencing; require all new construction and retrofitting of existing buildings use Class A fire-rated roofing materials, fire-resistant siding, and dual-paned tempered glass windows; prohibit the storage of flammable materials under decks or porches; prune branches of trees; cover all building vent openings with wire mesh screens to prevent infiltration from embers of sparks; and ensure that all property owners are informed and educated about wildfire resiliency requirements at the site at the time of purchase. Further, Policy 6-21 would require all new and existing utility lines be buried underground to mitigate additional wildfire risk.

As such, compliance with existing State and local codes and regulations as well as proposed policies would reduce impacts to a less-than-significant level related to exacerbating wildfire risks during implementation of the Proposed Plan.

Mitigation Measures

None required.

Impact 3.16-3 Development under the Proposed Plan would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities)

that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less than Significant*)

As noted above, development under the Proposed Plan would result in the construction of low to medium density residential developments as well as commercial, institutional, and public uses within the Core Campus, largely within the footprint of the former SDC facility development, and an additional SR 12 connector road. Thus, development under the Proposed Plan would require the installation and maintenance of associated infrastructure that includes roads, a potential recycled water facility, new sewer laterals and mains, microgrid connections, and new utility lines that could result in a potentially significant exacerbation of wildfire risk.

However, as described under Impact 3.16-2 above, compliance with existing State and local codes and regulations as well as proposed policies 2-31 through 2-42 would help mitigate these wildfire risks. Additional proposed policies to help mitigate associated infrastructure risk impacts include Policy 6-19 which requires every building within the Core Campus be connected to a microgrid to power the Planning Area in case of emergency. Further, Policy 6-21 requires all new and existing utility lines be buried underground to improve safety in accordance with Sonoma County Code Section 25-44. Policy 6-27 will maintain water supply at the site and ensure adequate flexibility and supply to serve regional needs in case of an emergency, including fire suppression needs. See Section 3.15: Utilities and Service system for more information regarding water supply and infrastructure improvements. The additional SR 12 connector road will provide additional fire access and evacuation routes.

Further, construction and maintenance of associated infrastructure could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new construction of infrastructure facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (Goal 2-A). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new facilities and SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, construction and maintenance of individual infrastructure facilities would be subject to separate project-level CEQA review as applicable at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate.

As such, compliance with existing State and local codes and regulations as well as proposed policies would reduce impacts to a less-than-significant level related wildfire risks from associated infrastructure.

Mitigation Measures

None required.

Impact 3.16-4 Development under the Proposed Plan would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (*Less than Significant*)

As noted above, development under the Proposed Plan would result in the construction of low to medium density residential developments as well as commercial, institutional, and public uses within the Core Campus, and an additional SR 12 connector road.

Severe wildfires damage the forest or shrub canopy, the plants below, as well as the soil. In general, this can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. All development within the Planning Area would be located and constructed on existing flat, urban, and built-up land within the Core Campus (Goal 2-A). Thus, if a fire were to occur in more the flat and urbanized area of the Core Campus, the risk of flooding, landslides, or drainage changes afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to the developed conditions.

However, some structures located near the boundaries of the Core Campus are adjacent to steep slopes, which are known landslide-susceptible areas, and contain vegetative wildfire fuels since these slopes are located in the preserved open space area outside the Core Campus. If a severe wildfire were to occur near the Core Campus boundary, structures directly downslope may be at risk of flooding or landslides and would expose future residents and visitors to wildfire pollutants. Therefore, Proposed Plan policies would serve to mitigate this risk. Proposed Policy 2-31 would require construction and maintenance a managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland. Shrubs and chaparral should be limited within the managed landscape buffer. Other proposed policies would require removal of surface and aerial fuels, implementation of fuel management methods, fire-resilient landscaping, a five-foot buffer of defensible space around buildings that excludes all flammable materials, fire-resistant construction materials, regular tree pruning, covering building vent openings with

wire mesh screens to prevent infiltration, and prohibit wooden fencing and storage of flammable materials under decks or porches (policies 2-32, 2-24, 2-35, 2-36, 2-37, 2-38, 2-39, 2-40, and 2-41).

Therefore, with compliance of proposed policies, implementation of the Proposed Plan would not expose people or structures to significant risks, including downslope or downstream flooding or landslides.

Mitigation Measures

None required.

4 Alternatives

4.1 Alternatives Analysis

The California Environmental Quality Act (CEQA) Guidelines mandates consideration and analysis of alternatives to the proposed Specific Plan. The Guidelines also require that an environmentally superior alternative be identified. If the alternative with the least environmental impact is the No Project Alternative, then the EIR must also designate the next most environmentally superior alternative. Section 15126.6 of the CEQA Guidelines states that:

An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

Case law suggests that the discussion of alternatives need not be exhaustive. CEQA Section 15126.6(f) states that the alternatives in an EIR should be governed by a “rule of reason.”

The Proposed Plan would result in significant and unavoidable impacts related to transportation (Impact 3.14-2), and historic resources (Impact 3.5-2).

CEQA Guidelines Section 15126.6(e) requires consideration of a No Project Alternative in every EIR. In the case of the Proposed Plan, the No Project Alternative is a scenario in which the Proposed Plan is not adopted. The following discussion includes an evaluation of the No Project Alternative as well as the Reduced Development and Historic Preservation alternatives.

The Proposed Plan and the alternatives are guided by the direction for the site established in Govt. Code Section 14670.10.5, which outlines the priority use for the campus as housing and for the surrounding land to be preserved as open space. Full Open Space and Public/Institutional Use alternatives were also considered; however, for reasons discussed in Section 4.3, these alternatives were determined to be inconsistent with project objectives and infeasible, and therefore not analyzed in detail.

There were several responses to the Notice of Preparation (NOP) regarding topics covered in this section. A few comments requested the EIR analyze an alternative with a

maximum number of housing units, while others emphasized the importance of adding a variety of housing types, including multifamily and affordable housing units. These comments are represented in the No Project: High Development Alternative. Several other commenters requested the EIR analyze a fewer housing unit scenario which is represented in the No Project: Low Development Alternative and the Reduced Development Alternative. Other commenters also advocated for an alternative that would maximize open space preservation and historic preservation which is represented in the Historic Preservation Alternative. The following discussion is intended address these comments and to inform the public and decision-makers about feasible alternatives that may avoid or substantially lessen the significant effects of the Proposed Plan. It also compares such alternatives to the Proposed Plan.

4.1.1 Vision and Objectives

To identify community priorities for the Planning Area and help guide the preparation of the Proposed Plan, a vision statement and objectives were developed at the outset of the planning process. These, stated below, serve as the project objectives for purposes of CEQA analysis.

4.1.1.1 Vision

“The former Sonoma Developmental Center is reinvigorated as a vibrant and sustainable community in the heart of Sonoma Valley. A mixed-use, pedestrian-oriented core provides a diverse array of housing choices, and serves as a magnet of innovation, research, education, and visitation. The surrounding open spaces flourish as natural habitats and as agricultural and recreational land linked to regional parks and open space systems. Development builds on the site’s rich historic legacy while meeting contemporary needs, emphasizing resiliency and sustainable building practices. Civic uses, community gathering places, and events attract visitors from Glen Ellen, Eldridge, and the broader Sonoma region, making the center a hub of community life in Sonoma Valley.

The former Sonoma Developmental Center (SDC) site, in the heart of Sonoma Valley, has emerged as a culturally and ecologically vibrant and resilient community. A core 180-acre developed area is surrounded by a vast protected open space of oak woodlands, native grasslands, wetlands, forests, creeks, and lakes that provide habitats and wildlife movement corridors; agricultural land; and recreational open space integrated with the surrounding park systems.

The developed core area comprises a complementary mix of housing, commercial, and institutional uses. The SDC site is financially independent and supporting infrastructure is up to date and well maintained. A variety of housing—including affordable, workforce, mid-income, and market-rate housing; senior housing; housing for people with developmental disabilities; and in new and adaptively re-used buildings—will foster a diverse and inclusive community. New development complements the adjacent communities of Glen Ellen and Eldridge. Residents enjoy pedestrian access to essential services and parks, and seamless connections to surrounding open spaces. Employment opportunities reflect the site’s legacy of care and emphasize innovation, research, education, environment, and ecology, together with supporting commercial and visitor-serving uses. Sonoma Valley’s former largest employment hub is reinvigorated as a regional model for sustainable development.

The reinvigorated community builds upon the site’s rich historic legacy while embracing the future. Key historic resources—including the Sonoma House and the Main Building—have been repurposed for contemporary uses, and elements of the historic landscape preserved. Site design patterns—streets layout, building/street relationship, streetscape character—maintain east-west views to the Sonoma and Mayacamas mountains and foster a harmonious sense of place. Contemporary buildings are intermixed with repurposed historic structures, creating a rich and visually cohesive development fabric.

A comprehensive network of pedestrian and bicycle paths connects residents to local and regional destinations, and to transit. Well-designed bus stops, crosswalks, and protected bike lanes create an inviting sense of safety for those of all ages and abilities and provide better walking and biking access to Glen Ellen and Eldridge, and to the regional bicycle network.

New land uses contribute positively to the site’s financial feasibility, enabling efficient and sustainable construction of necessary infrastructure. Water is conserved and reused, and safety and fire protection built into the landscape, with defensible design, new fire-resistant buildings, and well-planned evacuation routes. Reuse of historic buildings has saved resources needed for new construction, and building designs reflect sustainable practices and wildfire resiliency. The surrounding open spaces, preserved in perpetuity, are home to countless local species that use SDC’s habitat corridors. Sightings of wildlife throughout the site and along Sonoma Creek enrich life for residents.

The SDC site has become a multilingual gathering place for the Sonoma Valley, with public spaces for lingering and enjoying a cup of coffee or a meal; community amenities, cultural spaces, and events; playfields and recreational spaces for soccer games or a game of

fetch; and seamless connections to the extensive trail networks of the SDC property, Jack London State Park, Sonoma Valley Regional Park, and the surrounding mountains.”

4.1.1.2 Objectives

The guiding principles stated below were developed during the Specific Plan process and, for purposes of CEQA analysis, serve as the project objective. They seek to further the State’s goals for the SDC site established in California Government Code Section 14670.10.05 for promoting housing, especially affordable housing and housing for those with development disabilities; preserving open space surrounding the Core Campus; and ensuring that development is economically viable. They direct the overall strategy, policies, design, and investments that are included in the SDC Specific Plan and are integrated into concepts for each subarea of the Specific Plan.

- **Promote a Vibrant, Mixed-Use Community.** Promote a diverse and integrated mix of residential development and employment uses, including research, education, office, retail, and small businesses, to promote optimal development patterns and site revitalization in the Core Campus, and provide economic opportunities for Sonoma Valley communities.
- **Emphasize a Cohesive Sense of Place and Walkability.** Establish a cohesive visual landscape with consistent streetscapes and improved sidewalks within the Core Campus. Locate land uses and enhance the existing street network to encourage development of a walkable and pedestrian-friendly environment with gathering spaces, diverse activities, and connections within and to surrounding communities and regional trail systems. Ensure that new development complements the adjacent communities of Glen Ellen and Eldridge.
- **Integrate Development with Open Space Conservation.** Promote a sustainable, climate-resilient community surrounded by preserved open space and parkland that protects natural resources, fosters environmental stewardship, and maintains and enhances the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site. Support the responsible use of open space as a recreation resource for the community.
- **Balance Redevelopment with Existing Land Uses.** Use recognized principles of land use planning and sustainability to gauge how well proposed land uses protect public trust resources and fit the character and values of the site and surrounding area, as well as benefit local communities and residents.

- **Promote Sustainability and Resiliency.** Promote sustainable development practices in building and landscape design. Plan infrastructure efficiently and sustainably, conserving water and creating opportunities for water reuse and recharge. Proactively plan for community safety in natural disasters, especially ensuring that emergency plans and egress routes are in place with adequate capacity, and landscapes and buildings are designed with fire defenses.
- **Support Housing Development and Provide a Variety of Housing Types.** Promote housing to address Sonoma County's pressing housing needs and the State's key development objectives for the site. Support a range of housing opportunities, including affordable housing, workforce housing, mid-income housing, housing for individuals with developmental disabilities, senior housing, and market rate housing.
- **Balance Development with Historic Resource Conservation.** Preserve and adaptively reuse the Main Building and the Sonoma House complex, conserve key elements of the site's historic landscape, and strive to maintain the integrity of the historic district to the west of Arnold Drive by adaptive reuse of contributing buildings where feasible. Support a cohesive community feel and character, while allowing a diversity of architectural styles.
- **Promote Multi-Modal Mobility.** Promote car-free circulation within the site and promote transportation connections between the SDC site and the larger Sonoma Valley and Bay Area, including through transit access, safe sidewalks and crossings, and regional bicycle routes. Ensure that new development takes into consideration resultant traffic and levels of transportation activity from when SDC was operational.
- **Ensure Long-Term Fiscal Sustainability.** Ensure that the proposed plan is financially feasible and sustainable, as financial feasibility is essential to the long-term success of the project. Ensure that the proposed plan supports funding for necessary infrastructure improvements and historic preservation while supporting the Sonoma Valley community's needs and galvanizing regional economic growth.
- **Embrace Diversity.** Accommodate the needs of people of diverse backgrounds, interests, and income levels, creating an inclusive, accessible, inviting, and safe place that preserves SDC's legacy of care and creates opportunities for marginalized communities.

4.2 Alternatives Analyzed in This EIR

No Project Alternative

In light of the statewide affordable housing crisis, State law stipulates that the SDC Specific Plan prioritize housing, especially affordable housing and housing for individuals with developmental disabilities. The legislation also acknowledges the importance of the significant open space areas of the SDC site and requires permanent protection of the SDC site's open space and natural resources to the greatest extent feasible. State law seeks to achieve these objectives while retaining flexibility in its actions, including through "...sale, lease, exchange, or other transfer" of the property to achieve the desired outcomes, and directs the Director of the California Department of General Services that, "A transfer, sale, or final disposition of any portion of the property or property interest authorized pursuant to this section shall not occur until the director has determined that the county has granted necessary approvals to rezone the property, approved a specific plan or plans for the property, and approved any necessary development agreements needed for disposition of all or any portion of the property, or the director has determined that the transfer, sale, or final disposition is in the best interests of the state."

Thus, should the County not adopt the Specific Plan and not rezone the site for the uses outlined in the Specific Plan, the most likely course would be for State to achieve its desired land use objectives through mechanisms other than the Proposed Plan, rather than the end land use outcomes to be substantially different than those in the Proposed Plan, as the Proposed Plan is structured around the objectives for the site established by the State Legislature.

While this EIR cannot pre-judge the State's actions, the EIR tries to frame these in light of the State Legislature's established land use objectives for the site, per Govt. Code Section 14670.10.5. Furthermore, the State has already released a developer request for proposal for development of the site pointing to the Proposed Plan underway, and can enter into long-term ground leases with private developers—cited as a mechanism for the site in the Government Code for SDC redevelopment—so that the State retains planning control over the campus unfettered by local regulations to achieve these land use objectives, should the County be unwilling to plan and zone for these uses.

Thus, the No Project Alternative would result in a palette of uses similar to those outlined in the Proposed Plan, and like in the Proposed Plan, these uses would be located at the Core Campus, and the surrounding land would be preserved as open space. However, the No Project Alternative could differ in the amounts and mixes of uses,

densities/intensities of proposed development, and variations in development footprint within the Core Campus. The probable range of development under the No Project Alternative is further fleshed out in the form of a No Project: Low Development and a No Project: High Development scenario, as outlined below.

- No Project: Low Development

- In this scenario, the State may choose to pursue less housing and non-residential uses at the site, potentially resulting from a greater number of small-lot and townhome units (which, according to the financial analysis conducted for the alternatives) generate much higher financial returns, and fewer multifamily units. The State may implement the same land use designations as the Proposed Plan, but the densities/intensities of new development would be lower. The amount of public/institutional uses would be the same as the Proposed Plan or slightly higher.
- Compared to the Proposed Plan, development under this scenario would result in approximately 25 percent fewer housing units and jobs, leading to a possible population of 1,800 people, 750 housing units, and 700 jobs, with slightly more open space in the Core Campus compared to the Proposed Plan.
- Overall, this scenario would result in less construction and, by extension, generate lower levels of aggregate air pollutants (including GHGs), noise, and VMT, and would expose fewer sensitive receptors to significant impacts compared to the Proposed Plan. Because of the reduced level of development and high-level of infrastructure and other costs involved, this alternative will be less economically viable—which is a defined project objective under State law—than the Proposed Plan, but this would be somewhat offset by more single-family units. The overall amount of affordable housing at the site would also be lower.

- No Project: High Development

- In this scenario, given that the financial analysis for the project alternatives¹³⁹ found that redevelopment and deferred maintenance,

¹³⁹ See Alternatives Report, November 2022.

infrastructure, and historic preservation costs to be significant and housing (and a hotel) to be the most financially viable use, the State would pursue a greater amount of residential development (similar to the highest level analyzed under the alternatives) to achieve greater economic viability, which is one of the project objectives outlined in the State legislation. Employment would be at levels similar to the Proposed Plan.

- Compared to the Proposed Plan, development under this scenario would result in approximately 25 percent additional housing units and an equal number of jobs compared to the Proposed Plan, as the market demand for non-residential uses (with the exception of a hotel) is limited¹⁴⁰ and higher employment levels will reduce financial feasibility. This Alternative would lead to a possible population of 3,000 people, 1,250 housing units, and 940 jobs, and an increase in housing types, including affordable housing, compared to the Proposed Plan.
- The physical consequences of site redevelopment under this scenario could either exceed or be roughly equal to the consequences of redevelopment under the Specific Plan. Potentially a greater number of contributing historic buildings may be demolished to accommodate a higher level of development, and the wildlife corridor within the Core Campus outlined in the Proposed Plan may be reduced or eliminated.

Given the uncertainty around the precise land use mixes in the No Project scenarios, the County's failure to adopt the Specific Plan would result in environmental outcomes that are less certain and predictable at this stage, but potentially largely similar to those of the Proposed Plan with some variations, and are presented later in this chapter. Were the State to proceed with development under its own regulatory auspices, it would need to conduct its own environmental review as the lead agency, and thus, detailed environmental consequences of the County's failure to adopt the Specific Plan would be more clearly known at that time. The State could choose to cite work done in this EIR but would be required to reach its own conclusions related to the adequacy of the EIR and future projects on the property.

¹⁴⁰ See Chapter 9: Market Demand Analysis, Sonoma Developmental Center Background Report, September 2020.

Reduced Development Alternative

State law stipulates that the SDC Specific Plan provide housing as well as prioritize open space preservation and ensure the financial feasibility of development. The Reduced Development Alternative was designed to provide housing while further prioritizing open space preservation than would be achieved by the Proposed Plan to support more sustainable, compact development patterns that reduce vehicle miles travelled (VMT) while incorporating existing sustainable features of the Proposed Plan (e.g., microgrid). This alternative is assumed to use less land (acreage) than the Proposed Plan by swapping the Agrihood District development for open space preservation with development further concentrated in the Core Campus. Overall, a Reduced Development Alternative would result in less construction and, by extension, generate lower levels of aggregate air pollutants (including GHGs), noise, and VMT, and would expose fewer sensitive receptors to significant impacts compared to the Proposed Plan.

The Reduced Development Alternative would allow for similar housing development densities to the Proposed Plan, excluding the Agrihood District which would be entirely preserved open space. The buildout assumption for non-residential development would also slightly differ from the Proposed Plan, reducing the amount of non-residential square footage and employment in favor of greater active open space areas (parks, paseos). The remaining mix of land uses in the Reduced Development Alternative would be roughly similar to the Proposed Plan. Thus, the Reduced Density Alternative would use the same land use diagram as the Proposed Plan but would eliminate the Agrihood District for preserved open space and reduce the square footage of the Maker Place District in order to add more active open space uses. The Reduced Development Alternative would include a connection to Highway 12 as an emergency access route only, rather than a local road as in the Proposed Plan. Compared to the Proposed Plan, development under the Reduced Development Alternative could result in approximately 250 fewer housing units, leading to a possible population decrease of 600 people, and roughly 340 fewer jobs, and an increase in open space compared to the Proposed Plan. It is noted that that because of the reduced level of development and high-level of infrastructure and other costs involved, this alternative will be less economically viable—which is a defined project objective under State law—than the Proposed Plan.

Historic Preservation Alternative

The Historic Preservation Alternative would achieve a higher level of historic preservation, with a focus on adaptively reusing existing buildings to the maximum extent and limiting development to within the current built footprint of the SDC facility (Core Campus) as with

the other alternatives while incorporating existing sustainable features of the Proposed Plan (e.g., microgrid). Further, because the historic character of the existing buildings within the Sonoma State Home Historic District would be retained as much as possible, intensity and density of future development would be more constrained than with the Proposed Plan. As a result, overall development would be less than that of the Proposed Plan.

Buildout of the Proposed Plan would result in construction-related impacts associated with air quality, GHG emissions, and noise as well as operational air quality and VMT impacts. The Historic Preservation Alternative would result in less construction and, by extension, generate lower levels of construction-related air pollution and noise. However, previous analysis has demonstrated that because existing buildings were not designed for residential uses, construction related to adapting these buildings to the desired uses will still be needed. Furthermore, complete preservation and restoration of all existing buildings in the Planning Area is not financially feasible¹⁴¹, and thereby contrary to the economic objectives codified in State law (Government Code Section 14670.10.5). Thus, it is anticipated that some new development would occur under the Historic Preservation Alternative, and this alternative would prioritize market rate housing units over affordable housing units in order to generate adequate financial returns, undermining the State mandate and project objectives to promote affordable housing.

The mix of land uses in the Historic Preservation Alternative would be roughly similar to the Proposed Plan, with lower densities for residential and non-residential uses. Thus, the Historic Preservation Alternative would use the same general land use diagram as the Proposed Plan. Compared to the Proposed Plan, development under the Historic Preservation Alternative could result in approximately 550 fewer housing units, leading to approximately 1,320 fewer residents and roughly 340 fewer jobs than envisioned by the Proposed Plan. The open space available within the Core Campus in this Alternative would likely be less than in the Proposed Plan due to the lower densities of the existing buildings, and the location of existing buildings within areas reclaimed as open space in the Proposed Plan. The Historic Preservation Alternative also does not include a new connection to Highway 12.

¹⁴¹ Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at <https://www.sdcspecificplan.com/documents>

Table 4.1-1: Summary of Alternatives

	<i>Growth Increment by 2040</i>			
<i>Plan/Alternative</i>	<i>Population</i>	<i>Housing (units)</i>	<i>Jobs</i>	<i>SR 12</i>
Proposed Plan	2,400	1,000	940	Local road connection
No Project: Low Development Alternative ¹	1,800	750	700	Emergency access connection only
No Project: High Development Alternative ¹	3,000	1,250	940	Local road connection
Reduced Development Alternative	1,800	750	600	Emergency access connection only
Historic Preservation Alternative	1,080	450	600	No

2. As discussed under the No Project Alternative, State decisions and actions if the Proposed Plan is not adopted may result in a range of outcomes. No Project: Low Development and No Project: High Development represent possible outcomes.

Source: Dyett & Bhatia, 2022

4.3 Alternatives Considered but Not Evaluated in Detail in this EIR

Two alternatives to the Proposed Plan that could avoid or substantially reduce the significant impacts of the Proposed Plan were considered, a Full Open Space Alternative and a Public/Institutional Alternative. However, as described below, these alternatives, and an alternative site, were determined to be infeasible and therefore are not analyzed further.

Alternative Site Alternative

An Alternative considering siting housing and other development on a different site is not an option to consider because the project concerns redevelopment of the site at the Sonoma Developmental Center.

Full Open Space Alternative

A Full Open Space Alternative, designed to address the significant environmental impacts of the Proposed Plan by dedicating the entire site for open space preservation, was considered. However, loss of open space or biological resources impacts are not significant impacts of the project. Additionally, although open space preservation is included in Government Code Section 14670.10.5 as a State goal for areas outside of the Core Campus, dedicating the entire site for open space preservation is not financially feasible nor would it meet other objectives required under State law, such as the provision of housing. While this alternative would enhance natural resources at the site, it would shift growth elsewhere in the region, which could occur in undeveloped areas, leading to higher impacts on open space than development at the SDC Core Campus, which is already a developed area. Further, surrounding communities would not be served by new community services generated under the Proposed Plan. Therefore, VMT in the County may increase as populations and community service needs in surrounding areas continue to grow. The Full Open Space Alternative would also require either maintenance of the existing buildings, further contributing to the economic infeasibility, or demolition of existing buildings, including buildings that are listed on the National Historic Register, contributing both to economic infeasibility and to historic preservation impacts. As such, full open space preservation was determined to be infeasible for economic reasons, does not meet the primary objectives for the Project, and does not mitigate the two significant impacts of the project—potential loss of historic resources and total VMT—and has not been analyzed further.

Public/Institutional Use Alternative

Given history of SDC as the oldest facility in California created specifically to serve the needs of individuals with disabilities, a Public/Institutional Use Alternative was considered with the intention of achieving a high level of historic preservation and prioritizing public/institutional land uses at the site. A Public/Institutional Use Alternative would use many of the existing built footprints of the SDC facility, although buildings that are designed to house client facilities and other uses would not be readily adaptable for public uses. However, Public and Institutional Use is not a priority land use outlined in State law (Government Code Section 14670.10.5) for the Core Campus, and complete preservation and restoration of all existing buildings in the Planning Area while prioritizing public/institutional uses would significantly reduce the number of housing units and commercial spaces provided compared to the Proposed Plan and thus would be contrary to the objectives codified in State law. Furthermore, because there is no readily identifiable significant public use entity that would take over the entirety of the site, infrastructure and other site improvements needed to support the variety of uses (including housing), may not occur, significantly impeding development of the State-identified priority use of the site. As such, the Public/Institutional Use Alternative was determined to be infeasible.¹⁴²

4.4 Impact Analysis of Alternatives

4.4.1 No Project Alternative

4.4.1.1 No Project Low Development

Aesthetics

The No Project Low Development Alternative would result in less employment-generating land uses and fewer residential uses compared to the Proposed Plan. While this Alternative would have less overall development, the development that does occur may

¹⁴² Rehabilitation and adaptive reuse at SDC is generally more expensive than new construction. See Alternatives Report, November 2021 (Updated), available at <https://www.sdcspecificplan.com/documents>

differ in scale, density and style from the Proposed Plan, with a potential preference for more single-family homes to maximize financial feasibility.

While the type of development would differ under this Alternative, the overall amount and location of development would be similar or slightly less than the Proposed Plan, and the design standards and guidelines from the Proposed Plan can be assumed to be similar. As with the Proposed Plan, the connection to Highway 12 and new development would still potentially impact scenic vistas in the Planning Area, but the overall impact to scenic vistas would remain less than significant.

This Alternative would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the Proposed Plan because this alternative would likely include the similar goals and policies in the Proposed Plan. However, with lower financial feasibility and lower population to support new businesses and commercial uses, there would be lower potential for well-designed active gathering spaces. Overall, impacts related to aesthetics and visual resources from the Low Development Alternative would be equivalent to the Proposed Plan.

Agriculture and Forestry Resources

Impacts under the No Project Low Development Alternative related to Agriculture and Forestry Resources would be similar to those of the Proposed Plan as development would be contained in the Core Campus area. As in the Proposed Plan, no Prime Farmland, Unique or Farmland of Statewide Importance would be impacted and the impacts to agriculture and forestry resources would be less than significant.

Air Quality

Impacts under the No Project Low Development Alternative related to air quality during construction would be similar to those of the Proposed Plan but slightly reduced because the overall amount of development proposed would be reduced (refer to Table 4.1-1, above). This would result in a similar but slightly shorter duration for construction activities. The policies outlined in Section 3.3: Air Quality are assumed to be similar in this alternative. As with the Proposed Plan, it is likely that the Low Development Alternative would incorporate applicable control measures of the 2017 Clean Air Plan and would not disrupt or hinder implementation of any of these control measures.

During operations, emissions under the Low Development Alternative from area and building energy sources would be similar to those of the Proposed Plan but slightly

reduced because the number of housing units and non-residential space would be reduced. Because of this, the Low Development Alternative would generate fewer vehicle trips compared with the Proposed Plan. This would reduce aggregate operational emissions impacts, but not necessarily on a per capita basis, but would not eliminate them. With implementation of the policies outlined in Section 3.3: Air Quality, the Low Development Alternative would be somewhat reduced from the Proposed Plan, and would very likely also result in a less than significant impact.

Biological Resources

Construction of the No Project Low Development Alternative would result in somewhat reduced impacts on biological resources compared with the Proposed Plan because a reduced level of ground disturbance and construction activities would occur, resulting in reduced impacts on special-status species, burrowing owls, and roosting bats, as well as area available to wildlife for habitat and movement. The policies outlined in Section 3.4, as well as the biological resource protection practices identified in the Standard Conditions of Approval are assumed to be similar in the Low Development Alternative. With implementation of policies similar to those in Section 3.4, project-level and cumulative biological resources impacts under the Low Development Alternative would be less than significant and similar, although slightly reduced due to less development, from those of the Proposed Plan.

Cultural, Historic, and Tribal Resources

Similar impacts on cultural resources, and tribal cultural resources would result from the No Project Low Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would likely still be required for construction and for demolition of existing buildings. Policies and Standard Conditions of Approval regulating demolition and excavation activities are assumed to be similar in the No Project Low Development Alternative, leading to similar impacts to cultural and tribal cultural resources as the Proposed Plan, and a less than significant impact.

The relevant policies and Standard Conditions of Approval identified in Section 3.5 are assumed to be similar in the No Project Low Development Alternative. Impacts to historic resources would be similar under the No Project Low Development Alternative, as while fewer existing buildings may need to be demolished to meet the development program, existing historic buildings are also costly to repurpose and maintain, and more buildings with historic significance may be demolished in favor of less expensive and more efficient

new construction. The impact of the No Project Low Development Alternative would likely remain significant and unavoidable, although similar to than the Proposed Plan.

Energy and Greenhouse Gas Emissions

Under the No Project Low Development Alternative, the amount of demolition would be similar to that of the Proposed Plan, while the construction activity would be somewhat reduced, resulting in slightly less construction-related and operations GHG emissions. As with the Proposed Plan, the relevant proposed plan goals and policies detailed in Section 3.6 are assumed to be similar in the Low Development Alternative. Direct emissions generated by landscaping and other activities, as well as indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be less than those of the Proposed Plan because of the reduced overall development. As with the Proposed Plan, the Low Development Alternative would likely implement sustainability features and comply with State and County requirements regarding recycling and waste reduction programs, composting, and water-efficient landscaping. The Low Development Alternative would generate fewer vehicle trips than the Proposed Plan. This would result in reduced operational aggregate GHG emissions compared with those of the Proposed Plan, but similar on a per capita basis.

However, like the Proposed Plan, under the No Project Low Development Alternative, VMT per capita would not meet the required threshold, and thus, would conflict with the goals of SB 743 and the State's long-term climate change planning goals. Therefore, project-level and cumulative GHG emissions impacts under the No Project Low Development Alternative would be potentially significant, but the degree of impact would be reduced owing to lower projected operational GHG emissions.

Given the overall lower amount of development, it is likely that energy usage would be lower under the No Project Low Development Alternative compared to the Proposed Plan. However, with fewer residents and employees, this Alternative would support fewer commercial and community-serving uses and would provide less support for an expanded transit system in the area. The alternative would likely implement new sustainability policies as the Proposed Plan, such as requiring new development to incorporate green building measures such as energy-efficient building design and electrification. Therefore, overall impacts would be less than significant. Compared to the Proposed Plan, the Low Development Alternative, would have a lower degree of energy impacts.

Geology, Soils, and Mineral Resources

Similar impacts on geology, soils, and seismicity would result from the Low Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for demolition of existing buildings and construction of new residential and non-residential uses. Therefore, the potential impacts on geology, soils, and seismicity would be the similar to those under the Proposed Plan. Policies and Standard Conditions of Approval identified in Section 3.7 are assumed to be similar in this Alternative. With the Proposed Plan policies and Standard Conditions of Approval, project-level and cumulative impacts related to geology, soils, and seismicity under the Low Development Alternative would be less than significant and similar to those of the Proposed Plan.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials under the No Project Low Development Alternative would be similar to those of the Proposed Plan because construction would have similar risks, associated with the accidental release of hazardous materials, and would be subject to the same site remediation requirements as the Proposed Plan. As with the Proposed Plan, it is likely that the demolition of existing buildings and structures on the site would result in uncovering of hazardous building materials, however following the appropriate State and federal regulations on transportation and disposal of hazardous materials would lead to a less than significant impact, with impacts similar to the Proposed Plan.

Hydrology and Water Quality

Similar impacts on hydrology, drainage, and water quality would result from the Low Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for demolition of existing buildings and new construction at the site. While construction activities would be reduced from the Proposed Plan, demolition, excavation, and grading activities would still take place to remove existing buildings in that area. Therefore, the potential impacts under the Low Development Alternative on hydrology, drainage, and water quality would be similar or a bit reduced compared to those of the Proposed Plan. With implementation of existing State regulations as well as policies and actions within the Proposed Plan, project-level and cumulative impacts related to hydrology, drainage, and water quality under the Low Development Alternative would be less than significant and less than impacts under the Proposed Plan.

Land Use and Planning

The No Project Low Development Alternative would likely have a larger proportion of small-lot single family and townhomes as well as less historic preservation to achieve financial feasibility, with limited amount of shops, services and community amenities on the site. Compared to the Proposed Plan (which is consistent with project objectives to support housing development), development under this No Project Low Development Alternative would result in approximately 600 fewer new residents, 250 fewer new housing units, and 240 fewer new jobs in the Planning Area by 2040. While the Proposed Plan would support a vibrant mixed-use area around the Central Green, the No Project Low Development Alternative would likely lack the population density and activity to support shops, restaurants and other commercial destinations, and less funding would be available for community amenities such as a gym, performance space, or meeting space. Improvements to transportation systems would be less likely under the Proposed Plan as well due to fewer potential transit users living in the area.

Neither the Proposed Plan nor the No Project Low Development Alternative introduce physical barriers that would divide an established community. The Low Development Alternative includes the connection to Highway 12, but only as an emergency access route. Because the No Project Low Development Alternative would likely retain project objectives related to streetscape design and mobility, it can be assumed the Alternative would additionally implement new policies that create a fine-grained street, improve bicycle facilities, and create a network of paseos, parks, and open spaces within the Core Campus.

Development under the No Project Low Development Alternative would be subject to similar policies and implementing actions outlined in Section 3.10 to the extent feasible with the reduced development numbers. Policies promoting a vibrant mix of uses and activity center in the core area may not be feasible, as well as Goals 3-B and 3-F and related policies, leading to less regional connectivity at the site. The Alternative would likely establish new goals and policies in the Proposed Plan that provide housing for all income levels and household types, although in order to meet the project objective of financial feasibility, the Low Development Alternative would have less housing available for working families, students, seniors, and households with low, very low, and extremely low incomes.

Given that development of a similar character would still occur in the Planning Area, although to a lesser extent and in a smaller area, the No Project Low Development Alternative would have an equivalent impact related to land use, population, and housing

compared to the Proposed Plan, which would result in less-than-significant project-level impacts and a less than cumulatively considerable contribution to significant cumulative impacts with implementation of existing State regulations as well as similar policies and actions within the Proposed Plan.

Noise

The No Project Low Development Alternative would result in less overall development uses compared to the Proposed Plan, leading to a smaller development footprint and less construction activity than the Proposed Plan. This Alternative would involve implementation of similar Proposed Plan and County policies related to construction noise control. Therefore, construction noise and vibration impacts under this Alternative would be less than significant and less than the Proposed Plan. Average daily traffic volume on area roadways would be slightly less under this Alternative as compared with the Proposed Plan as well. Therefore, operational roadway noise would be slightly reduced along area roadways. Policies related to noise reduction from the Proposed Plan would still be implemented. Overall, implementation of applicable policies and compliance with County Code provisions would ensure that impacts under this Alternative would be less than significant and reduced as compared to the Proposed Plan.

Population and Housing

Buildout of the No Project Low Development is projected to result in 1,800 new residents, 750 new housing units, and 700 new jobs, resulting in 600 fewer residents, 250 fewer housing units and 240 fewer jobs than the Proposed Plan. The proportion of both income-restricted affordable housing and affordable by design housing in the Low Development Alternative is projected to be less than the Proposed Plan. Therefore, while the Low Development Alternative provides much-needed housing for the Sonoma Valley and provides affordable housing at the County required minimum proportion, it would provide less housing overall and less affordable housing than the Proposed Plan.

The Alternative will in result in 700 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population, and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. Thus, population growth and employment opportunities under the Alternative is in line with current General Plan goals and objectives. The No Project Low Development Alternative would not induce substantial unplanned population growth in the Planning Area; however,

it would shift some of the planned growth in the Planning Area to other locations in the region.

Public Services and Recreation

Buildout of the Low Development Alternative would result in 600 fewer residents and 240 fewer employees in the Planning Area as compared to the Proposed Plan. Therefore, this Alternative would be expected to generate fewer calls for service and a slightly reduced demand for police, fire, and emergency medical services from the Planning Area. With a lower residential population, demand for school and library services would also be reduced as compared to the Proposed Plan. As such, the less than significant impact of the Proposed Plan with respect to fire, police, school and library services would be further reduced under this Alternative. Buildout of this Alternative would also likely involve the construction of parks, plazas, and paseos as under the Proposed Plan; the environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR. Detailed design of the new park facilities has not yet been completed, so site specific impacts cannot be evaluated at this time, however all new parks development would adhere to similar environmental quality policies in the Proposed Plan that establish buffers between development and waterways, require that projects avoid or minimize the introduction of invasive plant species, and work with certified biologists and arborists when projects have the potential to impact significant resources. Therefore, impacts would be less than significant and would be reduced compared to the Proposed Plan.

Transportation

The No Project Low Development Alternative would have a similar overall level of development as the Reduced Development Alternative. The jobs to housing ratio of 0.39 is equivalent to the Proposed Plan, and while the mix of employment and other land use types would influence VMT, it likely that the overall VMT per capita would be similar to that projected for the Proposed Plan.

The No Project Low Development Alternative is estimated to result in approximately 25 percent fewer daily trips than the Proposed Plan, resulting in roughly 25 percent less VMT. Again, while this alternative would potentially result in a substantially lower total VMT than the Proposed Plan, the amount of home-based VMT generated per capita would likely be similar.

Like the Reduced Development Alternative, the No Project Low Development Alternative would include only an emergency access connection to Highway 12, which would eliminate the potential induced VMT impact identified for the Proposed Plan.

The No Project Low Development Alternative would eliminate induced VMT impacts and would likely have similar impacts related to development VMT including VMT per capita, VMT per employee, and total VMT per service population, though would not reduce VMT per capita sufficiently to avoid a significant and unavoidable VMT impact.

Utilities and Service Systems

As discussed in Section 3.15: Utilities and Service Systems, there would be sufficient water supply, wastewater treatment capacity, and solid waste disposal capacity to serve development under the Proposed Plan in 2040. The No Project Low Development Alternative would result in less overall development than the Proposed Plan. As such, this Alternative could reduce the Proposed Plan's less than significant impact further. As with the Proposed Plan, the water demand for this Alternative would be less than the historical water demand and would be well within the supply capacity. As with the Proposed Plan, significant upgrades would be required to the existing utility systems, including stormwater, power and telecommunications, water supply and wastewater. However, as development would be limited within the Core Campus, utility systems may not require expansion or upgrading to the east of the creek. Therefore, impacts from the Low Development Alternative would be less than significant with respect to utilities and services systems and reduced compared to the Proposed Plan.

Wildfire

In comparison with the Proposed Plan, the Low Development Alternative has a smaller development footprint within the Core Campus. As with the Proposed Plan, the similar proposed policies in Section 3.16 will be implemented, ensuring that development in the Planning Area is resilient to the risk of a wildfire. As with the Proposed Plan, impacts from wildfire are considered less than significant for the No Project Low Development Alternative.

4.4.1.2 No Project High Development

Aesthetics

The No Project High Development Alternative would result in equivalent employment-generating land uses and greater residential development (250 housing units more)

compared to the Proposed Plan. Development would likely occur in a similar scale and density as the Proposed Plan, with development potentially occupying a greater footprint (potentially about 20 acres more), but still within the Core Campus as in the Proposed Plan.

While the type of development would differ under this Alternative, the overall amount and location of development would be slightly greater than the Proposed Plan, and the design standards and guidelines from the Proposed Plan can be assumed to be similar under the No Project Alternatives. As with the Proposed Plan, the connection to Highway 12 and new development would still potentially impact scenic vistas in the Planning Area, but the overall impact to scenic vistas would remain less than significant.

This Alternative would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the Proposed Plan because this alternative would likely include the similar goals and policies in the Proposed Plan. In addition, with greater financial feasibility and population to support new businesses and commercial uses, there would be greater potential for well-designed active gathering spaces. Overall, impacts related to aesthetics and visual resources from the High Development Alternative would be equivalent to the Proposed Plan.

Agriculture and Forestry Resources

Impacts under the No Project High Development Alternative related to Agriculture and Forestry Resources would be similar to those of the Proposed Plan as development would be contained in the Core Campus area. As in the Proposed Plan, no Prime Farmland, Unique or Farmland of Statewide Importance would be impacted and the impacts to agriculture and forestry resources would be less than significant.

Air Quality

Impacts under the High Development Alternative related to air quality during construction would be similar to those of the Proposed Plan but slightly greater because the overall amount of development proposed would be increased (refer to Table 4.1-1, above). This would result in a similar but slightly greater duration for construction activities. The policies outlined in Section 3.3: Air Quality are assumed to be similar in this alternative. As with the Proposed Plan, it is likely that the High Development Alternative would incorporate applicable control measures of the 2017 Clean Air Plan and would not disrupt or hinder implementation of any of these control measures.

During operations, emissions under the No Project High Development Alternative from area and building energy sources would be similar to those of the Proposed Plan but slightly greater because the number of housing units would be increased. Because of this, the High Development Alternative would generate slightly greater vehicle trips compared with the Proposed Plan. This may increase aggregate operational emissions impacts but would reduce them on a per capita basis, since development would be in a sustainable, compact pattern within the Core Campus at similar to or at slightly greater intensities compared to the Proposed Plan. With implementation of similar policies outlined in Section 3.3: Air Quality, the High Development Alternative would be roughly equivalent to the Proposed Plan and would very likely also result in a less than significant impact.

Biological Resources

Construction of the No Project High Development Alternative would be confined to the Core Campus as is in the Proposed Plan, but would result in somewhat greater impacts on biological resources compared with the Proposed Plan because a greater level of ground disturbance and construction activities would occur, resulting in potentially increased impacts on special-status species, burrowing owls, and roosting bats. Furthermore, with the larger development footprint, the area devoted to the expanded wildlife corridor may be reduced or eliminated, potentially resulting in greater impacts to wildlife for habitat and movement. The policies outlined in Section 3.4, as well as the biological resource protection practices identified in the Standard Conditions of Approval are assumed to be similar in the No Project High Development Alternative. With implementation of policies similar to those in Section 3.4, project-level and cumulative biological resources impacts under the High Development Alternative would be less than significant and similar, although slightly greater due to increased development and reduction/elimination of the on-campus wildlife corridor, from those of the Proposed Plan.

Cultural, Historic, and Tribal Resources

Greater impacts on cultural resources, and tribal cultural resources would result from the No Project High Development Alternative compared with the Proposed Plan because more development would increase excavation, grading, and demolition of existing buildings and construction requirements. Policies and Standard Conditions of Approval regulating demolition and excavation activities are assumed to be similar in the High Development Alternative, leading to similar impacts to cultural and tribal cultural resources as the Proposed Plan, and a less than significant impact.

The relevant policies and Standard Conditions of Approval identified in Section 3.5 are assumed to be similar in the No Project High Development Alternative. Impacts to historic resources may be greater under the No Project High Development Alternative, as historic buildings are costly to repurpose and maintain, and more buildings with historic significance may be demolished in favor of less expensive and more efficient new construction. The impact of the No Project High Development Alternative would likely be significant and unavoidable, although slightly greater than the Proposed Plan.

Energy and Greenhouse Gas Emissions

Under the No Project High Development Alternative, the amount of demolition would be similar to that of the Proposed Plan, while the construction activity would be increased, resulting in slightly greater construction-related and operations GHG emissions. As with the Proposed Plan, the relevant proposed plan goals and policies detailed in Section 3.6 are assumed to be similar in the No Project High Development Alternative. Direct emissions generated by landscaping and other activities, as well as indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be greater than those of the Proposed Plan because of the increased overall development. As with the Proposed Plan, the No Project High Development Alternative would likely implement sustainability features and comply with State and County requirements regarding recycling and waste reduction programs, composting, and water-efficient landscaping. The No Project High Development Alternative would generate greater vehicle trips than the Proposed Plan. This would result in greater operational GHG emissions compared with those of the Proposed Plan.

However, like the Proposed Plan, under the No Project High Development Alternative, VMT per capita would likely not meet the required threshold, and thus, would conflict with the goals of SB 743 and the State's long-term climate change planning goals. Therefore, project-level and cumulative GHG emissions impacts under the High Development Alternative would be significant and unavoidable.

Given the overall increased amount and intensity of development, it is likely that energy usage would be greater under the No Project High Development Alternative. Furthermore, with additional residents and an equal number of employees compared to the Proposed Plan, this Alternative would support greater commercial and community-serving uses and would provide more support for an expanded transit system in the area. The alternative would likely implement new sustainability policies in the Proposed Plan, such as requiring new development to incorporate green building measures such as energy-efficient building design and electrification. Therefore, overall impacts would be less than

significant. Compared to the Proposed Plan, the No Project High Development Alternative, would have slightly greater overall energy impacts.

Geology, Soils, and Mineral Resources

Greater impacts on geology, soils, and seismicity would result from the No Project High Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required and increased for demolition of existing buildings and construction of new residential and non-residential uses. Therefore, the potential impacts on geology, soils, and seismicity would be the similar to but slightly greater than those under the Proposed Plan. Policies and Standard Conditions of Approval identified in Section 3.7 are assumed to be similar in this Alternative. With the Proposed Plan policies and Standard Conditions of Approval, project-level and cumulative impacts related to geology, soils, and seismicity under the Low Development Alternative would be less than significant and similar to those of the Proposed Plan.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials under the No Project High Development Alternative would be similar to those of the Proposed Plan because construction would have similar risks, associated with the accidental release of hazardous materials, and would be subject to the same site remediation requirements as the Proposed Plan. As with the Proposed Plan, it is likely that the demolition of existing buildings and structures on the site would result in uncovering of hazardous building materials, however following the appropriate State and federal regulations on transportation and disposal of hazardous materials would lead to a less than significant impact, with impacts similar to the Proposed Plan.

Hydrology and Water Quality

Greater impacts on hydrology, drainage, and water quality would result from the High Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required and increase for demolition of existing buildings and new construction at the site. Construction activities would be increased from the Proposed Plan, and demolition, excavation and grading activities would still take place to remove existing buildings in that area. Therefore, the potential impacts under the High Development Alternative on hydrology, drainage, and water quality would be similar or a bit greater compared to those of the Proposed Plan. With implementation of existing State regulations as well as policies and actions within the Proposed Plan, project-level and cumulative

impacts related to hydrology, drainage, and water quality under the Low Development Alternative would be less than significant and less than impacts under the Proposed Plan.

Land Use and Planning

The No Project High Development Alternative would focus on more overall development in the Planning Area by increased the number of housing units and affordable housing units, limiting historic preservation, and keeping a similar amount of shops, services and community amenities on the site as the Proposed Plan. Compared to the Proposed Plan development under this No Project High Development Alternative would result in approximately 600 additional residents, 250 additional new housing units, and the same number of jobs in the Planning Area by 2040. With increased financial feasibility with added residential development compared to the Proposed Plan, the No Project High Development Alternative would maintain the population density and activity to support shops, restaurants and other commercial destinations, and potentially more funding would be available for community amenities such as a gym, performance space, or meeting space. Improvements to transportation systems would be more likely under the Proposed Plan as well due to greater potential transit users living in the area.

Neither the Proposed Plan nor the No Project High Development Alternative introduce physical barriers that would divide an established community. Similar to the Proposed Plan, the High Development Alternative includes the local road connection to Highway 12. Because the No Project High Development Alternative would likely retain project objectives related to streetscape design and mobility, it can be assumed the Alternative would additionally implement new policies that create a fine-grained street, improve bicycle facilities, and create a network of paseos, parks, and open spaces within the Core Campus.

Development under the No Project Higher Development Alternative would be subject to similar policies and implementing actions promoting a vibrant mix of uses and regional connectivity outlined in Section 3.10. The Alternative would likely establish new goals and policies in the Proposed Plan that provide housing for all income levels and household types. With greater financial feasibility, the No Project High Development Alternative may have more housing available for working families, students, seniors, and households with low, very low, and extremely low incomes.

Given that development of a similar character would still occur in the Planning Area, although to a greater extent in the Core Campus, the No Project High Development Alternative would have an equivalent impact related to land use, population, and housing

compared to the Proposed Plan, which would result in less-than-significant project-level impacts and with implementation of existing State regulations as well as similar policies and actions within the Proposed Plan.

Noise

The No Project High Development Alternative would result in more overall development uses compared to the Proposed Plan, leading to a greater development footprint and greater construction activity than the Proposed Plan. This Alternative would involve implementation of similar Proposed Plan and County policies related to construction noise control. Therefore, construction noise and vibration impacts under this Alternative would be less than significant and greater than the Proposed Plan. Average daily traffic volume on area roadways would be slightly greater under this Alternative as compared with the Proposed Plan as well. Therefore, operational roadway noise would be slightly increased at sensitive receptors located along area roadways. Policies related to noise reduction from the Proposed Plan would still be implemented. Overall, implementation of applicable policies and compliance with County Code provisions would ensure that impacts under this Alternative would be less than significant and even through impacts would be greater as compared to the Proposed Plan.

Population and Housing

Buildout of the High Development Alternative is projected to result in 3,000 new residents, 1,250 new housing units, and 940 new jobs, resulting in 600 additional residents, 250 additional housing units and an equal number of jobs than the Proposed Plan. The proportion of both income-restricted affordable housing and affordable by design housing in the High Development Alternative is projected to be more than the Proposed Plan. Therefore, the High Development Alternative provides much-needed housing for the Sonoma Valley, and provides more housing overall and more affordable housing than the Proposed Plan.

The Alternative will in result in 940 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population, and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. The High Development Alternative would not induce substantial unplanned population growth in the Planning Area. Because this Alternative would also accommodate a greater share of projected regional growth, it would result in more positive cumulative outcomes compared to the Proposed Plan.

Public Services and Recreation

The No Project High Development Alternative would result in 600 additional residents and an equivalent number of employees in the Planning Area as compared to the Proposed Plan. Therefore, this Alternative would be expected to generate slightly greater calls for service and a slightly greater demand for police, fire and emergency medical services from the Planning Area. With a higher residential population, demand for school and library services would also be increased as compared to the Proposed Plan. However, similar to the Proposed Plan, the Alternative would likely expand the fire district, construct a new fire station, and coordinate with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools. Further, there is potential for the Sheriff's Office to continue to increase staffing levels to accommodate future growth in the county. As such, the impact of the Alternative with respect to fire, police, and school services would be greater compared to the Proposed Plan, but still less than significant.

Buildout of this Alternative would also likely involve the construction of parks, plazas, and paseos as under the Proposed Plan; the environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR. Detailed design of the new park and community facilities has not yet been completed, so site specific impacts cannot be evaluated at this time, however all new park and community facility development would adhere to similar environmental quality policies in the Proposed Plan that establish buffers between development and waterways, require that projects avoid or minimize the introduction of invasive plant species, and work with certified biologists and arborists when projects have the potential to impact significant resources. Therefore, impacts would be less than significant and would be similar compared to the Proposed Plan.

Transportation

The No Project High Development Alternative would have the same employment level as the Proposed Plan (940 jobs) but would have a somewhat higher population of 3,000 persons as compared to 2,400. The jobs to housing ratio would be approximately 0.31 which is lower than the 0.39 ratio associated with the Proposed Plan. Based on prior alternatives modeling exercises completed for SDC in 2021, it is likely that the No Project High Development Alternative would generate slightly more per capita VMT than the Proposed Project, though the difference would likely be negligible.

The No Project High Development Alternative is projected to result in approximately 15 percent more daily vehicle trips than the Proposed Plan, indicating that the total VMT generated may also be roughly 15 percent higher, though as noted above this would not necessarily translate to a substantial increase to the VMT per capita efficiency metric.

The alternative would include a local roadway connection to Highway 12. This new connection is also included in the Proposed Plan, and the potential for induced VMT to occur would remain the same.

Thus, the No Project High Development Alternative is likely to result in per capita VMT levels that are similar to, if not slightly higher than, the Proposed Plan. The Alternative would also have the same potential for induced VMT to occur as the Proposed Plan. Since the Alternative would not be expected to reduce residential VMT per capita and would not change findings related to induced VMT, a significant and unavoidable and cumulatively considerable VMT impact would still occur.

Utilities and Service Systems

As discussed in Section 3.15: Utilities and Service Systems, there would be sufficient water supply, wastewater treatment capacity, and solid waste disposal capacity to serve development under the Proposed Plan in 2040. The No Project High Development Alternative would result in slightly greater overall development than the Proposed Plan. As such, this Alternative could increase the Proposed Plan's utilities and service systems impact further. As with the Proposed Plan, the water demand for this Alternative would be less than the historical water demand and would be well within the supply capacity. As with the Proposed Plan, significant upgrades would be required to the existing utility systems, including stormwater, power and telecommunications, water supply and wastewater. Therefore, impacts from the No Project High Development Alternative would be less than significant with respect to utilities and services systems and but slightly greater compared to the Proposed Plan.

Wildfire

In comparison with the Proposed Plan, the No Project High Development Alternative has a similar but possible slightly greater development footprint within the Core Campus. As with the Proposed Plan, the similar proposed policies in Section 3.16 will be implemented, ensuring that development in the Planning Area is resilient to the risk of a wildfire. As with the Proposed Plan, impacts from wildfire are considered less than significant for the No Project High Development Alternative, and impacts would be similar or slightly greater compared to the Proposed Plan.

4.4.2 Reduced Development Alternative

Aesthetics

The Reduced Development Alternative would result in less employment-generating land uses and fewer residential uses compared to the Proposed Plan, with a similar distribution of land uses as the Proposed Plan, with the exception of the Agrihood area, which would be open space. While this Alternative would have less overall development, and no development in the Agrihood area, the development that does occur may differ in scale, density and style from the Proposed Plan, with a preference for more large lot, single family homes to maximize financial feasibility.

While the type of development would differ under this Alternative, the overall amount and location of development would be less than the Proposed Plan, and the design standards and guidelines from the Proposed Plan would still apply. The elimination of development in the Agrihood area would also reduce the potential for visual impacts. As with the Proposed Plan, the connection to Highway 12 and new development would still potentially impact scenic vistas in the Planning Area, but the overall impact to scenic vistas would remain less than significant.

This Alternative would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the Proposed Plan because this alternative would include the same goals and policies in the Proposed Plan however, with lower financial feasibility and lower population to support new businesses and commercial uses, there would be lower potential for well-designed active gathering spaces. Overall, impacts related to aesthetics and visual resources from the Reduced Development would be equivalent to the Proposed Plan.

Agriculture and Forestry Resources

Impacts under the Reduced Development Alternative related to Agriculture and Forestry Resources would be similar to those of the Proposed Plan. With the area east of Sonoma Creek returned to open space, the forestry resources at the site may be enhanced. With the exception of the Agrihood and the associated agricultural production from the Reduced Development Alternative, the active agricultural areas would be reduced, but as in the Proposed Plan, no Prime Farmland, Unique or Farmland of Statewide Importance would be impacted and the impacts to agriculture and forestry resources would be less than significant.

Air Quality

Impacts under the Reduced Development Alternative related to air quality during construction would be similar to those of the Proposed Plan but slightly reduced because the overall amount of development proposed would be reduced (refer to Table 4.1-1, above). This would result in a similar but slightly shorter duration for construction activities. The policies outlined in Section 3.3: Air Quality would apply to this alternative. As with the Proposed Plan, it is likely that the Reduced Development Alternative would incorporate applicable control measures of the 2017 Clean Air Plan and would not disrupt or hinder implementation of any of these control measures.

During operations, emissions under the Reduced Development Alternative from area and building energy sources would be similar to those of the Proposed Plan but slightly reduced because the number of housing units and non-residential space would be reduced by more than one-third. Because of this, the Reduced Development Alternative would generate fewer vehicle trips compared with the Proposed Plan. This would reduce aggregate operational emissions impacts, but not necessarily on a per capita basis, but would not eliminate them. With implementation of the policies outlined in Section 3.3: Air Quality, the Reduced Development Alternative would be somewhat reduced from the Proposed Plan, and would very likely also result in a less than significant impact.

Biological Resources

Construction of the Reduced Development Alternative would result in somewhat reduced impacts on biological resources compared with the Proposed Plan because a reduced level of ground disturbance and construction activities would occur, resulting in reduced impacts on special-status species, burrowing owls, and roosting bats. With development east of Sonoma Creek limited in the Reduced Development Alternative, once existing buildings are removed and construction is complete, the area available to wildlife for habitat and movement will be significantly increased compared to the Proposed Plan. The policies outlined in Section 3.4, as well as the biological resource protection practices identified in the Standard Conditions of Approval would apply to the Reduced Development Alternative. With implementation of policies outline in Section 3.4, project-level and cumulative biological resources impacts under the Reduced Development Alternative would be less than significant and similar, although slightly reduced due to the expansion of the wildlife corridor, from those of the Proposed Plan.

Cultural, Historic, and Tribal Resources

Similar impacts on cultural resources, and tribal cultural resources would result from the Reduced Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for construction and for demolition of existing buildings on the east side of Sonoma Creek. Policies and Standard Conditions of Approval regulating demolition and excavation activities would still be applied to the Reduced Development Alternative, leading to similar impacts to cultural and tribal cultural resources as the Proposed Plan, and a less than significant impact.

The relevant policies and Standard Conditions of Approval identified in Section 3.5 would still apply to the Reduced Development Alternative, however Policies 4-20 through 4-32 allow for some flexibility in historic preservation. Impacts to historic resources may be greater under the Reduced Development Alternative, as historic buildings are costly to repurpose and maintain, and more buildings with historic significance may be demolished in favor of less expensive and more efficient new construction. The impact of the Reduced Development Alternative would likely be significant and unavoidable, although slightly greater than the Proposed Plan.

Energy and Greenhouse Gas Emissions

Under the Reduced Development Alternative, the amount of demolition would be similar to that of the Proposed Plan, while the construction activity would be somewhat reduced, resulting in slightly less construction-related and operations GHG emissions. As with the Proposed Plan, the relevant proposed plan goals and policies detailed in Section 3.6 apply to the Reduced Development Alternative. Direct emissions generated by landscaping and other activities, as well as indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be less than those of the Proposed Plan because of the reduced overall development. As with the Proposed Plan, the Reduced Development Alternative would implement sustainability features and comply with State and County requirements regarding recycling and waste reduction programs, composting, and water-efficient landscaping. The Reduced Development Alternative would generate fewer vehicle trips than the Proposed Plan. This would result in reduced operational GHG emissions compared with those of the Proposed Plan.

However, like the Proposed Plan, under the Reduced Development Alternative, VMT per capita would not meet the required threshold, and thus, would conflict with the goals of SB 743 and the State's long-term climate change planning goals. Therefore, project-level and cumulative GHG emissions impacts under the Reduced Development Alternative would

be potentially significant, but the degree of impact would be reduced owing to lower projected operational GHG emissions.

Given the overall lower amount of development, it is likely that energy usage would be lower under the Reduced Development Alternative. However, with fewer residents and employees, this Alternative would support fewer commercial and community-serving uses and would provide less support for an expanded transit system in the area. The alternative would implement new sustainability policies in the Proposed Plan, including requiring new development to incorporate green building measures such as energy-efficient building design and electrification. Therefore, overall impacts would be less than significant. Compared to the Proposed Plan, the Reduced Development Alternative, would have a lower degree of energy impacts.

Geology, Soils, and Mineral Resources

Similar impacts on geology, soils, and seismicity would result from the Reduced Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for demolition of existing buildings and construction of new residential and non-residential uses. Therefore, the potential impacts on geology, soils, and seismicity would be the similar to those under the Proposed Plan. Policies and Standard Conditions of Approval identified in Section 3.7 would apply to the Alternative. With the Proposed Plan policies and Standard Conditions of Approval, project-level and cumulative impacts related to geology, soils, and seismicity under the Reduced Development Alternative would be less than significant with mitigation and similar to those of the Proposed Plan.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials under the Reduced Development Alternative would be similar to those of the Proposed Plan because construction would have similar risks, associated with the accidental release of hazardous materials, and would be subject to the same site remediation requirements as the Proposed Plan. As with the Proposed Plan, it is likely that the demolition of existing buildings and structures on the site would result in uncovering of hazardous building materials, however following the appropriate State and federal regulations on transportation and disposal of hazardous materials would lead to a less than significant impact, with impacts similar to the Proposed Plan.

Hydrology and Water Quality

Similar impacts on hydrology, drainage, and water quality would result from the Reduced Development Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for demolition of existing buildings and new construction at the site. With development eliminated from the area east of Sonoma Creek, construction activities would be reduced from the Proposed Plan, although demolition, excavation and grading activities would still take place to remove existing buildings in that area. Following completion of demolition of the existing buildings in the Agrihood area, water quality and drainage of Sonoma Creek would likely be improved by the re-naturalization of the east side of the creek. Therefore, the potential impacts under the Reduced Development Alternative on hydrology, drainage, and water quality would be similar but reduced compared to those of the Proposed Plan. With implementation of existing State regulations as well as policies and actions within the Proposed Plan, project-level and cumulative impacts related to hydrology, drainage, and water quality under the Reduced Development Alternative would be less than significant and less than impacts under the Proposed Plan.

Land Use and Planning

The Reduced Development Alternative would focus on less overall development in the Planning Area by reducing affordable housing, limiting historic preservation, and focusing more on single-family detached residential units than other typologies of residential, and limiting the amount of shops, services and community amenities on the site. Compared to the Proposed Plan (which is consistent with project objectives to support housing development), development under this Reduced Development Alternative would result in approximately 600 fewer new residents, 250 fewer new housing units, and 340 fewer new jobs in the Planning Area by 2040. While the proposed plan would support a vibrant mixed-use area around the Central Green, the Reduced Development Alternative would likely lack the population density and activity to support shops, restaurants and other commercial destinations, and less funding would be available for community amenities such as a gym, performance space, or meeting space. Improvements to transportation systems would be less likely under the Proposed Plan as well due to fewer potential transit users living in the area.

Neither the Proposed Plan nor the Reduced Development Alternative introduce physical barriers that would divide an established community. The Reduced Development Alternative includes the connection to Highway 12, but only as an emergency access route. Because the Reduced Development Alternative would retain project objectives related to streetscape design and mobility, both alternatives would additionally implement

new policies that create a fine-grained street, improve bicycle facilities, and create a network of paseos, parks, and open spaces within the Core Campus.

Development under both alternatives would be subject to the relevant policies and implementing actions outlined in Section 3.10 to the extent feasible with the reduced development numbers. Policies promoting a vibrant mix of uses and activity center in the core area may not be feasible, as well as Goals 3-B and 3-F and related policies, leading to less regional connectivity at the site. Both alternatives would establish new goals and policies in the Proposed Plan that provide housing for all income levels and household types, although in order to meet the project objective of financial feasibility, the Reduced Development Alternative would have significantly less housing available for working families, students, seniors, and households with low, very low, and extremely low incomes.

Given that development of a similar character would still occur in the Planning Area, although to a lesser extent and in a smaller area, the Reduced Development Alternative would have an equivalent impact related to land use, population, and housing compared to the Proposed Plan, which would result in less-than-significant project-level impacts and a less than cumulatively considerable contribution to significant cumulative impacts with implementation of existing State regulations as well as policies and actions within the Proposed Plan.

Noise

The Reduced Development Alternative would result in less overall development uses compared to the Proposed Plan, leading to a smaller development footprint and less construction activity than the Proposed Plan. This Alternative would involve implementation of all Proposed Plan and County policies related to construction noise control. Therefore, construction noise and vibration impacts under this Alternative would be less than significant and less than the Proposed Plan. Average daily traffic volume on area roadways would be slightly less under this Alternative as compared with the Proposed Plan as well. Therefore, operational roadway noise would be slightly reduced at sensitive receptors located along area roadways. Policies related to noise reduction from the Proposed Plan would still be implemented. Overall, implementation of applicable policies and compliance with County Code provisions would ensure that impacts under this Alternative would be less than significant and reduced as compared to the Proposed Plan.

Population and Housing

Buildout of the Reduced Development is projected to result in 1,800 new residents, 750 new housing units, and 600 new jobs, resulting in 600 fewer residents, 250 fewer housing units and 340 fewer jobs than the Proposed Plan. The proportion of both income-restricted affordable housing and affordable by design housing in the Reduced Development Alternative is projected to be less than the Proposed Plan. Therefore, while the Reduced Development Alternative provides much-needed housing for the Sonoma Valley, and provides affordable housing at the County required minimum proportion, it provides less housing overall and less affordable housing than the Proposed Plan.

The Proposed Plan will in result in 600 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population, and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. Thus, population growth and employment opportunities under the Proposed Plan is in line with current General Plan goals and objectives. The Reduced Development Alternative would not induce substantial unplanned population growth in the Planning Area; however, it would shift some of the planned growth in the Planning Area to other locations in the region.

Public Services and Recreation

Buildout of the Reduced Development Alternative would result in 600 fewer residents and 340 fewer employees in the Planning Area as compared to the Proposed Plan. Therefore, this Alternative would be expected to generate fewer calls for service and a slightly reduced demand for police, fire and emergency medical services from the Planning Area. With a lower residential population, demand for school and library services would also be reduced as compared to the Proposed Plan. As such, the less than significant impact of the Proposed Plan with respect to fire, police, school and library services would be further reduced under this Alternative. Buildout of this Alternative would also involve the construction of parks, plazas, and paseos as under the Proposed Plan; the environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR. Detailed design of the new park facilities has not yet been completed, so site specific impacts cannot be evaluated at this time, however all new parks development would adhere to environmental quality policies in the Proposed Plan that establish buffers between development and waterways, require that projects avoid or minimize the introduction of invasive plant species, and work with certified biologists and arborists when projects have

the potential to impact significant resources. Therefore, impacts would be less than significant and would be reduced compared to the Proposed Plan.

Transportation

The Reduced Development Alternative would result in an estimated population of 1,800 residents and an estimated employment level of 600 persons, both of which are less than the Proposed Plan. The jobs to housing ratio, which can influence VMT, would be approximately 0.33, which is similar to the Proposed Plan's ratio of 0.39. While the ultimate mix of employment types and presence of employment and service uses aimed at serving residents would influence VMT, it is unlikely that such a modest difference in the jobs to housing ratio would have a measurable influence in increasing or decreasing the projected VMT per capita as compared to the Proposed Plan.

The amount of daily vehicle trips generated by a project is often roughly proportionate to the amount of total VMT the project generates. Based on broad estimations using Institute of Transportation Engineers trip generation rates, the Reduced Development Alternative is projected to result in approximately 30 percent fewer daily trips than the Proposed Plan. By extension, the total VMT generated may be roughly 30 percent lower. While the Reduced Development Alternative would potentially result in a substantially lower total VMT than the Proposed Plan, the amount of home-based VMT generated per capita would likely be similar. This is because residential VMT is expressed as home-based VMT per capita, which is an efficiency metric wherein both the numerator (home-based VMT) and denominator (population) would be expected to decrease proportionately with reduced development levels.

As with the Proposed Plan, the Reduced Development Alternative includes a new roadway connection between the SDC campus area and Highway 12, though the new road would be restricted to emergency access only. Because the roadway would not serve public vehicular traffic generated by the Plan or broader Sonoma Valley area, there would be no potential for it to result in induced VMT. As a result, the Proposed Plan's impact associated with induced VMT would be eliminated. The Reduced Development Alternative would lessen VMT impacts by eliminating the potential for induced travel, though since it would not be expected to reduce residential VMT per capita, a significant and unavoidable and cumulatively considerable VMT impact would still occur.

Utilities and Service Systems

As discussed in Section 3.15: Utilities and Service Systems, there would be sufficient water supply, wastewater treatment capacity, and solid waste disposal capacity to serve

development under the Proposed Plan in 2040. The Reduced Development Alternative would result in less overall development than the Proposed Plan. As such, this Alternative could reduce the Proposed Plan's less than significant impact further. As with the Proposed Plan, the water demand for this Alternative would be less than the historical water demand, and would be well within the supply capacity. As with the Proposed Plan, significant upgrades would be required to the existing utility systems, including stormwater, power and telecommunications, water supply and wastewater. However, as development would be limited within the Core Campus to west of Sonoma Creek, utility systems would not require expansion or upgrading to the east of the creek. Therefore, impacts from the Reduced Development Alternative would be less than significant with respect to utilities and services systems and reduced compared to the Proposed Plan.

Wildfire

In comparison with the Proposed Plan, the Reduced Development Alternative has a smaller development footprint within the Core Campus, especially in the eastern portion, which is closer to the open space areas that have a history of fire. As with the Proposed Plan, the Relevant Policies and Implementing Actions identified in Section 3.16 will be implemented, ensuring that development in the Planning Area is resilient to the risk of a wildfire. As with the Proposed Plan, impacts from Wildfire are considered less than significant for the Reduced Development Alternative, and impacts would be reduced compared to the Proposed Plan.

4.4.3 Historic Preservation Alternative

Aesthetics

The Historic Preservation Alternative would result in less employment-generating land uses and fewer residential uses compared to the Proposed Plan, with a similar distribution of land uses as the Proposed Plan, with a greater proportion of historic contributing buildings retained for adaptive reuse. This Alternative would have less overall development, as many of the existing buildings would be retained, and the development that does occur may differ in scale, density and style from the Proposed Plan, with a preference for more large lot, single-family homes to maximize financial feasibility. The open space available within the Core Campus in this Alternative would likely be less than in the Proposed Plan due to the lower densities of the existing buildings, and the location of existing buildings within areas reclaimed as open space in the Proposed Plan.

While the type of development would differ under this Alternative, the overall development would be lower than the Proposed Plan, and the design standards and guidelines from the Proposed Plan would still apply, reducing the potential for impacts on scenic vistas and historic landscaping features, as with the Proposed Plan. Additionally, the retention of a greater proportion of historic buildings would reduce the potential for visual impacts, and the removal of the Highway 12 connection would reduce possible visual impacts to the area east of the Core Campus.

This Alternative would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the Proposed Plan because this alternative would include the same goals and policies in the Proposed Plan regulating new development, however, with lower financial feasibility and lower population to support new businesses and commercial uses, there would be lower potential for well-designed active gathering spaces. Overall, impacts related to aesthetics and visual resources from the Historic Preservation Alternative would be less than significant, and somewhat reduced compared to the Proposed Plan.

Agriculture and Forestry Resources

Impacts under the Historic Preservation Alternative related to Agriculture and Forestry Resources would be similar to those of the Proposed Plan. As with the Proposed Plan, development at the site would be limited to the Core Campus, an already developed area. Some areas where existing development is planned to be removed in the Proposed Plan would retain the existing historic contributing structures, leading to less area returned to agricultural and forestry uses. The active agricultural areas similar as to those in the Proposed Plan, and no Prime Farmland, Unique or Farmland of Statewide Importance would be impacted and the impacts to agriculture and forestry resources would be less than significant.

Air Quality

Impacts under the Historic Preservation Alternative related to air quality during construction would be similar to those of the Proposed Plan but slightly reduced because the overall amount of development proposed would be reduced (refer to Table 4.1-1, above). This would result in a similar but slightly shorter duration for construction activities. The policies outlined in Section 3.3 would apply to this alternative. As with the Proposed Plan, it is likely that the Historic Preservation Alternative would incorporate applicable control measures of the 2017 Clean Air Plan and would not disrupt or hinder implementation of any of these control measures.

During operations, emissions under the Historic Preservation Alternative from area and building energy sources would be similar to those of the Proposed Plan but reduced because the number of housing units and non-residential space as well as the number of buildings demolished would be reduced. Because of this, the Historic Preservation Alternative would generate fewer vehicle trips compared with the Proposed Plan. This would reduce operational emissions impacts but would not eliminate them. With implementation of the policies outlined in Section 3.3, the Historic Preservation Alternative would be reduced from the Proposed Plan and would also result in a less than significant impact.

Biological Resources

Construction of the Historic Preservation Alternative would result in somewhat reduced impacts on biological resources compared with the Proposed Plan because a reduced level of ground disturbance and construction activity would occur, resulting in reduced impacts on special-status species, burrowing owls, and roosting bats. However once existing buildings are renovated/reused and construction is complete, the area available to wildlife for habitat and movement will be similar to what exists currently at the site and lower compared to the Proposed Plan, and the creek corridors and the wildlife corridor will also not be expanded. Conversely, the lower population could result in fewer wildlife and habitat/human conflicts. Thus, with implementation of policies outline in Section 3.4, project-level and cumulative biological resources impacts under the Historic Preservation Alternative would be similar or slightly better compared to those of the Proposed Plan, but worse, but still less than significant, for wildlife corridors.

Cultural, Historic, and Tribal Resources

Similar impacts on cultural resources and tribal cultural resources would result from the Historic Preservation Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for construction. The impacts on cultural, historic, and tribal cultural resources would be reduced compared to the Proposed Plan due to the retention of more historic buildings at the site which would result in less construction disturbance. Policies and Standard Conditions of Approval regulating demolition and excavation activities would still be applied to the Historic Preservation Alternative, and impacts to cultural and tribal cultural resources would be reduced from the Proposed Plan because of increased adaptive reuse of existing structures and reduced development in other less disturbed portions of the Core Campus, and thus would have a less than significant impact.

The relevant policies and Standard Conditions of Approval identified in Section 3.5 would still apply to the Historic Preservation Alternative, however Policies 4-20 through 4-32 allow for some flexibility in historic preservation. More historic preservation would be required under the Historic Preservation Alternative. The impact of the Historic Preservation Alternative would likely be less than significant, and less than the Proposed Plan.

Energy and Greenhouse Gas Emissions

Under the Historic Preservation Alternative, the amount of demolition would be less than that of the Proposed Plan, and the construction activity would likely be somewhat reduced, resulting in less construction- and demolition-related and operations GHG emissions. As with the Proposed Plan, the relevant goals and policies detailed in Section 3.6. apply to the Historic Preservation Alternative. Direct emissions generated by landscaping and other activities would likely be comparable to the Proposed Plan. Indirect emissions associated with electricity consumption, waste and wastewater generation, and water use, would likely be more than those of the Proposed Plan because of the inefficiency of the existing buildings, and the difficulty in updating existing construction to match current standards for energy efficiency and GHG emissions. Outside of the adaptively reused buildings, the Historic Preservation Alternative would implement sustainability features and comply with State and County requirements regarding recycling and waste reduction programs, composting, and water-efficient landscaping. With less overall development, the Historic Preservation Alternative would generate fewer vehicle trips than the Proposed Plan. This would result in reduced operational GHG emissions compared with those of the Proposed Plan.

However, like the Proposed Plan, under the Historic Preservation Alternative, VMT per capita would not meet the required threshold, and thus, would conflict with the goals of SB 743 and the State's long-term climate change planning goals. Therefore, project-level and cumulative GHG emissions impacts under the Historic Preservation Alternative would be potentially significant, but the degree of impact would be reduced owing to lower projected operational GHG emissions.

Despite the overall lower amount of development, energy usage under the Historic Preservation Alternative may be comparable with the Proposed Plan due to the inefficiency of historic buildings for heating and cooling and the difficulty in updating energy systems in existing buildings. Additionally, with fewer residents and employees, this Alternative would support fewer commercial and community-serving uses and would provide less support for an expanded transit system in the area. Both alternatives would

implement new sustainability policies in the Proposed Plan, including requiring new development to incorporate green building measures such as energy-efficient building design and electrification, although full implementation could be constrained in the interest of historic preservation. Therefore, overall impacts would be less than significant. Compared to the Proposed Plan, the Historic Preservation Alternative, would have a similar degree of energy impacts.

Geology, Soils, and Mineral Resources

Somewhat reduced impacts on geology, soils, and seismicity would result from the Historic Preservation Alternative compared with the Proposed Plan because excavation, grading, and demolition would be reduced for demolition of existing buildings and construction of new residential and non-residential uses. Therefore, the potential impacts on geology, soils, and seismicity would be the reduced compared to those under the Proposed Plan. Policies and Standard Conditions of Approval identified in Section 3.7 would apply to the Alternative. However, some older buildings may be hard to retrofit seismically to the same level of safety as new buildings. With the Proposed Plan policies and Standard Conditions of Approval, project-level and cumulative impacts related to geology, soils, and seismicity under the Historic Preservation Alternative would be less than significant and less than or similar to those of the Proposed Plan.

Hazards and Hazardous Materials

Impacts related to hazards and hazardous materials under the Historic Preservation Alternative would be similar to those of the Proposed Plan because construction and adaptive reuse of existing buildings would have similar risks, associated with the accidental release of hazardous materials, and would be subject to the same site remediation requirements as the Proposed Plan; with higher reuse of buildings, there could be somewhat greater exposure to hazardous materials. As with the Proposed Plan, it is likely that the demolition, or changes to allow adaptive reuse of existing buildings and structures on the site would result in hazardous waste materials, however following the appropriate State and federal regulations on transportation and disposal of hazardous materials would lead to a less than significant impact, with impacts similar to the Proposed Plan.

Hydrology and Water Quality

Similar impacts on hydrology, drainage, and water quality would result from the Historic Preservation Alternative compared with the Proposed Plan because excavation, grading, and demolition would still be required for demolition of existing buildings and new

construction at the site, although those activities would be reduced from the Proposed Plan. However a larger area of the Core Campus would likely remain developed with creek buffers and wildlife corridors maintaining their current areas instead of expanding as in the Proposed Plan. Therefore, the potential impacts under the Historic Preservation Alternative on hydrology, drainage, and water quality would be similar but slightly increased compared to those of the Proposed Plan. With implementation of existing State regulations as well as policies and actions within the Proposed Plan, project-level and cumulative impacts related to hydrology, drainage, and water quality under the Historic Preservation Alternative would be less than significant and increased from impacts under the Proposed Plan.

Land Use and Planning

The Historic Preservation Alternative would focus on less overall development in the Planning Area by reducing affordable housing, maximizing historic preservation, and focusing more on single-family detached residential units than other typologies of residential in order to support the higher costs associated with adaptive reuse of historic buildings, as well as limiting stores, services, and community amenities on the site. Compared to the Proposed Plan (which is consistent with project objectives to support housing development), development under this Historic Preservation Alternative would result in approximately 1,320 fewer new residents, 550 fewer new housing units, and 340 fewer new jobs in the Planning Area by 2040. While the proposed plan would support a vibrant mixed-use area around the Central Green, the Historic Preservation Alternative would likely lack the population density and activity to support shops, restaurants and other commercial destinations, and less funding would be available for community amenities such as a gym, performance space, or meeting space. Improvements to transportation systems would be less likely than under the Proposed Plan as well due to fewer potential transit users living in the area.

Neither the Proposed Plan nor the Historic Preservation Alternative introduce physical barriers that would divide an established community. The Historic Preservation Alternative does not include the connection to Highway 12. Because the Historic Preservation Alternative would retain project objectives related to streetscape design and mobility, both alternatives would additionally implement new policies that enhance the existing street network with a somewhat finer-grained street grid, improved bicycle facilities, and a network of paseos, parks, and open spaces within the Core Campus, although the opportunities for this would be limited in this Alternative due to the increase in historic buildings retained which would limit the possible changes in the streetscape.

Development under both alternatives would be subject to the relevant policies and implementing actions outlined in Section 3.10 to the extent feasible with the reduced development numbers. Policies promoting a vibrant mix of uses and activity center in the core area may not be feasible, as well as Goals 3-B and 3-F and related policies, leading to less regional connectivity at the site. Both alternatives would establish new goals and policies in the Proposed Plan that provide housing for all income levels and household types, although in order to meet the project objective of financial feasibility, the Historic Preservation Alternative would have significantly less housing available for working families, students, seniors, and households with low, very low, and extremely low incomes.

Given that development of a similar character would still occur in the Planning Area, although to a lesser extent and in a smaller area, the Historic Preservation Alternative would have an equivalent impact related to land use, population, and housing compared to the Proposed Plan, which would result in less-than-significant project-level impacts and a less than cumulatively considerable contribution to significant cumulative impacts with implementation of existing State regulations as well as policies and actions within the Proposed Plan.

Noise

The Historic Preservation Alternative would result in less overall development uses compared to the Proposed Plan, leading to less construction activity than the Proposed Plan. This Alternative would involve implementation of all Proposed Plan and County policies related to construction noise control. Therefore, construction noise and vibration impacts under this Alternative would be less than significant and less than the Proposed Plan. Average daily traffic volume on area roadways would be less under this Alternative as compared with the Proposed Plan as well. Therefore, operational roadway noise would be reduced at sensitive receptors located along area roadways; however, some older buildings may not be as noise insulating as new construction. Policies related to noise reduction from the Proposed Plan would still be implemented. Overall, noise and vibration impacts would be less than significant and compliance with County Code provisions would ensure that impacts under this Alternative would be less than significant and reduced or similar to as compared to the Proposed Plan.

Population and Housing

Buildout of the Historic Preservation alternative is projected to result in 1,080 new residents, 450 new housing units, and 600 new jobs, 1,320 fewer residents, 550 fewer housing units and 340 fewer jobs than the Proposed Plan. The proportion of both income-

restricted affordable housing and affordable by design housing in the Historic Preservation Alternative is projected to be less than the Proposed Plan. Therefore, while the Historic Preservation Alternative provides much-needed housing for the Sonoma Valley, and provides affordable housing at the County required minimum proportion, it provides less housing overall and less affordable housing than the Proposed Plan.

The Historic Preservation Alternative would result in 600 jobs, which is much lower than both the historical employment level of 1,365 employees at SDC prior to its closure, as well as jobs to fully balance the projected population, and would thus not induce growth. Additionally, as with the Proposed Plan, all development will occur in already developed areas. The Historic Preservation Alternative would not induce substantial unplanned population growth in the Planning Area and the impact would be less than significant and comparable to the Proposed Plan. However, this Alternative would accommodate a lower proportion of the projected regional growth within the SDC campus, and lead to greater development pressures elsewhere in the region.

Public Services and Recreation

Buildout of the Historic Preservation Alternative would result in 1,320 fewer residents and 340 fewer employees in the Planning Area as compared to the Proposed Plan. Therefore, this Alternative would be expected to generate fewer calls for service and a slightly reduced demand for police, fire and emergency medical services from within the Planning Area. With a lower residential population, demand for school and library services would also be reduced as compared to the Proposed Plan. As such, the less than significant impact of the Proposed Plan with respect to fire, police, school and library services would remain. Buildout of this Alternative would also involve the construction of parks, plazas, and paseos as under the Proposed Plan; the environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR. Detailed design of the new park facilities has not yet been completed, so site specific impacts cannot be evaluated at this time, however all new parks development would adhere to environmental quality policies in the Proposed Plan that establish buffers between development and waterways, require that projects avoid or minimize the introduction of invasive plant species, and work with certified biologists and arborists when projects have the potential to impact significant resources. Therefore, impacts would be less than significant.

Transportation

The Historic Preservation Alternative would result in an estimated population of 1,080 residents, which is less than the Proposed Plan and Historic Preservation Alternative. The estimated employment level is 600 persons, which is also less than the Proposed Plan and equivalent to the Historic Preservation Alternative. The jobs to housing ratio would be approximately 0.56, which is considerably higher than the Proposed Plan's ratio of 0.39. Based on modeling completed in 2021 for the SDC Alternatives analysis, it was noted that the alternative with the highest jobs to housing ratio (Alternative B) resulted in slightly lower home-based work (commute) VMT than the other alternatives. Based on this observation, it appears that a higher jobs-to-housing ratio in the Plan area may lead to slightly less per capita VMT generated by residents. This is likely attributable to a higher proportion of residents in the Plan area being employed near their homes, which translates to lower average commute distances and miles traveled. Accordingly, it is likely that the Historic Preservation Alternative could result in a slightly lower VMT per capita than the Proposed Plan, thereby modestly reducing the significant VMT impact.

The Historic Preservation Alternative is projected to result in approximately 50 percent fewer daily vehicle trips than the Proposed Plan, indicating that the total VMT generated may also be roughly 50 percent lower. As discussed in the Historic Preservation Alternative, this reduction in the total VMT generated by development in the Plan area would be substantial though would not necessarily translate to less residential VMT per capita, which is the efficiency metric for which a significant VMT impact was identified.

The Historic Preservation Alternative includes no new roadway connection to Highway 12, in contrast to the Proposed Plan. Without the new roadway and associated lane miles, there would be no potential for induced travel and VMT associated with increases in roadway capacity. As a result, the significant impact associated with induced VMT would be eliminated. The Historic Preservation Alternative would lessen VMT impacts by eliminating the potential for induced travel and may also modestly reduce the projected residential VMT per capita. While beneficial, these reductions in VMT and VMT per capita would be insufficient to avoid a significant and unavoidable VMT impact.

Utilities and Service Systems

As discussed in Section 3.15: Utilities and Service Systems, there would be sufficient water supply, wastewater treatment capacity, and solid waste disposal capacity to serve development under the Proposed Plan in 2040. The Historic Preservation Alternative would result in less overall development than the Proposed Plan. As such, this Alternative

could reduce the Proposed Plan's less than significant impact further. As with the Proposed Plan, the water demand for this Alternative would be less than the historical water demand and would be well within the supply capacity. As with the Proposed Plan, significant upgrades would be required to the existing utility systems, including stormwater, power and telecommunications, water supply and wastewater. However, as development would be limited within the Core Campus to west of Sonoma Creek, utility systems would not require expansion or upgrading to the east of the creek. Therefore, impacts from the Historic Preservation Alternative would be less than significant with respect to utilities and services systems and reduced compared to the Proposed Plan.

Wildfire

In comparison with the Proposed Plan, the Historic Preservation Alternative has a similar or larger development footprint within the Core Campus, especially in the eastern portion which has some areas of high fire hazard severity and a history of fire. As with the Proposed Plan, the Relevant Policies and Implementing Actions identified in Section 3.16.3.3 will be implemented, ensuring that development in the Planning Area is resilient to the risk of a wildfire. As with the Proposed Plan, impacts from Wildfire are considered less than significant for the Historic Preservation Alternative, although they would be greater than the Proposed Plan. Lack of Highway 12 direct access may also lead to slightly longer evacuation time in certain scenarios.

4.5 Environmentally Superior Alternative

The CEQA Guidelines Section 15126.6 requires the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. If the No Project Alternative is identified as the environmentally superior alternative, the guidelines require another environmentally superior alternative to be identified.

Table 4.5-1 summarizes the alternatives' overall environmental impacts for each topic presented in Section 4.4. For the Proposed Plan, two impacts are expected to be significant and unavoidable, and 60 impacts were expected to be less than significant. The Reduced Development Alternative, No Project Low Development Alternative, and No Project High Development Alternative have the same outcomes of significance. The Historic Preservation Alternative would also have similar outcomes, except with less than significant historic resources impacts. Overall, the Historic Preservation Alternative is the environmentally superior alternative, although significant impacts of the Proposed Plan and the two alternatives are largely comparable, and the Historic Preservation Alternative

would be less superior in some environmental features such as energy use, biological resources, and wildfire risks. Additionally, this alternative would not support key project objectives related to increased housing supply, varied housing opportunities, community vibrancy, and long-term fiscal stability to the same degree as the Proposed Plan.

The Proposed Project fulfills the project objectives most completely, including providing greater levels of housing including affordable housing, and superior financial feasibility, with overall environmental impacts that are largely comparable between the Proposed Plan and the alternatives, with the exception of greater preservation of historic resources in the Historic Preservation Alternative.

Table 4.5-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>				
	<i>Proposed Plan</i>	<i>No Project: Low Development</i>	<i>No Project: High Development</i>	<i>Reduced Development Alternative</i>	<i>Historic Preservation Alternative</i>
3.1 Aesthetics					
3.1-1 Scenic Vistas	LTS	LTS, -	LTS, =	LTS, -	LTS, -
3.1-2 Scenic Highways	LTS	LTS, =	LTS, =	LTS, =	LTS, -
3.1-3 Visual Character	LTS	LTS, =	LTS, =	LTS, =	LTS, -
3.1-4 Light and Glare	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.1 Agriculture and Forestry Resources					
3.2-1 Conversion of Farmland	NI	NI, =	NI, =	NI, =	NI, =
3.2-2 Rezoning of Agricultural Land	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.2-3 Rezoning of Forest Land	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.2-4 Loss of Forest Land	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.2-5 Conversion of Farm of Forest Land	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.3 Air Quality					
3.3-1 Air Quality Plan	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.3-2 Air Quality Standard	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.3-3 Sensitive Receptors	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.3-4 Odors	LTS	LTS, -	LTS, +	LTS, -	LTS, -

Table 4.5-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>				
	<i>Proposed Plan</i>	<i>No Project: Low Development</i>	<i>No Project: High Development</i>	<i>Reduced Development Alternative</i>	<i>Historic Preservation Alternative</i>
3.4 Biological Resources					
3.4-1 Special-Status Species	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.4-2 Sensitive Habitat	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.4-3 Wetlands	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.4-4 Wildlife Corridors	LTS	LTS, -	LTS, +	LTS, -	LTS, +
3.4-5 Policies and Ordinances	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.4-6 HCPs	NI	NI, =	NI, =	NI, =	NI, =
3.5 Cultural, Historic, and Tribal Resources					
3.5-1 Historic Resources	LTS	LTS, +	LTS, +	LTS, +	LTS, -
3.5-2 Historic District	SU	SU, +	SU, +	SU, +	LTS, -
3.5-3 Archaeological Resources	LTS	LTS, =	LTS, +	LTS, =	LTS, =
3.5-4 Human Remains	LTS	LTS, =	LTS, +	LTS, =	LTS, =
3.5-5 Tribal Cultural Resources	LTS	LTS, =	LTS, +	LTS, =	LTS, =
3.6 Energy, Climate Change, and GHG Emissions					
3.6-1 Wasteful Energy Consumption	LTS	LTS, -	LTS, =	LTS, -	LTS, =
3.6-2 Energy Efficiency Standards	LTS	LTS, =	LTS, =	LTS, =	LTS, +

Table 4.5-1: Summary of Impacts for Alternatives

Impact	Level of Significance				
	Proposed Plan	No Project: Low Development	No Project: High Development	Reduced Development Alternative	Historic Preservation Alternative
3.6-3 GHG Emissions	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.6-4 Reducing Emissions	LTS	LTS, -	LTS, +	LTS, -	LTS, =
3.7 Geology, Soils, and Mineral Resources					
3.7-1 Seismic Hazards	LTS	LTS, =	LTS, =	LTS, =	LTS, +
3.7-2 Soil Erosion	LTS	LTS, =	LTS, =	LTS, =	LTS, -
3.7-3 Expansive or Unstable Soils	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.7-4 Septic Systems	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.7-5 Paleontological Resources	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.7-6 Mineral Resources	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.8 Hazards and Hazardous Materials					
3.8-1 Transport, Use, or Disposal	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.8-2 Accidental Upset	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.8-3 Quarter Mile of Schools	NI	NI, =	NI, =	NI, =	NI, =
3.8-4 Cortese List	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.8-5 Airport Hazards	NI	NI, =	NI, =	NI, =	NI, =
3.8-6 Emergency Response	LTS	LTS, =	LTS, =	LTS, =	LTS, =

Table 4.5-1: Summary of Impacts for Alternatives

	<i>Level of Significance</i>				
<i>Impact</i>	<i>Proposed Plan</i>	<i>No Project: Low Development</i>	<i>No Project: High Development</i>	<i>Reduced Development Alternative</i>	<i>Historic Preservation Alternative</i>
3.8-7 Wildland Fires	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.9 Hydrology and Water Quality					
3.8-1 Water Quality Standards	LTS	LTS, -	LTS, =	LTS, -	LTS, =
3.8-2 Groundwater	LTS	LTS, -	LTS, +	LTS, -	LTS, +
3.8-3 Drainage	LTS	LTS, -	LTS, +	LTS, -	LTS, +
3.8-4 Flooding	LTS	LTS, -	LTS, +	LTS, -	LTS, =
3.8-5 Water Quality Control Plan	LTS	LTS, -	LTS, +	LTS, -	LTS, =
3.10 Land Use and Planning					
3.9-1 Division of a Community	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.9-2 Conflict with Land Use Plan	LTS	LTS, =	LTS, =	LTS, =	LTS, =
3.11 Noise					
3.11-1 Noise Standards	LTS	LTS, -	LTS, +	LTS, -	LTS, =
3.11-2 Vibration	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.11-3 Airports	NI	NI, =	NI, =	NI, =	NI, =
3.12 Population and Housing					
3.12-1 Growth Inducement	LTS	LTS, +	LTS, -	LTS, +	LTS, +

Table 4.5-1: Summary of Impacts for Alternatives

Impact	Level of Significance				
	Proposed Plan	No Project: Low Development	No Project: High Development	Reduced Development Alternative	Historic Preservation Alternative
3.12-2 Displacement	NI	NI, =	NI, =	NI, =	NI, =
3.13 Public Services					
3.13-1 Fire, Police, Schools, Parks, and Public Facilities	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.13-2 Degradation of Parks	LTS	LTS, -	LTS, =	LTS, -	LTS, -
3.13-3 Construction or Expansion of Recreational Facilities	LTS	LTS, -	LTS, =	LTS, -	LTS, -
3.14 Transportation					
3.14-1 Circulation System Plan	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.14-2 VMT	SU, CC	SU, CC -	SU, CC +	SU, CC -	SU, CC -
3.14-3 Traffic Hazards	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.14-4 Emergency Access	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.15 Utilities and Service Systems					
3.15-1 Facilities	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.15-2 Water Supply	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.15-3 Wastewater Capacity	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.15-4 Landfill Capacity	LTS	LTS, -	LTS, +	LTS, -	LTS, -

Table 4.5-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>				
	<i>Proposed Plan</i>	<i>No Project: Low Development</i>	<i>No Project: High Development</i>	<i>Reduced Development Alternative</i>	<i>Historic Preservation Alternative</i>
3.15-5 Solid Waste Regulations	LTS	LTS, -	LTS, +	LTS, -	LTS, -
3.16 Wildfire					
3.16-1 Emergency Response Plan	LTS	LTS, -	LTS, +	LTS, -	LTS, +
3.16-2 Wildfire Risks	LTS	LTS, -	LTS, +	LTS, -	LTS, +
3.16-3 Infrastructure Maintenance	LTS	LTS, -	LTS, +	LTS, -	LTS, -

Notes:

LTS = Less than Significant

LTSM = Less than Significant with Mitigation

NI = No Impact

SU = Significant and Unavoidable

CC = Cumulatively Considerable

+/- = impact of the alternative is greater than, less than, or similar to the impact of the Proposed Plan

5 CEQA Required Conclusions

CEQA Required Conclusions

This chapter presents a summary of the impacts of the Proposed Plan in several subject areas specifically required by CEQA, including growth-inducing impacts, cumulative impacts, significant and unavoidable impacts, and significant irreversible environmental changes. These findings are based, in part, on the analysis provided in Chapter 3: Environmental Settings and Impacts.

5.1 Growth-Inducing Impacts

CEQA Guidelines require that an EIR “[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly” (CEQA Guidelines Section 15126.2(e)). This analysis must also consider the removal of obstacles to population growth, such as improvements in the regional transportation system.

Growth-inducing impacts, such as those associated with job increases that might affect housing and retail demand in surrounding jurisdictions over an extended time period, are difficult to assess with precision, since future economic and population trends may be influenced by unforeseeable events such as business development cycles and natural disasters. Moreover, long-term changes in economic and population growth are often regional in scope; they are not influenced solely by changes or policies related to a single city or development project, particularly in a highly urbanized region such as the San Francisco Bay Area. Business trends are influenced by economic conditions throughout the state and country, as well as around the world.

Another consideration is that the creation of growth-inducing potential does not automatically lead to growth. Growth occurs through capital investment in new economic opportunities by the private or public sector. These investment patterns reflect, in turn, the desires of investors to mobilize and allocate their resources to development in particular localities and regions. These factors, combined with the regulatory authority of local governments, mediate the growth-inducing potential or pressure created by a proposed plan. Despite these limitations on the analysis, it is still possible to qualitatively assess the general potential growth-inducing impacts of the Proposed Plan.

5.1.1 Projected Growth

The Proposed Plan is intended to foster residential, office, institutional, and commercial uses in a walkable setting within the Core Campus of the Planning Area, a previously-developed area located in southern Sonoma Valley in Sonoma County. The site has been identified as an appropriate location for new uses by the State of California through changes to the California Government Code. The area where proposed habitable uses are located is developed with existing buildings, roads, utilities, and other infrastructure, some of which may be replaced.

5.1.1.0 Population

While the Planning Area currently has no residents, historically SDC was home to over 3,500 patients. With the Proposed Plan, the Planning Area would accommodate a total population of approximately 2,400 people.

Although the population within the Planning Area is projected to increase substantially from its current largely vacant state, the Proposed Plan is consistent with the overarching regional need for both market rate and affordable housing in the Sonoma Valley and throughout the Bay Area. As outlined in Section 3.12: Population and Housing, for the county overall in 2020, the population of unincorporated Sonoma County was approximately 134,570 and the entire Sonoma County population was approximately 488,863.¹⁴³ Between 2010 to 2020, the unincorporated County's population decreased by about 7.2 percent from 145,079 residents.¹⁴⁴ However, for the same period, the entire County's population increased by about 1.3 percent from 483,878. Between 2020 and 2040, the unincorporated County's population is projected to increase by approximately 19.0 percent, while the entire County's population is projected to increase by

¹⁴³ California Department of Finance. May 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2022. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

¹⁴⁴ California Department of Finance. May 2022. E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Available: <https://dof.ca.gov/forecasting/Demographics/estimates/>. Accessed: June 1, 2022.

approximately nine percent.¹⁴⁵ As the population in the Sonoma County increases, so will the demand for housing, especially affordable housing. The SDC site represents an opportunity to provide housing for some of the projected population growth that the County and the Valley will likely experience over the planning period.

Table 5.1-1: Planning Area Population, Housing, and Job Growth Projections, 2020–2040

	<i>Historical (1960)¹</i>	<i>Existing (2022)</i>	<i>Total Projected with Proposed Plan (2040)</i>
Population	~3,700	0	2,400
Housing Units	N/A	0	1,000
Jobs	~1,900	<50	940

¹ Source: California Department of Developmental Services

5.1.1.1 Increase in Regional Housing Demand

The SDC has facilities that housed up to 3,700 clients. These are not in use and in various stages of disrepair. As outlined in Section 3.12, in 2020 there were 61,691 housing units in unincorporated Sonoma County and 204,742 in the entire County. Between 2010 and 2020, the unincorporated County's housing stock decreased by nearly nine percent from 67,967 housing units. This decrease in housing units is likely due either to annexations of land previously in the unincorporated county into various incorporated cities in Sonoma County or destruction from either the 2017 Sonoma Complex Fires, 2019 Kincade Fire, the Glass Fire of 2020, or the LNU Lightning Complex Fires of 2020. The entire County's housing stock remained nearly the same, at 204,572 housing units in 2010. As of 2020, Sonoma County has a high demand for housing and with the stagnation of growth of the housing stock, demand for housing in the county and especially the unincorporated county is only likely to increase.

¹⁴⁵ California Department of Finance. May 2022. P-2: County Population Projections (2010-2060). Available: <https://dof.ca.gov/forecasting/Demographics/projections/>. Accessed: June 1, 2022.

5.1.1.2 Jobs/Housing Ratio

A desirable jobs-to-housing ratio is often defined as a ratio greater than 1.0 but less than 2.0. Because most households have more than one wage earner, ratios below 1.0 suggest that residents are required to commute to jobs outside of their area of residence, and ratios greater than 2.0 suggest that employers are not able to house their workers within the jurisdiction, requiring workers to commute into the area. Theoretically, a balanced jobs-to-housing ratio would reduce the need for people to commute in or out of the area for work. In reality, the match of education, skills, and interests is not always accommodated within the boundaries of one community, and regional interdependencies almost always result in at least some inter-city commuting. As outlined in Section 3.12, there is more housing than jobs in Alameda, Contra Costa, Solano, and Sonoma counties, while there are more jobs than housing in Marin, Napa, San Francisco, San Mateo, and Santa Clara counties.

Historically, SDC was one of the largest employers in the County and the largest in Sonoma Valley. Based on the estimated buildout of the Proposed Plan, the jobs-to-housing balance in the planning area in 2040 would be about 0.94 in 2040, as shown in Table 5.2-2: Jobs-to-Housing Unit Ratio. Given that Sonoma County is short on jobs relative to employed residents, the modest addition of jobs, which would still be much less than the projected housing growth at SDC will not be growth inducing.

Table 5.1-2: Jobs-to-Housing Unit Ratio (2020 and 2040)

	2020	2040 (with Proposed Plan)
Jobs		
Planning Area	<50	940
Unincorporated Sonoma County	55,555 ¹	62,535 ²
Housing Units		
Planning Area	0	1,000
Unincorporated Sonoma County	61,961 ²	69,765 ²
Jobs to Housing Unit Ratio		
Planning Area	N/A	0.94
Unincorporated Sonoma County	0.90	0.90

Sources: (1) California Department of Finance, 2022; (2) Association of Bay Area Governments, 2017

5.1.1.3 Public Services and Recreation

Public services for the Planning Area, including police, fire protection, schools, and parks and recreation, are currently provided by the Sonoma County Sheriff's Office, the Eldridge Fire Department, the Sonoma Valley Unified School District (SVUSD), and the Sonoma Valley Regional Parks Department respectively. Development under the Proposed Plan would be in compliance with all applicable codes for fire safety and emergency access. The Eldridge Fire Department continues to operate independently, and it is anticipated that future services will still be provided in coordination with neighboring Sonoma County fire districts including Sonoma Valley Fire and Rescue Authority, Mayacamas Volunteer Fire Department, and Kenwood Fire Protection District, with which the Eldridge Fire Department has automatic aid agreements. The SVUSD is projected to have capacity at nearby schools to accommodate all of the projected population growth that will occur in the Planning Area.

As future buildout occurs under the Proposed Plan, the County will evaluate operations and deployment of services to efficiently use resources, ensure sufficient staffing to serve all new development and associated population growth in the Planning Area, and monitor the need for new facilities or additional equipment needed to provide adequate public services to future and existing residents.

5.1.2 Direct and Indirect Growth

As described above, the Proposed Plan facilitates redevelopment of the SDC campus, and this direct growth is analyzed throughout this EIR. Impacts from direct growth on infrastructure such as public services and utilities, the transportation system, and natural resources are identified, based on the buildout of the Proposed Plan. Some of the identified effects of growth are significant and unavoidable, even though development will be limited to the extent of existing urban development. Because of the programmatic nature of the Specific Plan, some aspects of future development under the Proposed Plan would be subject to additional site-specific environmental review under CEQA, with tiering and streamlining opportunities as provided for under State law.

Indirect growth can result from the construction of infrastructure, such as the extension of utilities or the construction of new roadways connecting urban centers to green field areas. In such cases, this extension of infrastructure to serve one property can facilitate the subsequent development of other intervening properties, effectively inducing additional growth indirectly. Such infrastructure in the Proposed Plan could include the SR 12

connector road and new water supply infrastructure. Given that the Specific Plan designates the hundreds of acres of land surrounding the Core Campus as Preserved Open Space with no opportunity for urban development, the potential for this type of indirect growth does not exist.

Additionally, while the availability of new jobs in the Planning Area may invite some people to move to the Planning Area or adjacent jurisdictions, the number of jobs projected at the Plan buildout are modest relative to the housing provided and to the number of jobs that previously existed at the site. Sonoma County itself has an extensive shortage of housing, with a recent report terming the shortage as a “crisis”.¹⁴⁶ The Vehicle Miles Traveled (VMT) Analysis conducted for the project shows that work-based VMT will be reduced from present conditions and will be below the threshold of significance; thus, employment growth at SDC will not be growth inducing. Residential growth at SDC will help to meet the housing demand in the County that currently exists, rather than induce new growth. Development of the Proposed Plan would involve construction activities that could generate some temporary employment opportunities. However, given the temporary nature of such opportunities, and given the relatively long period of time over which all phases of the Proposed Plan would be constructed, it may be unlikely that construction workers would relocate to the SDC site as a result of the Proposed Project.

5.2 Cumulative Impacts

CEQA requires that an EIR examine cumulative impacts. As discussed in CEQA Guidelines Section 15130(a)(1), a cumulative impact “consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” Furthermore, the analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall “reflect the severity of the impacts and their likelihood of occurrence.” (CEQA Guidelines Section 15130(b)).

In order to assess cumulative impacts, an EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted general

¹⁴⁶ Generation Housing. January 2022. The State of Housing in Sonoma County. Available: https://generationhousing.org/wp-content/uploads/2022/02/2022_Feb_SOH_Sonoma-County.pdf. Accessed: July 29, 2022.

plan or related planning document. The Proposed Project represents the cumulative development scenario for the reasonably foreseeable future in the Planning Area under the County's General Plan. This future scenario incorporates the likely effects of surrounding regional growth.

Several analyses presented in Chapter 3: Environmental Settings and Impacts represent cumulative analyses of issues through the Proposed Plan horizon year of 2040 because they combine the anticipated effects of the Proposed Plan with anticipated effects of regional growth and development. For example, the transportation analysis factors is not just traffic generated by the Proposed Plan, but cumulative traffic that will result in the area and the region in 2040. Greenhouse gas emissions and operational noise analysis are based on traffic modeling results. By their nature, transportation, energy and greenhouse gas emissions, and climate change analyses presented in Chapter 3 represent a cumulative analysis, because the effects specific to the Proposed Plan cannot reasonably be differentiated from the broader effects of regional growth and development. Thus, analyses for these topics reflect not just growth in the Planning Area, but growth elsewhere in the region as well. The cumulative conclusions are summarized there, and where applicable, significant unavoidable impacts are listed in Section 5.3, Significant and Unavoidable Impacts. Other cumulative impacts are identified below.

5.2.1 Aesthetics

The cumulative geographic context for aesthetics is the Planning Area as well as view corridors, view sheds, or scenic resources in the immediate vicinity and visible from the Planning Area.

The scenic resources in the Planning Area and immediate vicinity include the views of the hillside area and open space to the east and west of the Planning Area, Suttonfield and Fern lakes, and the historic built environment of the former SDC facility. Highway 12, which comprises the eastern edge of the Planning Area, is also a Caltrans-designated scenic highway. A significant cumulative impact would result if development facilitated in the Planning Area in combination with other development in the vicinity blocked or substantially degraded these views. Development in the Planning Area's vicinity would occur in the neighboring communities directly north and south of the Planning Area in unincorporated Sonoma County and would be regulated by the Sonoma County General Plan. The Sonoma County General Plan designates Arnold Drive and Highway 12 as Scenic Corridors where 200 feet on either side of these roads are subject to development

restrictions and design criteria, and the westernmost portion of the Planning Area nearest to Sonoma Mountain is designated as a Scenic Landscape Unit within which uses are limited to agricultural or resource. The General Plan also designates surrounding areas predominantly for low-density single family residential use. Therefore, foreseeable development in these areas are not likely to result in structures tall enough to block scenic views and vistas. New development within the Planning Area would be in the existing urbanized area (the Core Campus). New structures are subject to height restrictions (as set by the Development Standards in the Land Use chapter of the Proposed Plan), and the Proposed Plan largely maintains the overall maximum existing building height levels, with structures oriented along the existing street network. Future development in the Planning Area would be required to conform with such design standards and policies within the Proposed Plan in addition to and the Sonoma County General Plan, which would further minimize visual intrusion, support visual and physical access to scenic vistas and open space, and assist in reducing obstructions of view of the scenic vistas associated with the open space areas of the region while improving the aesthetic character of the Planning Area. Therefore, impacts on scenic resources, including the Highway 12 scenic highway, would be less than significant.

Implementation of the Proposed Plan in combination with other development in the vicinity would introduce new sources of light within the cumulative geographic context, including light spillover from buildings, outdoor security lights, lighted signs, streetlights, and vehicle headlights, in addition to glare produced by reflective surfaces and unshielded equipment. A significant impact would occur if these new sources of light had an adverse impact on day and nighttime views in the area. The Planning Area is in the rural Sonoma Valley and since most of the existing buildings are currently vacant, sources of light and glare are minimal and can be primarily attributed to automobile headlights and pedestrian streetlight fixtures within the Core Campus. Therefore, the additional light and glare created under the Proposed Plan through new development, a Highway 12 connector, and increased traffic would illuminate currently dark or unlit areas without reflective or glaring surfaces. However, proposed policies 5-32, 5-39, and 5-43 would maintain a buffer of vegetation in order to buffer lights to protect wildlife within the preserved open space areas and implement dark-sky requirements for all public realm lighting and all new buildings on the site. Future development within Sonoma County, including the Planning Area and its immediate vicinity, would be required to adhere to the relevant standards on light and glare in the California Building Code and the design criteria for signage in Section 26-82-030 of the Sonoma County Code. Given that the Proposed Plan would need to conform to both proposed and existing standards regulating light and glare, and that all development in

the area would be regulated by design standards and code restrictions, the cumulative impact of the Proposed Plan on light and glare would be less than significant.

Development under the Proposed Plan would be consistent with applicable policies and standards for new development as well as regulations governing scenic quality in the urbanized area, including the Sonoma County Code and Sonoma County General Plan. Impacts from the Proposed Plan, in conjunction with other plans and projects in the region, that could conflict with existing zoning or other regulations which govern scenic quality are not cumulative in nature.

5.2.2 Agriculture and Forestry Resources

The cumulative geographic context for agriculture and forestry resources is the Planning Area. While the Planning Area contains historical grazing land and farmland of local importance, it does not include any prime farmland or farmland of statewide importance. Agricultural and forestry resources will both be increased on the site with the addition of the Agrihood and the expansion of the creek and wildlife buffers on the east and north in the Proposed Plan. Relevant policies and implementing actions in the Proposed Plan encourage the creation of an agricultural neighborhood, and ensure protection of the existing forestry resources at the site, reducing potential for negative impacts due to development. Additionally, development resulting from the Proposed Plan, as well as future development projects that could occur within the Planning Area or in the vicinity of the Planning Area, would be required to comply with Sonoma County General Plan goals and objectives and Sonoma County Zoning Regulations discussed in Section 3.2.1.3 which provide protections for local oak woodlands and agricultural resources.

With implementation of the relevant policies and implementing actions, the Proposed Plan's contribution to cumulative agricultural and forestry resources impacts would be less than cumulatively considerable.

5.2.3 Air Quality

The Bay Area Air Quality Management District (BAAQMD) has identified project-level thresholds to evaluate criteria pollutant impacts (Table 3.3-6). In developing these thresholds, BAAQMD considers levels at which project emissions are cumulatively considerable. As noted in BAAQMD's CEQA guidelines (2017), in developing thresholds

of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

BAAQMD's project-level thresholds do not lend themselves well to the analysis of specific plans. Rather, it is more appropriate to evaluate planning-level documents for their consistency with the most recently adopted air quality attainment plan, which is the 2017 Clean Air Plan for the SFBAAB (San Francisco Bay Area Basin). As discussed under Impact 3.3-1, the Proposed Plan would support the goals of BAAQMD's 2017 Clean Air Plan, include all applicable control measures, and would not conflict with its implementation. The Proposed Plan's objectives and principles would ultimately reduce the severity of growth-oriented criteria pollutants, relative to conditions without the Proposed Plan. As described in Section 5.1.1: Projected Growth, the Proposed Plan includes a fairly limited level of development relative to the region, and as discussed and modeled in Impact 3.3-2, the Proposed Plan would have a less-than-significant impact on air quality with respect to ROG, NO_x, PM₁₀, and PM_{2.5}. As required by Standard Conditions of Approval policy AQ-1, individual development projects would be required to meet all BAAQMD regulations and ensure that they do not exceed project-level thresholds for criteria air pollutants. Further, development in the surrounding context of the Proposed Plan would be subject to Sonoma County General Plan policies including OSRC-16a (requiring projects be designed to minimize air emissions), OSRC-16c (refer projects to the local air quality districts for review), and OSRC-16e (cooperate with local air quality district to monitor air pollution). Therefore, proposed policies and existing State and regional regulations would ensure that future development would not lead to cumulatively considerable criteria air pollutant emissions, and the impact would be less-than-significant.

According to the BAAQMD's guidelines, combined risk levels should be determined from all nearby sources of toxic air contaminants (TACs) within 1,000 feet of a project site, and these combined risk levels should be compared to the BAAQMD's cumulative health risk thresholds. As discussed in Impact 3.3-3, there are no sensitive receptors within the Planning Area and new TAC sources are not proposed by the Proposed Plan, and existing sensitive receptors or TAC sources within 1,000 feet of the Planning Area include the existing residential area just south of the Planning Area boundary and Highway 12 (see Figure 3.3.-1). Impact 3.3-3 describes how existing State and BAAQMD regulations as well as Sonoma County General Plan policies would apply to both the Proposed Plan and related projects within the geographic context such that future development would not

individually result in a significant impact with respect to TAC exposure, and thereby, would be a less-than-significant cumulatively considerable impact.

As discussed above under Impact 3.3-3, a quantitative evaluation of potential health risk impacts for the Proposed Plan is not possible.

5.2.4 Biological Resources

The biological cumulative geographic context for biological resources is the County of Sonoma. While the Planning Area retains a large amount of natural habitat and land suitable for sensitive and special status species, future development within the Planning Area will be limited in its footprint and will be reduced from the existing conditions. Creek buffers and riparian corridors will be expanded from the current boundaries, and key pinch points for wildlife movement will be re-naturalized, increasing the ability of wildlife to move more freely through the site. However, despite the reduced development footprint, an increase in residential development and employment uses at the site has the potential to create conflicts with wildlife and sensitive species, and to have significant impacts on biological resources. Relevant policies and implementing actions in the Proposed Plan reduce the potential for negative impacts to biological resources through limitations on lights, fencing and other development, mowing, and recreational activities in key areas of habitat and wildlife movement, as well as by regulating the design and management of the developed area to reduce conflicts with wildlife. Additionally, development resulting from the Proposed Plan, as well as future development projects that could occur within the Planning Area or in the vicinity of the Planning Area, would be subject to the requirements of biological resource protection laws, including FESA, CESA, MBTA, and the California Fish and Game Code, as well as protection policies and provisions in the City's 2040 General Plan and Municipal Code.

With implementation of the relevant policies and implementing actions, the Proposed Plan's contribution to cumulative biological resources impacts would be less than cumulatively considerable.

5.2.5 Cultural, Historic and Tribal Resources

The cumulative geographic context for cultural, historic, and tribal cultural resources is the County of Sonoma. If the Proposed Plan, in combination with other past, present, and

reasonably foreseeable projects in Sonoma County, would result in the loss of or adverse changes to multiple historic or cultural resources a significant cumulative impact could result. However, as described in Section 3.5, the relevant policies and implementing actions included in the Proposed Plan provide a framework for the preservation of cultural and historic resources at the site. At the time development or redevelopment projects are proposed during implementation of the Proposed Plan, any project-level CEQA document would need to identify potential impacts on known or potential historic sites and structures. Such project-level review in combination with the Proposed Plan policies outlining the recommended and required preservation of historical resources within the Planning Area would ensure that the Proposed Plan's incremental contribution to this impact would not be cumulatively considerable.

No archaeological resources are known to be present in the Planning Area, but there are sites in the Planning Area that may be sensitive for unrecorded resources, most notably anywhere that has been under occupation or use for at least 45 years. Anticipated development projects under the Proposed Plan may involve grading, excavation, or other ground-disturbing activities, which could have a cumulative impact on unknown archaeological resources. However, compliance with Proposed Plan policies and implementing actions, as well as applicable local, State, and federal laws, would ensure that the Proposed Plan's contribution to this impact would not be cumulatively considerable.

All development projects allowed under the Proposed Plan would be required to comply with State laws pertaining to the discovery of human remains and disposition of Native American burials; therefore, the Proposed Plan would result in a less than cumulatively considerable contribution to impacts related to human burials.

There are known Native American tribal cultural resources within the Planning Area, and development projects allowed under the Proposed Plan may result in the identification of unrecorded tribal cultural resources given the historic occupation of the area. Future projects that would not otherwise qualify for an exemption under CEQA would be required to comply with the provisions of AB 52 to incorporate tribal consultation into the CEQA process. Therefore, the Proposed Plan's contribution to this impact would not be cumulatively considerable.

5.2.6 Energy and GHG Emissions

Construction and operation of the Proposed Plan would result in the consumption of energy resources. However, as discussed in Impact 3.6-1 and summarized by Table 3.6-2, the Proposed Plan would result in an overall decrease in operational energy consumption, especially on a per service population basis, due to significant reductions in mobile sources (gasoline and diesel fuel) as a product of increased diversity of land uses, focus on non-automobile transportation connectivity, and increasing State standards for fuel economy (e.g., EO N-79-20, Pavley standards). In addition, development under the Proposed Plan would be required to meet CALGreen Tier 2 standards of building energy efficiency as well as seek to utilize on-site energy sources that would also reduce energy demand. This projection is in line with the expected decline in energy use (see regulatory and environmental settings in Section 3.6). As discussed in Impact 3.6-2, the Proposed Plan would thus support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy – reinforcing that the Proposed Plan would not result in cumulatively considerable impact with respect to wasteful, inefficient, or unnecessary consumption of energy resources.

By their nature, the greenhouse gas emissions impacts analyzed in Chapter 3 represent a cumulative analysis, because the effects specific to the Proposed Plan cannot reasonably be differentiated from the broader effects of regional growth and development. Thus, analyses for these topics reflect not just growth in the Planning Area, but growth elsewhere in the region as well. Please see Section 3.6 for a discussion of cumulative impacts associated with GHG emissions.

5.2.7 Geology, Soils, and Mineral Resources

The cumulative geographic context for geology and soils consists of sites within the Planning Area and nearby properties in the immediate vicinity. Although regional geographies can be similar, in general, geology and soils impacts do not typically combine such that a larger geographic context would be involved. Depending on subsurface conditions, slopes, and other factors, each cumulative project would require different levels of grading, cut-and-fill, and excavation. In addition, each cumulative project would be required to comply with general plan, Proposed Plan, and California Building Standards Code requirements. The standards presented in these documents require that a site-specific geotechnical investigation be prepared which would include design

recommendations to reduce each cumulative project's impacts. Similar seismic safety standards would apply to the cumulative projects. For these reasons, project building under the Proposed Plan, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on geology and soils. Therefore, no significant cumulative impact exists in the geographic context for geology, soils, and seismicity.

All significant paleontological resources are unique and nonrenewable resources. Unlike archaeological resources, which are site-specific, paleontological resources can occur throughout a sensitive geologic unit, regardless of location. Therefore, the geographic context for paleontological resources encompasses the complete extent of geologic units with high or undetermined paleontological sensitivity that underlie the Plan Area. It is likely that significant paleontological resources in these geologic units have been and could in future be destroyed by development. Therefore, a cumulative impact on paleontological resources in the geographic context exists.

Past development in the geographic context has removed the upper layers of this geologic unit in some areas and replaced it with artificial fill. While the Proposed Plan would not directly involve ground-disturbing activities that could damage or destroy unique paleontological resources, it would enable development that would involve ground disturbance. This future development, in combination with other foreseeable development in the identified geographic context, has the potential to encounter and damage or destroy previously unknown paleontological resources during both construction and operation. However, compliance with Standard Condition of Approval GEO-3 would avoid any project-level impacts on paleontological resources. Therefore, the contribution of the Proposed Plan to the cumulative impact on paleontological resources would not be cumulatively considerable.

5.2.8 Hazards and Hazardous Materials

The cumulative geographic context for hazards and hazardous materials consists of sites within the Planning Area and nearby properties in the immediate vicinity. In general, only projects occurring in the immediate vicinity to the Planning Area are considered due to the limited potential impact area associated with the release of hazardous materials into the environment. Similar to sites within the Planning Area, reasonably foreseeable projects in the Proposed Plan's surroundings could result in construction impacts related to the routine transport, disposal, or handling of hazardous materials; intermittent use and

transport of petroleum-based lubricants, solvents, and fuels; and transport of affected soil to and from sites. However, the handling and transportation of hazardous materials by all projects (including projects within the Planning Area) would be regulated under federal, state and local authority and no significant cumulative impact would occur. Furthermore, hazardous waste generated during construction of any project would be collected, properly characterized for disposal, and transported in compliance with regulations such as the ones described under the Regulatory Setting in Section 3.8. In addition, impacted sites under development would undergo remediation under oversight of applicable state and local agencies, effectively reducing the amount of contaminants found in the cumulative project area. Hazardous materials are strictly regulated by local, state, and federal laws. Specifically, these laws are designed to ensure that hazardous materials do not result in a gradual increase in toxins in the environment. For each of the reasonably foreseeable projects under consideration, various project-specific measures (such as the ones identified for the Proposed Plan) would be implemented as a condition of development approval to mitigate risks associated with exposure to hazardous materials. For these reasons, the Proposed Plan, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative hazards or hazardous materials impact. Cumulative impacts related to the hazard of wildfire are addressed in 5.3.16 below.

5.2.9 Hydrology and Water Quality

The context for surface hydrology and water quality is the southern Sonoma Valley. The context for groundwater hydrology is the Sonoma Valley Groundwater Sub-basin. Thus, overall, the cumulative geographic context for cumulative hydrology and water quality impacts is geographic and a function of whether impacts could affect surface water features/watersheds, the County's storm drainage system, or groundwater resources, each of which has its own physical boundary. Future development in the geographic context for hydrology and water quality would be required to comply with regulations and policies including NPDES Construction General Permit adopted by the SWRCB; San Francisco Bay RWQCB's NPDES permit and Waste Discharge Requirements for MS4 discharges; Sustainable Groundwater Management Act; and local Sonoma County municipal codes. For these reasons, under the Proposed Plan, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on hydrology and water quality.

The Sonoma Creek watershed is predominantly open space aside from the already developed Core Campus of SDC. Potential growth in the watershed would likely not degrade water quality as the Proposed Plan reduces the footprint of development and increases the creek buffers and open space. Policies in the Proposed Plan ensure that new development will replace already existing impervious surfaces with pervious surfaces both through removal of development and renaturalization and through replacement of impervious pavement with pervious pavement in areas that will remain developed. All new development is required to handle stormwater in a manner that ensures that flood flows will not increase or be redirected to other areas. Similar to the Proposed Plan, all future development in the geographic context for hydrology and water quality would be required to Sonoma County General Plan Policies and local municipal codes related to protecting water resources. Therefore, the contribution of the Proposed Plan to the cumulative impact on hydrology and water quality would not be cumulatively considerable.

5.2.10 Land Use and Planning

The cumulative context for land use is the County of Sonoma. Projects that could have the effect of physically dividing an established community—such as a major new road, highway, or similar infrastructure—tend to have a singular rather than cumulative impact. However, a significant impact could occur if new development in the Planning Area in combination with foreseeable development in Sonoma County physically divided an established community. The Proposed Plan would not introduce any physical barriers to the Planning Area and would generally improve connectivity for all users by introducing a new connection to Highway 12, additional local roads within SDC, and improving local and regional bicycle and pedestrian connectivity. It will not have any impacts relating to dividing any nearby communities such as Glenn Ellen and Eldridge. Therefore, the cumulative impact of the Proposed Plan on the division of an existing community would be less than significant.

Impacts from plans and projects in the region that could conflict with existing plans, including the Sonoma County General Plan, are not cumulative in nature. Therefore, given that the Proposed Plan is consistent with the General Plan's goals for the Planning Area and includes provisions to update the General Plan and Zoning Ordinance consistent with State law in order to ensure consistency. Therefore, the contribution of the Proposed Plan to the cumulative impact on land use and planning would not be cumulatively considerable.

5.2.11 Noise

The cumulative geographic context for noise and vibration is the Planning Area and the immediate vicinity. The noise analysis represents cumulative analyses of issues through the Proposed Plan because it combines the anticipated effects of the Proposed Plan with anticipated effects of growth and development within the Sonoma Valley region through 2040. By its nature, the long-term noise analysis represents a cumulative analysis, because it accounts for the contribution that countywide and regional growth will make to the noise environment within the Planning Area through modeling that factors in road and other traffic generated from projects throughout the wider region. Consequently, the impact significance conclusions discussed in Chapter 3.11 are representative of cumulative impacts.

The Proposed Plan would result in both short-term and long-term changes to the existing noise environment in the Planning Area. Construction activities, including traffic, demolition, and reconstruction, would generate ambient and groundborne noise. Construction associated with the Proposed Plan could have a cumulative impact on ambient noise levels. However, there are a variety of policies, codes, and regulations in place to prevent against substantially adverse impacts, particularly to sensitive land uses. Standard Conditions of Approval HAZ-1 and HAZ-2 impose limits on construction hours and implement construction noise control measures to mitigate the impact of noise from construction impacts. Additionally, all new construction would be required to comply with noise and vibration level restrictions which regulate the time and intensity of construction in the Sonoma County Municipal Code.

New development resulting from the Proposed Plan could result in a cumulative impact on ambient noise levels from traffic and construction. However, the Proposed Plan includes a number of policies, outlined in Section 3.11.3.3, designed to reduce noise and vibration impacts on sensitive receptors. Standard building construction can typically provide an exterior-to-interior noise reduction of up to 20 dB. Implementation of this comprehensive suite of Proposed Plan policies and implementing actions the Sonoma County Municipal Code, would therefore reduce potential noise and vibration impacts to sensitive receptors along major roadways in and around the Planning Area to a less than significant level despite increases in traffic noise.

Together, these policies and noise level restrictions in the Sonoma County Code would ensure that adverse noise and vibration impacts associated with construction be attenuated to a less than significant impact. The Proposed Plan would result in no impact

from airport noise, and therefore, its impact on noise and vibration would result in a less than cumulatively considerable impact.

5.2.12 Population and Housing

The cumulative geographic context for population and housing is the regional Bay Area. Potential impacts related to population and housing can be cumulative in nature, with the potential to affect the entire metropolitan region, as new jobs could attract residents to nearby cities, and new residents might seek employment in other nearby places. A significant impact could occur if the Proposed Plan, in combination with foreseeable development in the wider Bay Area, led to substantial direct or indirect unplanned population growth. Population growth, by itself, is not an environmental impact; however, the direct and indirect effects, such as housing and infrastructure needs that are related to population growth, can lead to physical environmental effects. Plan Bay Area 2050 projects Sonoma County to grow by 34,000 households (needing more than 35,000 new housing units) between 2015 and 2050. Development associated with implementation of the Proposed Plan is projected to result in approximately 2,400 new residents, 1,000 new housing units, and 900 new jobs by 2040. While this represents a substantially higher amount of population, housing, and jobs than currently exist in the Planning Area, it represents less than three percent of the projected countywide household growth and is less than the historic population and employment of SDC, and will help meet the high demand for housing and jobs in Sonoma County. Therefore, there would not be cumulative considerable impacts from the Proposed Plan.

A significant impact would occur if the Proposed Plan, in combination with foreseeable development in the Bay Area, led to the displacement of long-term residents as a result of new investments and necessitated the construction of new housing elsewhere. The Proposed Plan is currently unoccupied, and development will not lead to any displacement in the Planning Area or the surrounding regional context. The Proposed Plan will result in more affordable housing than is currently required for inclusionary housing, and an additional County-sponsored affordable housing project of 100 units at the site. Furthermore, the Proposed Project requires housing to be made available to individuals with developmental disabilities. Given that development in the Planning Area would not lead to any displacement and, and that new development would meet and exceed County regulations regarding affordable and fair housing choices, implementation of the Proposed Plan would have a less than significant cumulative impact on land use, population and housing.

5.2.13 Public Services and Recreation

The geographic context for all public services and recreation is Sonoma County.

Buildout of the Proposed Plan would result in 2,400 new residents. The Planning Area is served by the Sonoma County Sheriff's Office and is part of the Valley Zone (Zone 6), staffed from the Sonoma Valley substation located approximately four miles to the south of the Planning Area. The Sheriff's Office has not established service ratios or response time goals at this time. In 2020, the average response time for patrol in unincorporated areas was 10 minutes and 28 seconds for Priority 1 calls for service. However, the increased local population generated by implementation of the Proposed Plan may increase the need for police services. In 2002, the City of Sonoma and Valley of the Moon Fire Protection District entered into a Joint Powers Agreement creating a public entity known as the Sonoma Valley Fire & Rescue Authority (SVFRA). The SVFRA provides all-risk fire, rescue, and emergency medical services to 58.5 square miles comprised of the communities of Agua Caliente, Boyes Hot Springs, Diamond-A, El Verano, Feters Hot Springs, Temelec, Seven Flags, and contract services to the City of Sonoma and Glen Ellen. One of the goals in the Sonoma County Sheriff's Office Strategic Plan 2019-2022 is to increase staffing levels by filling all vacancies and advocating for additional allocations. Thus, there is potential for the Sheriff's Office to continue to increase staffing levels to accommodate future growth in the county. This could require the construction of new police service facilities that may result in environmental impacts, but details of such future need, facility location, and timing, any additional facility needs and any specific impacts associated with the construction of such new facilities are not known at this time, and any analysis of such impacts would be speculative. In addition, any such new facilities would require separate environmental analysis and any necessary project-specific mitigation prior to being considered for approval. As a result, there would not be cumulatively considerable impacts.

As of 2022, there are four career fire stations and two volunteer-staffed stations organized into six companies under the SVFRA—four paramedic engine companies and two ALS ambulances. SVFRA also staffs an assortment of specialized equipment through the supplemental staffing of 41 dedicated volunteer firefighters. This equipment includes a Ladder Truck, two Rescues, three Water Tenders, and nine additional Fire Engines, including six specialized wildland engines. The SVFRA also provides ambulance service to the greater Sonoma Valley, an area of approximately 100 square miles. Station 5, the Glen Ellen Station, is also staffed by SVFRA employees. With four SVFRA stations in addition to the Eldridge Fire Department within four miles of the SDC site, fire service is

well-established in the area. Construction of a new fire station could result in subsequent environmental impacts; the specific impacts of which are not known at this time. However, any new developments of fire protection facilities to serve the Planning Area would be located and constructed on existing urban and built-up land within the Core Campus (proposed Policy 6-1). Environmental impacts related to construction emissions, vehicle miles traveled (VMT), and biological resources associated with construction of the proposed new fire station or SR 12 connector are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5.2-30 and 5.2-31 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Because there is not sufficient information as to location or timing for a new fire station, analysis of potential impacts would be speculative at this time. Further, construction of a new fire station would be subject to separate project-level CEQA review at the time the design is proposed in order to identify any potential project-specific impacts and identify any mitigation as may be appropriate. As such, compliance with existing regulations as well as proposed policies would not lead to cumulatively considerable impacts related to the provisions of fire protection facilities.

The Planning Area and surrounding communities, including Glen Ellen and Eldridge, fall within the Sonoma Valley Unified School District (SVUSD), which consists of nine public schools serving kindergarten through grade 12: five elementary schools, two middle schools, and two high schools (**Table 3.13-2**). SVUSD enrollment for the 2021-2022 school year was 3,334 students. There were 276 certificated staff members employed as of 2018, translating to approximately 12 students per staff. There are also 46 preschools/early learning facilities in Sonoma County provided through a combination of center-based childcare and State programs; three of these early learning sites are in the local area. Proposed Policy 6-2 would also require project applicants for development under the Proposed Plan coordinate with Sonoma County school districts to ensure that the future population of the Planning Area can be accommodated adequately in public schools. Additionally, project applicants for development under the Proposed Plan would be required to comply with SB 50, which mandates statutory school facilities fees for residential and commercial developments. Compliance with SB 50 would financially offset impacts on SVUSD capacity and would provide funding for potential future school facility development needs associated with the Proposed Plan-related population increase. Therefore, due to available school capacity, compliance with SB 50, and implementation of Proposed Plan policies, construction or expansion of new school facilities would not be required, and this impact would be less than significant.

There are 54 regional parks and trails within Sonoma County that are managed by the Sonoma County Regional Parks Department as well as additional recreational facilities such as community and neighborhood parks and school athletic fields. According to the Sonoma County General Plan 2020, the County's regional parkland ratio is 20 acres of parkland per 1,000 residents. The County's community and neighborhood parkland ratio is 2.5 acres of parkland per 1,000 residents. Policy PF-2c requires the use of the following standards for determination of park needs: 20 acres of regional parks per 1,000 residents countywide and five acres of local and community parks per 1,000 residents in unincorporated areas. Although the Proposed Plan would result in a population increase of about 2,400, there are approximately 12 acres of parks and recreational facilities designed into the Proposed Plan within the Core Campus. Moreover, 755 acres of the Planning Area will be retained as open space that will be publicly accessible and integrated into the regional parks system (proposed Policy 2-1). Open space preservation doesn't require new construction, so impacts are negligible, but other recreational facilities will require construction of new or physically altered facilities (proposed policies 2-1, 6-3, 6-4, 6-5, 6-6, and 6-7) and have a potentially significant environmental impact. The environmental impacts related to traffic, noise, and air quality and GHG emissions during construction and operation of the park facilities have been considered throughout this EIR (see Section 3.3: Air Quality, Section 3.6: Energy and Greenhouse Gas Emissions, Section 3.11: Noise, and Section 3.14: Transportation). Detailed design of the new park facilities has not yet been completed, so site-specific impacts cannot be evaluated at this time. However, construction of new parks would be subject to separate project-level CEQA review at the time the design and exact location is proposed in order to identify and mitigate any project-specific impacts as appropriate. As such, compliance with existing regulations would not lead to cumulatively considerable impacts related to the provisions of park facilities.

In the event that a new public service or community facility is needed, construction of such a facility could result in subsequent environmental impacts; the specific impacts of which are not known at this time and any analysis would require speculation. However, any new developments of public service or community facilities necessary to serve the Planning Area would be located and constructed on existing urban and built-up land. Environmental impacts related to construction emissions, VMT, and biological resources associated with construction or expansion of the proposed community facilities are accounted for in technical modeling provided in other chapters of this EIR. Further, proposed policies 5-59 and 5-60 also ensure that new developments use reclaimed and salvaged materials and incorporate green building measures to mitigate environmental impacts. Future recreational facilities will tier from this EIR to identify and mitigate site-specific impacts if

and when design of those parks is complete. Therefore, public service and community facilities impacts of the Proposed Plan would not be cumulatively considerable.

Therefore, the contribution of the Proposed Plan to the cumulative impact on public services and recreation would not be cumulatively considerable.

5.2.14 Transportation

The Mobility and Access chapter of the Proposed Plan includes several goals that are supportive of goals, objectives, and policies contained in Sonoma County General Plan 2020. Proposed goals 3-A and 3-C emphasize creating complete streets that emphasize the effectiveness and safety of pedestrian, bicycle, and transit modes. These goals are supported by Policy 3-1 which calls for a fine-grained street grid emphasizing pedestrian and bicycle connectivity; policies 3-2, 3-4, 3-15, and 3-16, which eliminate gaps in the pedestrian network and establish new pedestrian and bicycle corridors; Policy 3-11 which addresses incorporation of traffic calming measures; and Policy 3-13 which indicates that Arnold Drive within the Plan Area shall be designed as a complete street. These goals and policies are consistent with Sonoma County General Plan Goals CT-1 and CT-3 as supported by Objectives CT-1.4, CT-2.8, CT-3.1, and CT-3.3, which address providing a sustainable circulation system that reduces the need for future automobile use, encouraging pedestrian, bicycle, and transit-oriented development and the improvement of facilities to serve these modes. Objectives CT-4.1 and CT-4.2 of the Sonoma County General Plan pertain to upholding vehicle level of service standards. As individual development projects occurring within the Proposed Plan complete traffic impact studies as required by the Sonoma County Department of Transportation and Public Works (DTPW), the potential exists for identification of locations where LOS targets would be exceeded, either individually as a result of the project or (more typically) by contributing to cumulative LOS target deficiencies. Such effects are no longer considered in CEQA per PRC section 21099 (b)(2), which states “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment.” Accordingly, while traffic congestion effects of the Proposed Plan or development of individual sites within the Planning Area may not comply with the LOS targets established in Sonoma County General Plan Objectives CT-4.1 and CT-4.2, for the purposes of the Proposed Plan’s CEQA assessment this would not be considered an adverse environmental impact. This is not to suggest that future development will not be required to complete transportation improvements to maintain LOS standards; such improvements will continue to be

assessed by DTPW through review of traffic impact studies during the entitlement review process, and applicable conditions of approval established. Considering that the Proposed Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities, impacts would not be cumulatively considerable.

The Proposed Plan includes implementation of a new roadway connection between the Core Campus area and Highway 12. While this connection is intended to function as a collector street providing an additional east-west emergency access connection from the site that includes high quality pedestrian and bicycle facilities, rather than a high-speed/high-capacity highway, the potential exists for the added traffic capacity it provides to result in induced VMT. Induced VMT was calculated using a tool developed by the NCST⁴. Induced vehicle travel effects are not fully accounted for in travel demand models, so for the purposes of this evaluation are considered separately from the land use VMT assessment described above. Applying the criteria used in the NCST calculator, the new roadway connection would be classified as a Class 3 facility in the County of Sonoma, with 0.78 added lane miles. Based on output from the calculator, the roadway is estimated to result in 2.6 million additional VMT per year, or approximately 7,120 daily VMT. As described above, policies in the Proposed Plan are designed to reduce VMT in the Planning Area through required TDM reductions, establishment of a TMA to oversee VMT reduction strategies and programs, multi-modal transportation improvements, and parking-related demand management strategies. While these VMT reduction measures can be expected to reduce VMT, their effectiveness cannot be guaranteed, and they may be insufficient to reduce residential VMT per capita in the Planning Area below the applicable significance threshold or fully offset the effects of induced VMT. There are no other feasible mitigation measures available. Impacts would be cumulatively considerable.

The Proposed Plan would enable construction of new developments and new transportation facilities, as well as modifications to existing transportation facilities. Since the Proposed Plan is a program-level document, the design elements of individual future developments and new transportation facilities are not known. However, all future public and private improvement projects and transportation facilities would be subject to additional review and approval by the County of Sonoma to ensure safety. Considering that the Proposed Plan would not substantially increase hazards due to design features and that specific infrastructure designs and development projects would be reviewed for conformance with adopted safety standards, impacts would not be cumulatively considerable.

The Proposed Plan is a program-level plan that does not directly address project-level components that will be required to provide adequate emergency access. Considering the Proposed Plan's accommodation of emergency vehicles in existing and future streets, and the established procedures for reviewing project-level emergency access needs and compliance with State and local law as part of the entitlement process, impacts would not be cumulatively considerable.

Given the cumulatively considerable VMT impacts from the Proposed Plan, the impacts from Transportation are conservatively considered cumulatively considerable.

5.2.15 Utilities and Service Systems

Future development anticipated by the Proposed Plan would generate additional demand for water and wastewater, stormwater, solid waste services, power, and telecommunications services.

The cumulative effects on water supply and groundwater are discussed above in the Hydrology and Water Quality section; this evaluation focuses on impacts on the water treatment and distribution systems. Before the SDC closed in 2018, the SDC water distribution system was an independent, stand-alone, permitted public water distribution system. Since the facility's closure, portions of the SDC water distribution system have remained in operation to serve existing users through the State of California/SDC's water supply agreement with Sonoma Water and its connection to Sonoma Water's aqueduct, which SDC has relied on in the past due to disruptions to their own water supply facilities. By 2040 SDC water use is estimated to reach 225 acre feet per year, which is less than the historical water demand and well within the supply available at the site according to the Water Supply Analysis conducted by the Valley of the Moon Water District and referenced in Section 3.15. Therefore, the Proposed Plan's contribution to this potentially significant cumulative impact is less than cumulatively considerable.

The Planning Area is within the service area of the Sonoma Valley County Sanitation District (SVCSD) and is currently served by a gravity main in Arnold Drive, which carries wastewater flows from Glen Ellen south through the Planning Area and to the SVCSD Treatment Plant approximately 8-miles to the south. Between May 1 and October 31, the recycled water is used for irrigation and wetland habitat enhancement. Between November 1 and April 30, tertiary recycled water can be discharged into Schell Slough.

Implementation of the Proposed Plan would result in the development of 1,000 residential units, 40,000 square feet of commercial space, 90,000 square feet of new hotel space, 190,000 square feet of office space, 30,000 square feet of new public building space, 40,000 square feet of institutional space, and 20,000 square feet of utility building space.

Existing and projected wastewater generation for the Planning Area is shown in gallons per day and acre-feet per year in **Table 3.15-2**. The SVCSD Treatment Plant is permitted to discharge an average dry weather flow of 3 MGD. Additionally, the SVCSD Treatment Plant can treat, up to 16 MGD and has the ability to discharge 11 MGD. The SVCSD Treatment Plant also has 35 million gallons of equalization storage. Infiltration and inflow are significant issues within SVCSD.

As shown in **Table 3.15-2**, estimated wet-weather flow with buildout of the Proposed Plan in 2045 is 0.3 MGD, which represents approximately 2 percent of total available capacity in 2045. Therefore, the Treatment Plant will have adequate capacity to serve the 2045 service population of the Planning Area and impacts from the Proposed Plan would not be cumulatively considerable.

Future developments within the Planning Area must meet the requirements of Sonoma County's MS4 permit with the California State Water Board. These include stormwater treatment regulations, hydromodification requirements, as well as trash capture regulations. Guidelines for implementing these regulations are detailed in the BASMAA Manual and are reviewed and permitted by Sonoma County. Projects within the Planning Area will be required to comply with these requirements, which will reduce pollutants carried by stormwater runoff and minimize stormwater runoff during light precipitation events. Therefore, through phasing construction of storm drains with other development work, conformance with the Sonoma Water Flood Management Design Manual and BASMAA Manual, impacts due to construction of new or expanded storm water drainage facilities would not be cumulatively considerable.

Solid waste from the SDC site will be routed to Central Disposal Site. Sonoma County has disposed between 37,408 and 42,523 tons of solid waste during the five-year period between 2016 and 2020. These volumes account for all waste generated by all sources within the County, including both residential, commercial, and industrial waste. Using these reported volumes of solid waste, and the population of Sonoma County during each of these years, a per capita solid waste disposal rate was calculated for Sonoma County. As shown in the table, the average per capita solid waste disposal rate in Sonoma County, in recent years, is approximately 1 ton per year per person. As discussed in Chapter 2: Project Description, implementation of the Proposed Plan will increase the Planning Area's

population by 2,400 residents compared to existing conditions. Thus, the Proposed Plan would result in a net increase in solid waste generation of approximately 2,400 tons per year, or 6.6 tons per day. The permitted capacity of the Central Disposal Site is 2,500 tons per day. Thus, the daily solid waste generated by the Proposed Plan would be approximately 0.27 percent of the permitted daily capacity of the landfill. The Proposed Plan would not be a substantial contributor to the County's solid waste at the Central Disposal Site. Therefore, the Proposed Plan's contribution to this potentially significant cumulative impact would not be cumulatively considerable.

Electric service by Pacific Gas and Electric Company (PG&E) is available to the area. Service to the site will be made in accordance with PG&E's Electric Rules and Tariffs on file with the State of California Public Utilities Commission at the time the Applicant applies for service and in accordance with any required Land and Environmental reviews. As such, compliance with existing regulations and implementation of Proposed Plan policies would reduce impacts to the maximum extent practicable. Overall, buildout of the Proposed Plan would not have a cumulative impact on the provisions of power and telecommunications facilities. Therefore, the contribution of the Proposed Plan to the cumulative impact on utilities and service systems would not be cumulatively considerable.

5.2.16 Wildfire

The geographic context for wildfire impacts is considered to be Sonoma County and the surrounding area. Evacuation traffic added by the Proposed Plan would not result in substantial changes in evacuation times, increasing along evaluated routes on average by less than 15 seconds and one percent. The largest increase in travel times to areas beyond the evacuation areas would be up to 1.2 minutes and by up to five percent. The Proposed Plan would reduce some travel times from the Madrone/Proposed Plan area by up to three percent due to the planned additional connection to SR 12. The estimated changes in travel times caused by the Proposed Plan would not require changes in current evacuation routes or plans. Thus, implementation of the Proposed Plan would not impair an emergency response or emergency evacuation plan there would be no cumulatively considerable impact.

Further, while the projected population and employment growth in the Planning Area would increase the number of people potentially exposed to impacts from wildfire, the Proposed Plan would not induce substantial unplanned population growth in the Planning Area. The Proposed Plan also includes fire-protection features such as a managed

landscape buffer the east, widened riparian corridors, and fire-resilient construction. Therefore, as described in Section 3.16: Wildfire, the Proposed Plan would reduce wildfire impacts locally, and compliance with local and state regulations pertaining to wildfire would help reduce impacts regionally, the Proposed Plan's contribution to wildfire risks is not considered cumulatively considerable.

5.3 Significant and Unavoidable Impacts

Significant unavoidable impacts are those that cannot be mitigated to a level that is less than significant. According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program, including those that can be mitigated, but not to a less-than-significant level. However, the Proposed Plan aims to be self-mitigating. Thus, all proposed policies aim to address environmental impacts to the to the greatest extent feasible and no mitigation measures are required. The analysis in Chapter 3 determined that the Proposed Plan would result in significant impacts related to cultural/historic resources and transportation (home-based work trip vehicle miles traveled per capita) that, even with implementation of mitigation measures, would remain significant and unavoidable. These impacts are summarized below:

5.3.1 Cultural, Historic, and Tribal Resources

Analysis of cultural and historic resources have been combined with tribal resources in Section 3.5 of this EIR. However, significant and unavoidable impacts pertain only to cultural and historic resources.

Development under the Proposed Plan would potentially entail the demolition of at least 13 percent of historically contributing resources that were originally documented as part of the Sonoma State Home Historic District (SSHHD), which has been determined eligible for listing in the California Register of Historical Resources (CRHR) and qualifies as a historical resource under CEQA. Further, new construction under the Proposed Plan has the potential to disconnect the remaining contributing resources in the Core Campus from those in the Community Separator and Regional Parks lands to the east and west, disrupting the SSHHD's overall integrity to the point that it would no longer be eligible for listing in the National Register of Historic Places, CRHR, or as a California Historic Landmark. This impact, in addition to demolition of the aforementioned resources would

result in a substantial adverse change to the significance of the historic district such that the significance of the historic district would be materially impaired pursuant to Section 15064.5. Implementation of proposed goals 2-I and 2-J and policies 4-20 through 4-32 as well as the Standard Conditions of Approval (LU1 through LU-6) would partially compensate for the impact associated with demolition of historically contributing resources and physical alteration of the historic district to the maximum extent practicable; however, because these measures would not be enough to avoid or reduce the impact completely, the Proposed Plan's impact would remain significant and unavoidable.

5.3.2 Transportation

Goals and policies in the Proposed Plan are designed to reduce VMT in the Planning Area by fostering a greater diversity of land uses focused within a centralized, compact development footprint within the Core Campus area of the SDC property. This would be achieved through multi-modal transportation improvements—including increased pedestrian, bicycle, and transit connectivity. The Proposed Plan will have less than significant impacts for work-based VMT and for total VMT. While the Proposed Plan calls for measures such as traffic calming, transportation demand management, parking-related demand management, and other trip reduction measures, implementation of these VMT reduction measures—including a policy requiring future development projects under the Proposed Plan to meet a 15 percent reduction in VMT—and thereby reduce VMT performance metrics at the countywide level, this outcome is not guaranteed. This EIR conservatively assumes that VMT reduction due to implementation of these strategies would be inadequate to reduce residential VMT per capita and induced VMT to less-than-significant levels, resulting in significant and unavoidable impacts, with no other feasible mitigation measures available. These impacts would also be cumulatively considerable.

5.4 Significant Irreversible Environmental Changes

CEQA Guidelines require an EIR to consider whether “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely” (CEQA Guidelines Section 15126.2(d)). “Nonrenewable resources” refers to the physical features of the natural environment, such as land or waterways, and resources that are renewable

only over long time spans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. Irreversible changes and irretrievable commitments of non-renewable resources anticipated by the Proposed Plan would involve two types of resources: (1) general industrial resources including fuels and construction materials; and (2) project-specific resources such as land, biotic, and cultural resources at the building sites.

5.4.1 Commitment/Consumption of Non-Renewable Resources

Implementation of the Proposed Plan could result in the long-term commitment of various resources to residential and non-residential development. While the Proposed Plan itself would not directly entitle or result in any new development, it is reasonably foreseeable that the Proposed Plan, which acts as a blueprint for growth and development in the Planning Area over the next 20 years, could result in significant irreversible impacts related to the commitment of non-renewable and/or slowly renewable natural and energy resources, such as:

Air Quality: Increases in vehicle trips resulting from buildout of the Proposed Plan would potentially contribute to long-term degradation of air quality and atmospheric conditions in the region. Technological improvements in automobiles, including the growth of the electric vehicle market share, may lower the rate of air quality degradation in the coming decades. Nonetheless, vehicle trips resulting from implementation of the Proposed Plan could result in the irreversible consumption of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for non-electric automobiles and long-term degradation of air quality.

Water Consumption: To the extent that the Proposed Plan would accommodate new population and jobs, it would increase the demand for water and place a greater burden on water supply than currently exists in the Planning Area. However, water demand is expected to be well within the available water supply, and is expected to be reduced from the historical water demand when SDC was in full operation. Despite the change in demand resulting from the Proposed Plan being marginal, the increase would represent an irreversible environmental change, as use of this resource would increase.

Energy Sources: Although use of renewable energy sources is growing throughout the region and California, residential and non-residential developments still rely on electricity, natural gas, and petroleum products for lighting, heating, and other indoor and outdoor power demands, while automobiles use both oil and gas. The Proposed Plan would support and reflect the increasingly stringent State and local goals and regulations that seek to increase energy efficiency, reduce energy consumption, and prioritize renewable energy. However, new development anticipated by the Proposed Plan would result in increased energy use for the operation of new buildings and for transportation. This new development would therefore result in an absolute increase in use of both renewable and nonrenewable energy resources. To the extent that new development uses more nonrenewable energy sources, this would represent an irreversible environmental change.

Agricultural Resources: The Planning Area is a previously developed area located within the unincorporated Sonoma County. No existing agricultural resources would be impacted by the Proposed Plan and thus no irreversible environmental change would occur.

Cultural Resources: Implementation of the Proposed Plan could result in substantial adverse change to historical and cultural resources through demolition, alterations, changes in ownership, and accidents caused by construction activities. Development under the Proposed Plan would entail demolition of some of the buildings that are contributing to the proposed historic district at the site. Thus, demolition of those buildings would result in an irreversible change to a potential historic district and cultural resource in the Planning Area.

5.4.2 Construction-Related Commitments

Irreversible environmental changes could also occur during the course of constructing development projects anticipated by the Proposed Plan. New construction would result in the consumption of building materials (such as lumber, sand and gravel), natural gas, and electricity, water, and petroleum products to process, transport and build with these materials. Though it is possible for construction equipment to be fueled by renewable sources over the course of the Proposed Plan buildout, the timing and availability of these energy sources is unknown. Construction equipment running on fossil fuels would be needed for excavation and the shipping of building materials. Due to the non-renewable or slowly renewable nature of these resources, this represents an irretrievable commitment of resources.

However, development allowed under the Proposed Plan would not necessarily result in the inefficient or wasteful use of resources. Compliance with all applicable building codes, as well as existing and Proposed Plan policies and standard conservation features would ensure that natural resources are conserved to the maximum extent feasible. It is possible that new technologies or systems will emerge, or become more cost-effective or user-friendly, to further reduce the reliance upon non-renewable natural resources. Nonetheless, future activities related to implementation of the Proposed Plan could result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

5.4.3 Irreversible Damage from Environmental Accidents

Demolition and construction activities associated with implementation of the proposed Project would involve some risk for environmental accidents. However, accidental spills and soil contamination, as discussed in Section 3.8, Hazards and Hazardous Materials, would be addressed by County, State, and federal agencies, and would follow professional industry standards for safety and construction. There is a possibility for contaminated soil to be encountered during grading, excavation, and/or ground disturbance associated with implementation of the Proposed Project, or that contaminated materials may be encountered during renovations or redevelopment of older buildings at the property. However, the risks of accidental contamination from handling construction materials or transport of these materials off site would be less-than-significant through compliance with the many federal, State, and local regulations regarding the handling and disposal of such construction materials. Additionally, the land uses proposed by the Proposed Project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident, such as industrial-related spills or leaks. As a result, the Proposed Project would not pose a substantial risk of environmental accident.

6 List of Preparers

6.1 List of Preparers

A list of contributing City staff and consultant team members, their titles, and affiliations, is provided below.

County of Sonoma

- Tennis Wick, Director
- Scott Orr, Deputy Director - Planning
- Brian Oh, Comprehensive Planning Manager

Consultants

Dyett & Bhatia

- Rajeev Bhatia, Principal
- Jossie Ivanov, Senior Associate
- Mayu Tanaka, Associate
- Helen Pierson, Planner
- Clare Kucera, Planner

BKF Engineers

- Eric Wade, PE, Civil Engineer
- Rami Selim, PE

Charles Salter Associates

- Jeremy Decker, PE, Vice President

Kittelson & Associates

- Mike Aronson, PE
- Laurence Lewis, Associate Transportation Planner

- Grace Carsky, Transportation Analyst

Page & Turnbull

- Ruth Todd, Principal
- Christina Dikas, Associate Principal

Questa

- Will Hopkins, Supervising Geologist
- Stephen Kriley, Staff Geologist
- Marc Feliciano, Associate

Whitlock & Weinberger (W-Trans)

- Brian Canepa, Principal
- Zack Matley, Principal

WRA

- John Baas, Senior Open Space Planner

