CITY OF Newman CALIFORNIA

Newman Community Conservation Area Master Plan

Initial Study and Proposed Mitigated Negative Declaration

March 2021

Redtail Consulting
Environment & Community

Cover photograph: courtesy of Vollmar Natural Lands Consulting

Newman Community Conservation Area

Initial Study and Proposed Mitigated Negative Declaration

March 2021

CITY OF Newman CALIFORNIA

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1 Introduction

This document is an Initial Study analyzing the environmental impacts of implementing the City of Newman's (City's) Newman Community Conservation Area (NCCA) Master Plan (City of Newman 2021), consistent with the California Environmental Quality Act (CEQA) and the state's *CEQA Guidelines*. As the entity that will make the decision about whether or not to proceed with the projects, the City is serving as the lead agency under CEQA. As a state agency with jurisdiction over natural resources held "in trust" for the people of California and potentially affected, the California Department of Fish and Wildlife (DFW) is considered a trustee agency under CEQA. Three of the four projects envisioned in the Master Plan may require permits from the U.S. Army Corps of Engineers (Corps), DFW, and/or the Central Valley Regional Water Quality Control Board (RWQCB), and in this case DFW as well as the RWQCB would also be responsible agencies under CEQA. Extension of water service outside City limits to support limited uses at the NCCA would require authorization from the Stanislaus and/or Merced County Local Agency Formation Commissions (LAFCo). The authorizing LAFCo will be an additional responsible agency under CEQA.

The NCCA is planned to support three separate but related habitat restoration and creation projects, a multi-use trail system, and other amenities that will provide public access, recreation, nature viewing, and nature- and conservation-oriented education opportunities to the community. The Master Plan was developed to guide project implementation, operations, and maintenance. As such, the Master Plan

- lays out the City's vision for the NCCA
- describes the projects that will be undertaken to implement the NCCA vision (the NCCA projects)
- provides a framework for continued project planning, construction, operations, and maintenance
- discusses immediate and longer-term funding approaches for the NCCA projects
- includes measures to avoid and reduce impacts on existing resources at the NCCA site
- provides for long-term preservation and protection of habitat values at the NCCA

Because the purpose of the Master Plan is to define and describe the projects that will implement the Master Plan vision, analyzing the impacts of constructing, operating, and maintaining the NCCA projects analyzes the impacts of the Master Plan.

Based on the analysis presented in this Initial Study, the City anticipates adopting a Mitigated Negative Declaration for the NCCA projects. The Mitigated Negative Declaration signifies that although the NCCA projects would have the potential to result in some significant environmental impacts, the City has identified and

committed to implement measures to mitigate—that is, to avoid or reduce—those impacts, such that with the mitigation measures in place, no significant short- or long-term impacts are expected as a result of the NCCA projects.

Contents of this Initial Study

This Initial Study contains the following sections.

- **Section 1 – Introduction:** describes the scope and intent of this Initial Study, provides background information, discusses the need for the NCCA, identifies goals and objectives for the NCCA as a whole and for each of the NCCA projects, lists the permits and approvals that will be required to implement each project, briefly discusses consultation regarding Native American tribal cultural resources, and describes the process and timeline for public review and comment on this Initial Study
- **Section 2 – Project Information:** provides specifics regarding the NCCA projects, including the elements of each project, the construction activities that are anticipated, and ongoing operations and maintenance (O&M) of the NCCA facilities once construction is complete
- **Section 3 – Environmental Impacts:** analyzes the impacts of implementing the NCCA projects on the environment and describes the mitigation measures the City will implement to avoid or reduce potentially significant impacts
- **List of Acronyms and Abbreviations:** presented as an 11 x 17 foldout table following Section 3
- **Appendices**:
  - Appendix A: NCCA Master Plan[1]
  - Appendix B: Biological Resource Evaluation
  - Appendix C: Air Quality and Greenhouse Gas Emissions Modeling Results
  - Appendix D: Cultural Resources Technical Report
  - Appendix E: NEWS Project Basis of Design Memorandum and Final Stormwater Quality Benefit Analysis
  - Appendix F: Miller Ditch Treatment Wetland Project Water Budget, Water Quality, and Pollutant Removal Technical Memoranda
  - Appendix G: Proposed Mitigated Negative Declaration

Scope & Intent of this Initial Study

The NCCA is planned to occupy two parcels acquired by the City in 2014 for this specific purpose: a 78-acre parcel located at the southeast corner of Canal School Road and Inyo Avenue and a 24-acre parcel located

[1] The NCCA Master Plan presented in Appendix A is the Third Administrative (internal) Draft of this document. Once the CEQA review process is complete, the City intends to incorporate CEQA mitigation requirements into the Master Plan as adopted Avoidance and Minimization Measures (AMMs), finalizing the document. Regulatory permit terms and conditions will also be incorporated as AMMs in future updates to the Final NCCA Master Plan as individual projects are authorized. AMMs already incorporated into the Master Plan and therefore applicable to all of the NCCA projects are described in Section 2 of this Initial Study.

nearby, northeast of Brazo Road (Figure 1-1). A program of four separate but complementary projects is envisioned at the NCCA (Figure 1-2):

- in the northwest portion of the 78-acre parcel, the Newman Environmental Wetland System **(NEWS project)**, an approximately 21-acre constructed wetland complex that will treat stormwater and dry season runoff from the City and surrounding agricultural lands prior to discharge to the Newman Wasteway[2] and, ultimately, the San Joaquin River
- in the central and east portions of the 78-acre parcel, extending to the central and south portions of the 24-acre parcel, an approximately 11-acre seasonal wetland, riparian, and grassland restoration project **(wetland project)** emphasizing natural sequestration of greenhouse gases (GHGs)
- in the southwest portion of the 78-acre parcel, an additional approximately 16-acre constructed wetland project that is being planned in collaboration with the Environmental Systems Graduate Group at the University of California, Merced (UC Merced) Department of Civil and Environmental Engineering to treat water from the Miller Ditch[3], with a focus on removing agricultural pollutants **(Miller Ditch Treatment Wetland project)** (MDTW, MDTW project)[4]
- in the east and southeast portions of the 78-acre parcel, the **Newman Nature Park,** which is being planned with community input and may include a wide range of facilities such as a community gathering plaza, outdoor classroom areas, a nature-themed play area, and native plant, rainwise garden, and low-impact development demonstration areas, as well as an unpaved trail network and interpretive signage extending throughout the 78-acre parcel to enable appropriate public recreational access and, ultimately, tie all of the projects together

This Initial Study analyzes all four projects. The City's intent in bringing all four NCCA projects before the public and agencies at this time, in a single Initial Study, is to provide the most comprehensive possible picture of the NCCA projects, their impacts, and their benefits.

This Initial Study also analyzes the effects of extending City water service to the 78-acre parcel to serve limited uses at the NEWS project and Newman Nature Park. For CEQA purposes, because the extension of water service to each project would serve only that project and has no separate, independent utility, each water service extension is technically part of the project it would serve. However, the water service extension could involve a footprint outside the NCCA parcels, and would entail different construction activities. This Initial Study thus addresses the water service extension separately, to make sure all impacts are accounted for, even though construction of the water service extension would be coordinated with the NEWS and/or Newman Nature Park projects, and the City would not proceed with the extension unless the corresponding NCCA projects also move forward.

[2] The Newman Wasteway (Figure 1-1) was originally constructed as part of the federal Central Valley Project, to convey emergency releases from the Delta-Mendota Canal to the San Joaquin River (for more information, see U.S. Bureau of Reclamation and California Department of Water Resources 2010). Now, it also conveys agricultural tailwater from cultivated lands between the Canal and the River.

[3] The Miller Ditch (Figure 1-1) is an agricultural feature that conveys supply from the Central California Irrigation District's Main Canal to agricultural users south and east of the City. It also receives return flow from agricultural lands southeast of the City and conveys this tailwater to the Newman Wasteway.

[4] In previous City documents, the MDTW project was referred to as the UC Merced project.

Level of Analysis

As of the preparation of this Initial Study, the NEWS project and wetland project are the farthest along in the planning process; the wetland project has been funded by a DFW Wetlands Restoration for Greenhouse Gas Reduction Program grant awarded in 2019 and the NEWS project will be funded by a State Water Resources Control Board (SWRCB) Proposition 1 Storm Water Grant Program Round 2 Implementation Projects grant awarded in early 2021. The NEWS project is currently at the 60% level of design and the wetland project is approaching the 65% design milestone. These two projects are analyzed to the project level.

The City intends to apply for California Department of Parks and Recreation Proposition 68 Statewide Park Development and Community Revitalization Program Round Four funding for the Newman Nature Park in spring 2021. To the extent feasible with community dialogue still ongoing, the Newman Nature Park is also analyzed to the project level.

Project-level analysis is intended to enable prompt implementation, unless conditions, or the project themselves, change significantly. For instance, if elements not analyzed in this IS/MND are added to the Nature Park based on community input, additional CEQA review may be needed for the Nature Park project, but it should be facilitated and expedited by the analysis presented here.

The MDTW project is the farthest out on the planning horizon; it has been developed in concept, and baseline technical studies are in progress (e.g. Rodal Morales and Beutel 2020a, 2020b; Rodal Morales et al. 2020), but some details are not available at this time. The MDTW project is therefore analyzed to a more general, programmatic level, with as much information as possible provided. As planning proceeds and more detail on the MDTW project becomes available, the City will likely need to conduct a second round of project-level CEQA review for the MDTW project. This may take the form of an internal Addendum to this Initial Study, or a publicly circulated "tiered" document that incorporates and builds on the analysis in this Initial Study, or it may be a stand-alone document, depending on how much background conditions and the details of the project itself have evolved in the meantime.

Background & Need for NCCA

Parklands and open spaces are a critical aspect of community livability, and the ability to connect with nature is increasingly understood as vital to mental and physical health. The City's General Plan—its fundamental planning document—begins with a Vision Statement that includes the following language (City of Newman 2007).

> There will be a range of activities available in Newman for all residents, including youth and seniors. Parks scattered throughout the city will provide…facilities that promote community gatherings. A network of pedestrian trails and bike paths will connect residents to parks…

Reflecting this commitment, a number of community and neighborhood parks are already available throughout the City, providing various types of recreational and gathering facilities, including playgrounds, barbecue areas, dining areas, baseball and soccer fields, and basketball courts, as well as a community center, teen center, wading pool, and skateboard park. The City also has a number of mini-parks that serve their immediately surrounding neighborhoods with green space, picnic tables, and play structures.

However, city parks offer a different user experience and serve different functions than accessible areas of more natural open space. The closest parklands offering any type of natural open space experience range from about 4 to 17 miles away as the crow flies (farther by road), and none of them is specifically dedicated to nature-

Map Source: *modified from* City of Newman 2007

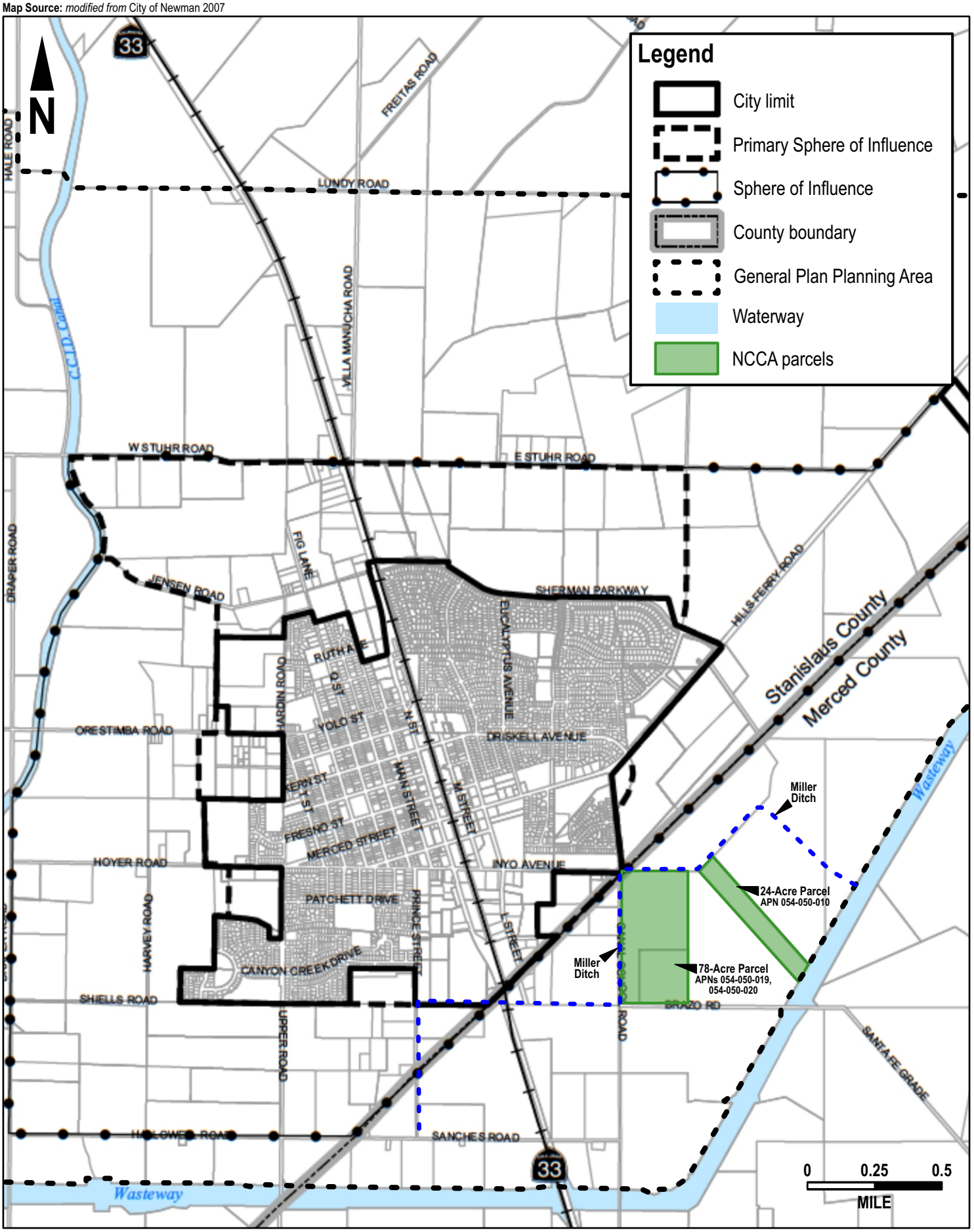

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Figure 1-1. NCCA Location and Extent
Newman Community Conservation Area Master Plan
City of Newman

Aerial Photograph Source: GoogleEarth (imagery date 07/18/2019, downloaded 03/16/2020)

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Figure 1-2. Conceptual NCCA Site Layout
Newman Community Conservation Area Master Plan
City of Newman

oriented recreation or education. In addition, although the City has adopted a Non-Motorized Transportation Plan (City of Newman 2013) and has been working to expand and improve bicycle and pedestrian facilities, the Newman area still lacks regional trail systems that offer extended walking and bicycling opportunities.

Additionally, with the use of natural processes for stormwater and wastewater treatment becoming increasingly visible in recent decades, City staff have long held the vision that such applications would one day serve the Newman community, which currently discharges its stormwater and agricultural tailwater untreated into the Newman Wasteway and ultimately the San Joaquin River.

In this context, the NCCA is intended to meet three needs:

- providing opportunities for nature-oriented open space recreation and nature education that are not currently available in the Newman area
- providing treatment for the City's previously untreated stormwater and agricultural tailwater runoff prior to discharge into the Newman Wasteway and San Joaquin River
- improving overall air, water, and habitat quality in the Newman area, as a benefit to the community, area wildlife, and the environment as a whole

Thus, in addition to providing long-term environmental benefit, the NCCA will fill an important gap in the recreational resources available to residents of the City and surrounding vicinity, along with opportunities for nature education that currently do not exist in the area. When completed, the NCCA will be a unique community and environmental resource, the first of its kind in the western San Joaquin Valley region.

Goals & Objectives

NCCA Program Goal & Objectives

The City's overarching goal for the NCCA is to create a community amenity that supports improved water and air quality, GHG sequestration, and habitat resources while offering site-appropriate recreational and educational opportunities as well as economic benefits for residents of the City and surrounding area.

The following sections identify goals and objectives for each of the projects under the NCCA program. Programmatic parcel-wide objectives comprise the objectives of the individual projects, all of which individually support the City's programmatic goal for the NCCA.

Goals & Objectives by Project

NEWS Project

The goal of the NEWS project is to construct, operate, and maintain a wetland system consistent with historic habitats in the surrounding area, in order to

- reduce the discharge of urban and agricultural storm and dry weather runoff pollutants to the Newman Wasteway and San Joaquin River via physical, biological, and biochemical marshland processes
- support the City's vision to manage stormwater as an ecological and water resource asset
- benefit the community of Newman and the surrounding area by providing appropriate public access to encourage natural environment experiences

- provide a "living lab" for K–12 and college/university students in the Newman area and beyond
- offer operational flexibility to support downstream objectives for stormwater and agricultural runoff management

Specific objectives are to

- develop an approximately 21-acre constructed wetland system comprising a trash rack, sediment settlement forebay, and vegetated clarification ponds, with unpaved access suitable for operations and maintenance as well as non-vehicular public use such as walking, jogging, bicycling, birding, and watershed education
- treat urban and agricultural stormwater and dry weather runoff from 2,241 acres in and around the City, diverted from the City storm drain system downstream of the pump station at Canal School Road and Inyo Avenue
- provide sufficient capacity to capture and treat the urban water quality design event that carries the greatest pollutant loading to the Newman Wasteway and San Joaquin River (the 85th percentile, 24-hour storm event)[5]
- plant at least 100 trees and shrubs of suitable native species on high ground bordering the ponds

Wetland Project

The goal of the wetland project is to restore a mosaic of wetland, riparian woodland, and native perennial grassland habitat, in order to

- sequester GHGs and other pollutants
- restore and preserve rare habitat types for the benefit of plants and wildlife
- contribute to public nature viewing and educational amenities for the City and surrounding area

Specific objectives are to

- reestablish, rehabilitate, or enhance at least 10 acres of wetland habitat
- plant and establish at least 50 trees of native species suitable to the site
- restore at least 1 acre of native perennial grassland habitat

MDTW Project

The goal of the MDTW project is to create and enhance wetland habitat using Central California Irrigation District (CCID) agricultural supply and agricultural tailwater, in order to

- treat flow from the Miller Ditch (including agricultural tailwater) in support of downstream reuse

[5] An area's 85th percentile storm event is the storm with precipitation equal to or greater than 85% of 24-hour storm events occurring in that area in a year. Storms up to and including the 85th percentile event deliver the majority of the precipitation the area receives annually and are thus responsible for the majority of the area's runoff (and resulting delivery of pollutants to downstream receiving waters). As a result, capture and treatment of runoff from storms up to and including the 85th percentile event is a widely used water quality design target.

- create hands-on learning opportunities in the planning, development, execution, and operation of constructed wetland water treatment projects for students in the Environmental Engineering program at UC Merced
- improve the ecological function and value of the 78-acre parcel
- contribute to public nature viewing and educational amenities for the City and surrounding area

Specific objectives include

- enhancing and creating up to about 16 acres of perennial or near-perennial freshwater surface-flow wetland in multiple cells designed to provide polishing treatment
- providing unpaved access suitable for operations and maintenance as well as non-vehicular public use such as walking, jogging, bicycling, birding, and watershed education

Newman Nature Park

The Newman Nature Park is planned to provide a local opportunity for open-space recreation offering multiple social, economic, and environmental benefits to residents of the City and surrounding area. It is envisioned as expanding and diversifying the non-vehicular recreational access offered by the NEWS and MDTW projects.

Goals of the Newman Nature Park include

- providing the community with opportunities to connect with nature through walking, bicycling, and other passive recreation accessible to a diverse range of visitors, including families, seniors, youth groups, and those with disabilities
- promoting mental and physical health through access to, and interaction with, the natural environment
- providing the City's disadvantaged youth with opportunities for outdoor experiences and a connection to nature
- fostering learning opportunities for K–12 and college/university students
- showcasing sustainable water and land resource management practices

Specific objectives—which were developed in consideration of preliminary community outreach and will be refined and finalized based on continuing dialogue with the community—include

- constructing a network of new accessible (ADA-compliant) trails suitable for non-vehicular passive recreation such as jogging, walking, biking, birding, and wildlife observation, potentially including a perimeter trail and/or main trail loop and connecting trails sited appropriately throughout the parcel
- providing seating and shade along the trails for rest, nature viewing, and contemplation areas; incorporating bilingual (English/Spanish) interpretive signs to enhance the trail and park experience for a variety of users, including children, those with disabilities, and seniors
- developing opportunities for nature-oriented public education, such as outdoor learning areas, and potentially including a community plaza gathering area
- showcasing the use of permeable surface media, runoff capture, bioswales, and other low-impact development (LID) measures as well as solar-powered lighting where appropriate

- providing restrooms, a handwashing station, and a hydration station, as well as storage for maintenance and educational materials
- providing ample off-street visitor parking, including ADA stalls and bicycle parking and potentially including a bus drop-off to facilitate group visits

The Newman Nature Park may also offer demonstration areas for native plant gardening, composting, rainwise and other sustainability techniques that can be incorporated at area homes and businesses.

Required Permits & Approvals

Because of existing environmental values at the NCCA site, a number of resource agency permit requirements may apply to the NCCA projects, summarized in Table 1-1. Water service extension may also require resource agency permits, depending on the alignment selected. Because construction of the water service extension would likely be coordinated with NEWS project and/or Newman Nature Park construction (discussed further in Section 2 of this Initial Study), the City expects to include appropriate portions of the water service extension in the resource agency permit application packages submitted for each of those projects.

Table 1-1. Resource Agency Permit Requirements Potentially Applicable to NCCA Projects

Regulation	Agency with Jurisdiction	Scope and Requirements	Projects Needing Permit*
Federal Clean Water Act, Section 404	Corps	Regulates the placement of "dredged and fill materials" into waters of the United States, including wetlands. In practice, because the terms *dredged and fill* are interpreted very broadly, requires Corps permit authorization for a wide range of activities entailing disturbance or permanent impact below the ordinary high water mark (OHWM) in fresh water and below the mean higher high tide (MHHT) line in tidally influenced waters	• NEWS project • wetland project • MDTW project
Federal Clean Water Act, Section 401	RWQCB	Requires projects that must obtain certain other federal permits, including Clean Water Act Section 404 authorization from the Corps, to obtain certification from the RWQCB that the proposed activities would not degrade the quality of receiving waters downstream of the project, or RWQCB concurrence that certification can be waived	• NEWS project • wetland project • MDTW project
Federal Clean Water Act, Section 402[a] (National Pollutant Discharge Elimination System)	RWQCB	Regulates discharge of stormwater and other runoff from construction sites and other localized ("point") sources. In California, requires construction projects with a disturbance footprint of 1 acre or more to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which entails preparation by qualified personnel of a Storm Water Pollution Prevention Plan (SWPPP)	• NEWS project • wetland project • MDTW project

Regulation	Agency with Jurisdiction	Scope and Requirements	Projects Needing Permit*
		reflective of site conditions and the sensitivity (risk level) of receiving waters	
California Fish and Game Code Sections 1600 *ff.*	DFW	Regulates activities affecting the geomorphology and function of California's rivers, streams, and lakes. Requires DFW approval for activities that would • divert or obstruct the natural flow of a river, stream, or lake • modify the bed, channel, or bank of a river, stream, or lake • use material from the bed, channel, or bank of a river, stream, or lake • place debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake	• NEWS project • wetland project • MDTW project
Federal Endangered Species Act	USFWS	Among other provisions, regulates activities affecting plant and wildlife species listed by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service as Threatened or Endangered, and their habitat. Requires USFWS or National Marine Fisheries Service authorization (Incidental Take Permit, or ITP) for activities affected listed species or their habitat	As discussed in more detail in Section 2 of this Initial Study, all of the NCCA projects would incorporate extensive Avoidance and Minimization Measures (AMMs) for the protection of special-status plants and wildlife during both construction and O&M, and the City hopes to be able to avoid the need for Incidental Take Permit (ITP) authorization under the federal and California Endangered Species Acts. If this is not possible, ITPs may also be required for some or all of the projects
California Endangered Species Act	DFW	Among other provisions, regulates activities affecting plant and wildlife species listed by the State of California as Threatened or Endangered, and their habitat. Requires California Department of Fish and Wildlife (DFW) authorization (Incidental Take Permit, or ITP) for activities affecting listed species or their habitat	

* The Newman Nature Park project may also require Corps and/or RWQCB authorization for minor impacts to wetlands. The City is working with agency staff to clarify the status of these wetlands and will apply for all permits identified as necessary by the resource agencies with jurisdiction.

In addition to the resource agency permits summarized above, water service extension would require authorization from the Stanislaus and/or Merced County LAFCo, since it would be located outside City limits in unincorporated Merced County. Driveway access to the NEWS project from Canal School Road, and to the MDTW project and Newman Nature Park from Brazo Road, would require County encroachment permits.

Native American Consultation

The state's *CEQA Guidelines* encourage early consultation with Native American tribes traditionally and culturally affiliated with the area where a proposed project will take place. Additionally, Section 21080.3.1 of the CEQA statute, signed into law in 2015 under AB52, requires lead agencies to consult with traditionally and culturally affiliated Native American tribes prior to the release of a CEQA document if (1) the tribe has

requested, in writing, to be formally notified of projects, and (2) the tribe responds, in writing, within 30 days of receiving notification.

As of the date of preparation of this Initial Study, no tribes have requested AB52 notification from the City. However, as part of the cultural resources study conducted for the NCCA projects (see Appendix D), the City team reached out to the Native American Heritage Commission to verify contacts for tribes traditionally and culturally affiliated with the NCCA vicinity, and has sent letters advising those contacts of the upcoming projects and soliciting early comments and input on concerns related to tribal cultural resources. A search of the Native American Heritage Commission's Sacred Lands database was also requested. Results are summarized in Section 3 of this Initial Study under the headings *Cultural Resources* and *Tribal Cultural Resources* and are discussed in detail in Appendix D.

Public Circulation & Comment

The fundamental purposes of CEQA include improving information sharing and enhancing public participation in the planning process. CEQA accordingly requires lead agencies to circulate draft environmental documents for review and comment by other agencies and the public at large. This Initial Study is now being circulated for public and agency review. The review period begins on March 18, 2021 and will conclude on April 19, 2021.

Contact for Comments on this Initial Study

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Public Works Department | City of Newman
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Newman, CA 95360
kreyes@cityofnewman.com

Comments on this Initial Study may be provided via letter or email to the City's Director of Public Works at the contact above. **The deadline for receipt of comments is 5:00 PM, Monday, April 19, 2021.** As required by CEQA and the state's *CEQA Guidelines*, all comments received by the comment deadline will be considered by the City in making the decision about whether to adopt the proposed Mitigated Negative Declaration and proceed with the NCCA projects analyzed to the project level.

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Project Information

Project Overview

Project title:	Newman Community Conservation Area Master Plan
Lead agency name and address:	City of Newman Public Works Department 938 Fresno Street Newman, CA 95360
Project sponsor's name and address:	*Same as above*
Contact person and phone number:	Kathryn Reyes Director of Public Works 209.862.4448
Project location:	This IS/MND analyzes the effects of four separate but complementary projects under the NCCA Master Plan. All projects would be located on City-owned lands (APNs 054-050-019, 054-050-020, and 054-05-010) southeast of Canal School Road and Inyo Avenue, immediately outside City limits (Figures 1-1, 1-2)
General Plan land use designation:	City of Newman: *Agriculture* County of Merced: *Agriculture*
Zoning:	Because the NCCA parcels are outside City limits they are zoned only by the County of Merced. The County zoning is *A-1 General Agriculture*

Project Setting

The following discussion of existing conditions at the NCCA site was summarized from the NCCA Master Plan (City of Newman 2021). More detailed information is presented in the Master Plan (Appendix A to this Initial Study) and supporting technical reports, including the Biological Resource Evaluation prepared in support of the Master Plan and project CEQA review (Vollmar Natural Lands Consulting 2021a) (Appendix B to this Initial Study).

Overview

The NCCA site is located in an area with a long history of agricultural use and is currently surrounded by actively cultivated lands in various row and orchard crops. As shown in Figures 1-1 and 1-2, it occupies two

City-owned parcels: a 78-acre parcel at the southeast corner of Canal School Road and Inyo Avenue (APNs 054-050-019, 054-050-020) and a 24-acre parcel located nearby to the east, north of Brazo Road (APN 054-05-010).

Site topography and historic aerial photographs indicate that the 78-acre parcel was previously graded for flood irrigation supported by a system of ditches, and it has been cultivated for row crops in the past, but has been fallow since the 1990s. The 24-acre parcel does not appear to have been substantially graded or cultivated. In recent years, both of the NCCA parcels have primarily been used for grazing and are at least intermittently flood-irrigated during the dry season, using supply diverted from the adjacent Miller Ditch (City of Newman 2021).

The NCCA parcels lie at an elevation of approximately 75 – 80 feet above mean sea level and are gently rolling to nearly flat, with a maximum difference in elevation across each parcel of less than 10 feet. Both parcels were historically part of the large floodplain and tributary complex draining generally eastward to the San Joaquin River. Regionally and in the site vicinity, this system has been substantially disrupted and replaced by agricultural uses, and the NCCA parcels now occupy a complex surface water drainage context that includes a network of agricultural canals and ditches as well as the Newman Wasteway, which ultimately discharges to the San Joaquin River to the east (City of Newman 2021) (Figure 1-1).

Conspicuous on both parcels is a channel-like feature that appears to represent a substantially disturbed remnant tributary of the San Joaquin River, labeled as the *central swale* on Figure 1-2. This remnant channel no longer supports through-going flow; it is blocked by berms at both ends, has been extensively modified by shallow grading for agriculture, and is disconnected from the River by intervening cultivated lands. Berming along the banks has also reduced its original extent and further modified its hydrology although it is locally open to overland flow input on both the 78-acre and 24-acre parcels (Vollmar Natural Lands Consulting 2021a).

Site Hydrology

Surface Drainage

The NCCA site is located in the Bennett Valley – San Joaquin River watershed (City of Newman 2021). Three local sub-drainage watersheds have been defined in the vicinity of the NCCA parcels (Figure 2-1):

- the urban City area
- agricultural fields to the north
- agricultural fields to the south

The majority of the urban City area, and the agricultural fields to the north, drain to an existing City stormwater pump station at the northwest corner of Canal School Road and Inyo Avenue. The agricultural fields to the south drain to the Miller Ditch, which borders the parcels to the west and north and empties into the Newman Wasteway east of the 24-acre parcel, with excess flow from large storm events diverted via an overflow pipeline to a separate outfall to the north along the Wasteway. The Newman Wasteway in turn discharges to the San Joaquin River south of the City's Wastewater Treatment Plant (WWTP) and Hills Ferry Road (City of Newman 2021) (Figure 1-1, Figure 2-1).

The Miller Ditch is a constructed feature that conveys flows from several sources. During the spring and summer, supply from the CCID canal west of the City is diverted into the Miller Ditch for irrigation use; several agricultural users both up- and downstream of the NCCA parcels have established agreements with the CCID

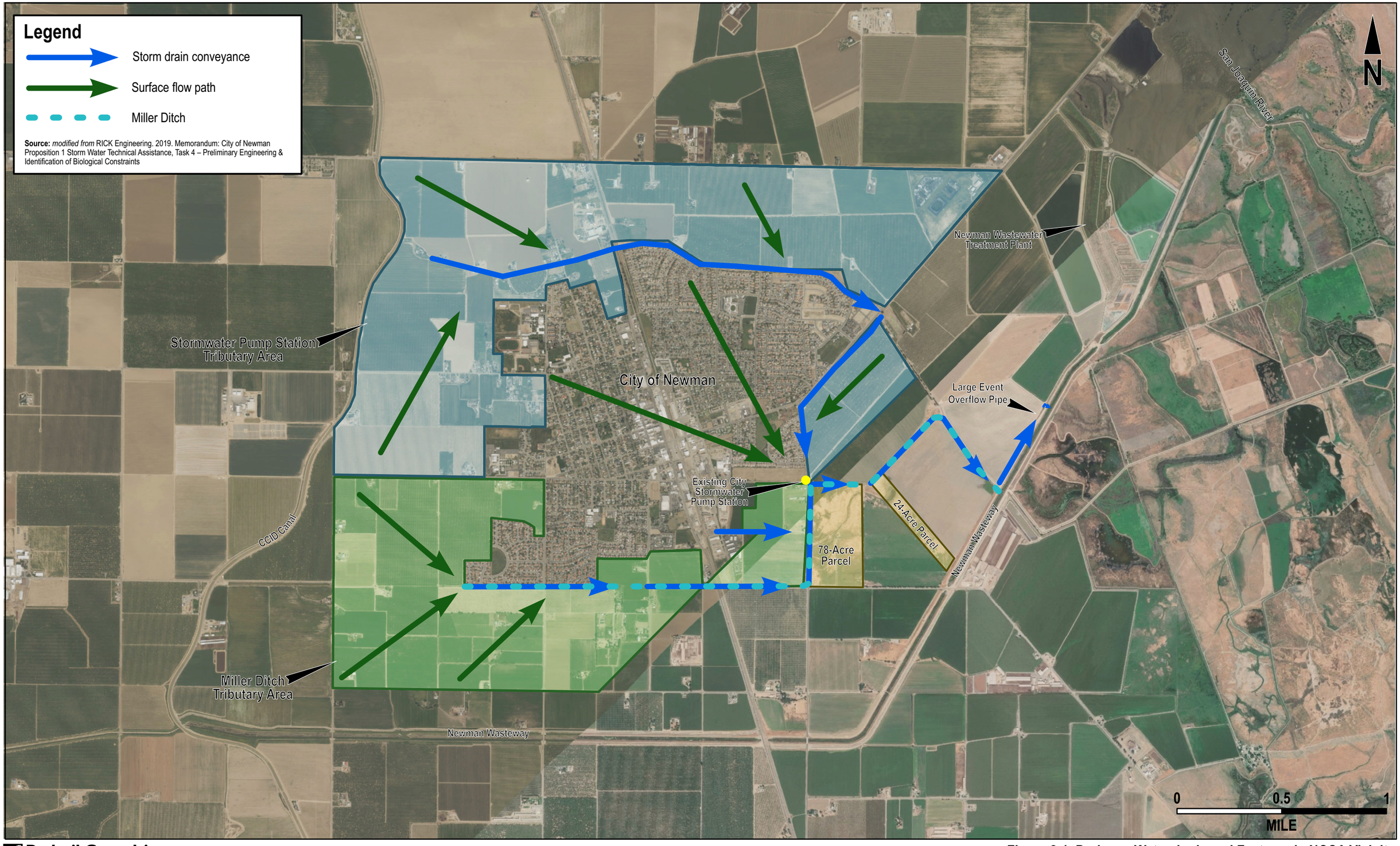

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Figure 2-1. Drainage Watersheds and Features in NCCA Vicinity
Newman Community Conservation Area Master Plan
City of Newman

for use of supply from the Miller Ditch. The Miller Ditch also receives agricultural tailwater and some overland runoff. As a result, flow in the Ditch is generally year-round, although flow volumes and water quality vary seasonally (City of Newman 2021).

Neither of the NCCA parcels appears to have been subject to the deep ripping typical of agricultural lands in the vicinity. As a result, they were initially expected to preserve intact Northern Claypan, an indurated subsurface clay layer that significantly reduces downward percolation of surface water and creates perched groundwater conditions in the shallow subsurface. More detailed soil studies performed in late summer and early fall 2020 with funding from the City's DFW grant for the wetland project has determined that clay layers are locally present in the subsurface but appear to have been disrupted by agricultural grading, particularly on the 78-acre parcel (Vollmar Natural Lands Consulting 2020).[1]

Shallow Groundwater

Based on test pit and piezometer data from spring 2019 and 2020, the early dry-season depth to shallow groundwater on the 78-acre parcel ranges from about 6.5 feet to about 10 feet, increasing toward the north end of the parcel (City of Newman 2021).

Double-ring infiltrometer testing conducted in May 2019 suggests that infiltration rates on the 78-acre parcel range from 3.8 gallons/square foot/day at the parcel's northeast corner to as much as 34.1 gallons/square foot/day in the central portion of the NEWS project footprint and 41.1 gallons/square foot/day near the NEWS project's southeast boundary. Similar testing in the central portion of the 24-acre parcel showed an infiltration rate of 1.1 gallons/square foot/day (Technicon 2019). Additional testing conducted in late summer 2020 using shallow infiltration basins excavated to depths of 1 – 2 feet below grade measured infiltration rates ranging from 1.1 gallons/square foot/day to 41.1 gallons/square foot/day, with the lowest rates measured along the central swale on the 78-acre parcel and in remnant wetlands on the 24-acre parcel, and the highest rates in leveled areas outside the central swale on the 78-acre parcel (Vollmar Natural Lands Consulting 2020). This is generally consistent with the results of the earlier Technicon (2019) infiltration tests.

An existing well is located near the northwest corner of the 78-acre parcel. Very little information is available on the well, but Department of Water Resources (DWR) records indicate that it was drilled in late 1992 or early 1993. It has a 6-inch casing diameter, was completed to a depth of 185 feet, and is screened from 150 to 170 feet below ground surface (Department of Water Resources n.d.), and thus is probably producing from the upper unconfined aquifer. In recent years, it has been used for cattle watering (Souza pers. comm.), and the City considers it a non-potable source. The City plans to close and abandon the well per Merced County well destruction requirements, and will not be using it in conjunction with the NCCA projects.

Habitat Conditions

The NCCA parcels currently support a mosaic of disturbed upland and wetland habitats, as well as remnant and currently functional agricultural ditches that also offer some wetland value. Wetlands on both parcels are partially supported by irrigation for grazing; as a result, the duration of ponding on the site is longer that it would historically have been. Additionally, although vernal pools occur in the region and were probably present at the site in the past, none of the wetlands on the NCCA parcels currently supports a majority of vernal pool indicator species (Vollmar Natural Lands Consulting 2021a, 2021b; Pinnell pers. comm.). This is likely due to the effects

[1] The design of the wetland project has been adjusted based on the results of recent soil studies, to take maximum advantage of soil conditions on the site while dovetailing with the other NCCA projects to maximize sitewide function and value; this is discussed further in *Project Elements* below.

of historic agricultural grading and present-day irrigation. The table below summarizes wetland acreages; their distribution is shown on Figures 2-2 and 2-3.

Table 2-1. Potential Jurisdictional Habitat on NCCA Parcels

Habitat Type	Total Extent	Presumed Jurisdiction		
		Corps	DFW	RWQCB
Emergent wetland	0.142	—	—	0.142
Seasonal wetland, central swale	1.396	0.064	0.064	1.396
Other seasonal wetland	7.979	2.155	0.886	7.979
Ditch	3.704	3.704	3.704	3.704
Total extent of wetland habitat:	*13.221*	*5.923*	*4.654*	*13.221*

Source: Poisson pers. comm.

Seasonal wetlands on the NCCA parcels support a mixture of native and non-native species, including native Mexican rush (*Juncus mexicanus*) and non-native Mediterranean barley (*Hordeum marinum*), Italian rye grass (*Festuca perennis*), rabbit's foot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), and annual blue grass (*Poa annua*). Emergent wetlands support native common tule (*Schoenoplectus acutus occidentalis*), broad-leaved cattail (*Typha latifolia*), water-pepper (*Persicaria hydropiper*), and knotgrass (*Paspalum distichum*), interspersed with the same native and non-native species found in the seasonal wetlands (Vollmar Natural Lands Consulting 2021a). Based on their distribution and geometry, and the parcels' history of agricultural use, wetlands at the site are thought to represent a combination of heavily disturbed remnant natural features and anthropogenic features created by agricultural grading (Vollmar Natural Lands Consulting 2021b).

Upland habitat on the NCCA parcels consists primarily of grasslands dominated by non-native species typical of ruderal uplands in the region, although a few small, localized stands of native grassland are present. Non-native grasses found on the parcels include ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), slender wild oat (*Avena barbata*), foxtail barley (*H. murinum*), and Bermuda grass (*Cynodon dactylon*). Associated non-native forbs include white clover (*Trifolium repens*), bur-clover (*Medicago polymorpha*), bindweed (*Convolvulus arvensis*), summer mustard (*Hirschfeldia incana*), English plantain (*Plantago lanceolata*), white horehound (*Marrubium vulgare*), milk thistle (*Silybum marianum*), black mustard (*Brassica nigra*), and wild geranium (*Geranium dissectum*). Native grassland areas support beardless wild rye (*Elymus triticoides*) and meadow barley (*H. brachyantherum* ssp. *brachyantherum*). Mexican rush also occurs sporadically in upland habitats across both parcels (Vollmar Natural Lands Consulting 2021a).

A number of large mature willows (*Salix* spp.), Mexican fan palms (*Washingtonia robusta*), a mid-sized walnut tree (*Juglans* sp.), and smaller cultivated fruit trees are present immediately outside the east boundary of the 78-acre parcel, visible in Figure 1-2 (Vollmar Natural Lands Consulting 2021a).

Additionally, both parcels exhibit numerous large and small mammal burrows, likely created by California ground squirrel (*Otospermophilus beecheyi*) and pocket gopher (*Thomomys bottae*). Upland habitat on the 78-acre parcel supports several large California ground squirrel burrow complexes, and numerous additional ground squirrel burrows are present within berms and levees. Smaller gopher burrows are concentrated in wetland and grassland habitats. Several California ground squirrel individuals were observed during site visits conducted in March 2020 (Vollmar Natural Lands Consulting 2021a).

N

0 200 400
FEET

Legend

Symbols

- Miller Ditch (approximate; not surveyed)
- Miller Ditch culvert (approximate; not surveyed)

Potential Jurisdictional Features (Federal and State)

- Ditch
- Seasonal wetland swale
- Seasonal wetland

Potential Jurisdictional Features (State)

- Ditch
- Seasonal wetland swale
- Seasonal wetland
- Emergent wetland

Vollmar NATURAL LANDS CONSULTING

Source: *modified from* Vollmar Natural Lands Consulting 2020b

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Figure 2-2. Potential Jurisdictional Waters, 78-Acre Parcel
Newman Community Conservation Area Master Plan
City of Newman

Redtail Consulting
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Figure 2-3. Potential Jurisdictional Waters, 24-Acre Parcel
Newman Community Conservation Area Master Plan
City of Newman

Special-Status Species on NCCA Parcels

A number of special-status species have the potential to be present on the NCCA site, including plants as well as wildlife. The site is not located within designated critical habitat for any listed species (Vollmar Natural Lands Consulting 2021a).

Table 2-2 lists the special-status plants with potential to occur on the NCCA parcels. None of the species considered potentially present is state- or federally listed; they qualify for special status due to their inclusion in the California Native Plant Society's rare plant inventory, which assigns California Rare Plant Rank (CRPR) status based on distribution and threat level. Additional special-status plants are known from the region, but are believed to be absent from the parcels due to unsuitability of habitat and/or distance from the species' primary range.

Protocol-level surveys of the NCCA parcels for special-status plants were conducted in spring – summer 2020. Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*) (CRPR 4.2 "watch list") was observed on both the 78-acre parcel and the 24-acre parcel. None of the other species listed in Table 2-2 was found to be present. However, presence and local distribution can vary from year to year, and the potential for presence of the other five species in future years probably cannot be entirely ruled out.

Table 2-2. Special-Status Plants Potentially Present at NCCA Site

Species	Rank*	Habitat	Potential to Occur in Plan Area
Heartscale *Atriplex cordulata* var. *cordulata* (Annual herb)	1B.2	Saline or alkaline chenopod scrub, meadows and seeps, valley and foothill grasslands, on sandy substrates, at elevations up to 70 meters above sea level	Wetlands at NCCA site offer suitable habitat. Closest documented occurrence is 5 miles away
Crownscale *Atriplex coronata* var. *coronata* (Annual herb)	4.2	Alkaline chenopod scrub, valley and foothill grasslands, vernal pools, commonly on clay substrates, at elevations up to 200 meters above sea level	Wetlands at NCCA site offer suitable habitat
Lesser saltscale *Atriplex minuscula* (Annual herb)	1B.1	Alkaline chenopod scrub, playas, valley and foothill grasslands with sandy substrates, at elevations of 15 – 45 meters above sea level	Wetland and mesic uplands at NCCA site offer suitable habitat
Vernal pool smallscale *Atriplex persistens* (Annual herb)	1B.2	Alkaline vernal pools, at elevations less 115 meters above sea level	Wetlands at NCCA site offer suitable habitat. Closest documented occurrence is 3.3 miles away
Parry's rough tarplant *Centromadia parryi* ssp. *rudis* (Annual herb)	4.2	Alkaline, vernally mesic seeps, roadsides, valley and foothill grasslands, vernal pools, at elevations up to 100 meters above sea level	Wetland and mesic uplands at NCCA site offer suitable habitat; species was observed on both parcels during protocol surveys conducted in 2020
San Joaquin spearscale *Extriplex joaquiniana* (Annual herb)	1B.2	Alkaline chenopod scrub, meadows and seeps, playas, valley and foothill grasslands, at elevations up to 350 meters above sea level	NCCA site offers suitable habitat. Closest documented occurrence is 4 miles away

* Refers to California Native Plant Society's California Rare Plant Ranks and California threat level codes

Key to California Rare Plant Ranks
CRPR 1A = Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B = Plants rare, threatened, or endangered in California and elsewhere
CRPR 2B = Plants rare, threatened, or endangered in California but more common elsewhere

Species	Rank*	Habitat	Potential to Occur in Plan Area

CRPR 3 = More information is needed about plant
CRPR 4 = Plants of limited distribution ("watch list")

Key to California Threat Level Codes
1 = seriously threatened in California
2 = fairly threatened in California
3 = not very threatened in California

Source: Vollmar Natural Lands Consulting 2021a

Special-status wildlife species that may occur at the NCCA site are identified in Table 2-3. Numerous additional special-status species—including Valley elberberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB), several amphibians, and a number of special-status bird, bat, and other small mammal species—are known from the region but are not expected to use the NCCA parcels, due to unsuitability of habitat and/or distance from the locations of documented occurrences (Vollmar Natural Lands Consulting 2021a).

Protocol-level surveys for large branchiopods—Conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*B. longiantenna*), vernal pool fairy shrimp (*B. lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*)—were conducted during winter 2019 – 2020. All four of these species were found to be absent from the NCCA site (Vollmar Natural Lands Consulting 2021a).

California tiger salamander (*Ambystoma californiense*) (CTS) (state and federally listed as Threatened) is also expected to be absent from the NCCA site. Although the uplands at the site offer potential refugial habitat for the species, the site does not offer suitable breeding habitat, is more than 3.6 miles (the maximum distance CTS have been documented as traveling overland) away from the closest known CTS occurrence, and is surrounded by an extensive buffer of unsuitable agricultural lands (Vollmar Natural Lands Consulting 2021a).

Table 2-3. Special-Status Wildlife Potentially Present at NCCA Site

Species	Status	Habitat Requirements	Potential to Occur in Plan Area
Amphibians and Reptiles			
Northwestern pond turtle *Actinemys marmorata*	SSC	Permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, unlined irrigation canals, and reservoirs	**Low potential.** Irrigation ditches at NCCA site provide marginal habitat, and closest documented occurrence is 2 miles away, but species is highly mobile and could use NCCA parcels for dispersal when moving between areas of better habitat
Western spadefoot *Spea hammondii*	SSC	Grasslands with shallow temporary pools offer optimal breeding habitat. Adults remain in underground burrows during most of the year	**Low potential.** Seasonal wetlands at NCCA site provide marginal breeding habitat due to very shallow water and fairly short ponding duration. Adjacent annual grassland uplands could provide suitable refugia during dry season, but closest documented occurrence is 6.7 miles away. Species is unlikely to be present but cannot be conclusively ruled out
Giant garter snake *Thamnophis gigas*	FT/ST/SSC	Primarily observed in marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields; occasionally found in slow-moving creeks. Prefers locations with vegetation close to the water for basking	**Low potential.** Species has been thoroughly studied and there is only one known breeding population in the San Joaquin Valley. Ditches at the NCCA site that offer aquatic habitat connecting to Newman Wasteway and ultimately the San Joaquin River provide potentially suitable habitat. Closest documented occurrence is 2 miles away, is from 1976, and is imprecisely

Species	Status	Habitat Requirements	Potential to Occur in Plan Area
			located, but species' presence cannot be conclusively ruled out
Birds			
Tricolored Blackbird *Agelaius tricolor*	SC/SSC (nesting)	Forages in pastures, agricultural fields, rice fields, and feedlots; nests in freshwater marshes with tules or cattails, or in dense thickets of willow, thistle, wild rose, or blackberry in close proximity to open water	**Low potential.** Species occurs year-round in area; closest documented occurrence is 0.6 mile away. Suitable foraging habitat is present in and around the NCCA site but the site does not provide nesting habitat; the perennial marsh in the central swale is too small and degraded and lacks the density the species requires
Burrowing Owl *Athene cunicularia*	SSC	Found in open, treeless areas with low, sparse vegetation, such as grasslands, deserts, pastures, agricultural fields, and levee embankments. Nests in small mammal burrows	**Potential.** NCCA site provides grassland habitat with small mammal burrows and offers suitable breeding, foraging, and refuge habitat. Closest documented occurrence is 11.7 miles away but species is mobile and may use the site
Swainson's Hawk *Buteo swainsoni*	ST (nesting)	Forages in open grasslands, prairies, and agricultural fields; nests adjacent to riparian habitat	**Potential.** Large trees suitable for nesting are present adjacent to boundaries of NCCA site and suitable foraging habitat is available in and around the site. Species is known to nest in the region during spring and summer and has been observed foraging onsite
Northern Harrier *Circus hudsonius*	SSC (nesting)	Frequents meadows, grasslands, open rangelands, desert sinks, and fresh- and saltwater emergent wetlands; seldom found in wooded areas. Typically found in flat or hummocky open areas with tall, dense grasses, shrubs, and sedges for nesting, cover, and feeding	**Low potential.** NCCA site provides suitable nesting and foraging habitat in freshwater emergent wetlands and dense grasslands. Closest documented occurrence is 13.5 miles away, but species is mobile and may be present
Loggerhead Shrike *Lanius ludovicianus*	SSC (nesting)	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Nests in thorny vegetation, trees, shrubs, brush piles, or tumbleweeds	**Potential.** NCCA site's open habitat and fencing provide suitable foraging and resting habitat and species has been observed onsite
Yellow-billed Magpie *Pica nuttalli*	BCC (nesting)	Prefers open oak and riparian woodland or farm and ranchland with tall trees in the vicinity of grassland, pasture, and cropland	**Potential.** Grassland at the NCCA site and adjacent trees provide suitable habitat
Mammals			
American badger *Taxidea taxus*	SSC	Prefers open areas and may also frequent brushlands with little groundcover. When inactive, dens underground	**Very low potential; likely absent.** Habitat at the NCCA site is marginal for species and no dens or other signs of the species were observed during the 2019 – 2020 biological surveys. Closest documented occurrence is 6.8 miles away. Species is not expected to be present
San Joaquin kit fox *Vulpes macrotis mutica*	FE/ST	Annual grassland, scrub, subshrub land. Dens in friable soils or enlarges smaller holes created by other animals	**Low potential.** Suitable grassland habitat is available throughout the NCCA site and the species' prey base of small mammals is present, but habitat at the site is largely disconnected from other suitable habitat in the area, no dens

Species	Status	Habitat Requirements	Potential to Occur in Plan Area
			were observed at the site during the 2019 – 2020 biological surveys, and closest documented occurrence is 3.6 miles away. Species is unlikely to use the NCCA site for breeding but may pass through or hunt on the site

Key to Status Abbreviations:
FT = federally listed as Threatened
FE = federally listed as Endangered
BCC = USFWS Bird of Conservation Concern
ST = state-listed as Threatened
SC = candidate for state listing
SSC = state Species of Special Concern

Source: Vollmar Natural Lands Consulting 2021a

In addition to the special-status species listed in Table 2-3, birds protected by the federal Migratory Bird Treaty Act may nest in the trees along the east boundary of the 78-acre parcel (Vollmar Natural Lands Consulting 2021a).

Project Elements

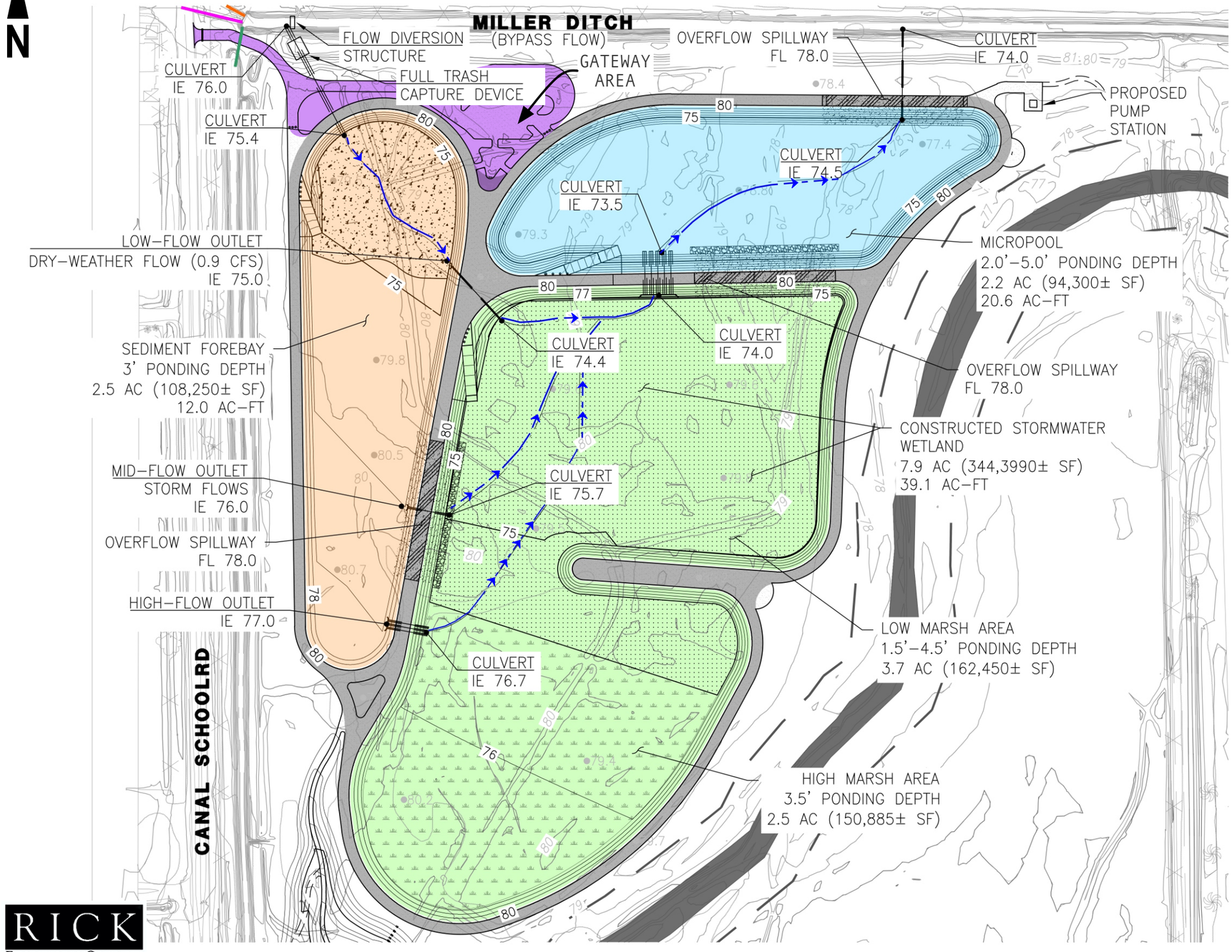
Initial conceptual designs for the four NCCA projects were developed independently by consultant teams retained by the City. In late summer and early fall 2020, the City hosted a series of contactless virtual charrette sessions to enable interaction between the four design teams. The goal of these sessions was to "dovetail" the footprints and features of the four projects to maximize long-term benefits to habitat function and value across the NCCA site, while taking advantage of new soil and hydrologic information collected by the wetland project team with funding from the City's Wetlands Restoration for Greenhouse Gas Reduction Program grant from DFW, which came under contract in summer 2020. This process resulted in modifications to the wetland and MDTW projects. The following descriptions of the NCCA projects reflect outcomes of the 2020 NCCA-wide charrette sessions.

NEWS Project

The NEWS project is planned to occupy approximately the northwest quadrant of the 78-acre parcel (Figure 1-2). As shown in Figure 2-4, it would include a 2.5-acre sediment settling forebay, about 8 acres of constructed wetland habitat for stormwater treatment (5.6 acres of low marsh habitat plus an additional 2.5 acres of high marsh habitat), and a 2.2-acre "micropool" with emergent wetland habitat for final polishing treatment. It is being designed to capture and treat both dry weather flows and storm runoff from a Drainage Management Area of 2,241 acres, which includes the urbanized City and surrounding agricultural lands, in events up to and including the 85th percentile, 24-hour storm event. Treatment in the NEWS wetlands would rely entirely on natural processes, including settlement, filtering, adsorption, degradation, plant uptake, and oxidation and reduction processes that are a function of soil condition, vegetation, residence time, and a combination of aerobic and anaerobic conditions.

Flows from the Miller Ditch would enter the NEWS facility via a passive diversion structure located at the northwest corner of the 78-acre parcel. The diversion structure would be equipped with a trash capture device to prevent rubbish and debris from entering the treatment wetlands. This is expected to be a debris separating baffle box or a similar structure, and is being designed to meet full trash capture (FTC) standards (i.e., ability to

Source: *modified from* RICK Engineering. 2020. Wetland System Routing Schematic, Newman Environmental Wetland System, City of Newman, CA (03/16/2020), scale: 1:1,800



RICK ENGINEERING COMPANY
San Luis Obispo

Redtail Consulting
Environment & Community

Figure 2-4. NEWS Project Concept
Newman Community Conservation Area Master Plan
City of Newman

capture all particles with a diameter of 5 millimeters or greater for the 1-year, 1-hour storm event for priority land use areas).

The diversion structure would deliver flows to the forebay, which would provide a ponding duration sufficient to allow sediment to settle out prior to flows entering the treatment wetlands. The proximal portion of the forebay immediately downstream of the inlet (approximately 0.79 acre in extent) would be equipped with a hardscape liner to enable periodic removal of accumulated sediment, as discussed in more detail in *Project Operations & Maintenance* below. The downstream portion of the forebay would be unlined. The forebay would also be equipped with permanent steel markers to measure sediment accumulation and alert O&M staff to the need for sediment removal (also discussed further in *Project Operations & Maintenance*).

Maximum ponding depth in the forebay would be on the order of 3 feet. From the forebay, three culverts at different elevations would deliver flows to the wetland area. Dry weather flows would enter the wetland via a low-level culvert and would remain in the low marsh area before moving on via passive flow into the micropool. The majority of flow from smaller storm events would also enter the wetland area via the low-level culvert, although events as small as the 1-year storm are expected to activate the mid- and higher-level culverts at peak flow. In larger storm events, the mid- and higher-level culverts would convey a larger percentage of flow, and the low and high marsh areas would be more extensively and deeply inundated. Hydraulic gradients are being designed so that the wetland area would empty completely into the micropool between storm events, mimicking natural seasonal wetland hydrology. Like the downstream portion of the forebay, the wetland area would be unlined, enabling some infiltration of treated water into the subsurface as in a natural wetland.

The micropool would remain permanently inundated except in the driest years, consistent with natural emergent wetland habitat. The micropool would be equipped with a liner to prevent infiltration, since the separation between the micropool invert and shallow groundwater in this portion of the 78-acre parcel may not meet the RWQCB's 3-foot standard, particularly in wet years. Treated water from the micropool would be discharged by passive flow back into the Miller Ditch.

A small pump station may also be included to enable drawdown of the micropool for periodic inspection and maintenance of the liner. The pump station was not included in the budget requested under Proposition 1 grant funding from the SWRCB, but may be added at a later time, funded by the City. If constructed it would have a footprint on the order of 10 feet by 10 feet and a height of no more than about 10 feet. The pump station would discharge from the micropool into the adjacent Miller Ditch.

Table 2-4 summarizes the NEWS project's design capture and treatment capabilities.

Table 2-4. NEWS Project Stormwater Capture, Infiltration, and Treatment Overview

Metric	Volume
Drainage Management Area 85th percentile, 24-hr runoff volume	31.9 acre-feet
NEWS project runoff capture (storage) capacity	42.1 acre-feet
Percent of 85th percentile, 24-hour storm event captured	100%
Average annual volume captured and treated	1,156 acre-feet
Average annual volume infiltrated into groundwater	45 acre-feet
Average annual return to Miller Ditch	1,111 acre-feet

Source: RICK Engineering 2020

The NEWS project would also include unpaved roads/trails to enable O&M access. These would be opened to the public for walking, bicycling, jogging, and other non-motorized recreational use, with split-rail fencing around the forebay, wetland areas, and micropool providing for safety and discouraging entry into sensitive habitat.

Accessed via a driveway from Canal School Road, a gateway area at the northwest corner of the facility would offer an O&M staging area, bilingual English/Spanish interpretive signage, and native tree and shrub landscaping, providing a functional and welcoming entry into the facility. Parking for 8 – 10 vehicles would be provided, and there would also be an area suitable for use as a bus drop-off. The gateway would be hardscaped with permeable pavers, and ADA parking stalls consistent with applicable standards would be included in the parking area. Night lighting is not planned at this time, although the City may add limited solar-powered lighting in the future if it proves to be needed.

The simplest route to access the NEWS project from Canal School Road would be to expand and improve the existing access immediately south of the intersection with Inyo Avenue; this is the alignment shown on Figure 2-4. However, the County may require a greater separation from the intersection; in this case, access to the gateway would be shifted farther south along Canal School Road and the City would provide a bridge and/or culvert to maintain Miller Ditch flows unimpeded. Alternately, the access shown on Figure 2-4 could be reconfigured slightly to align more directly with Inyo Avenue. It is the City's intent to work with the County as design proceeds, to ensure that all applicable County roadway and safety standards are met.

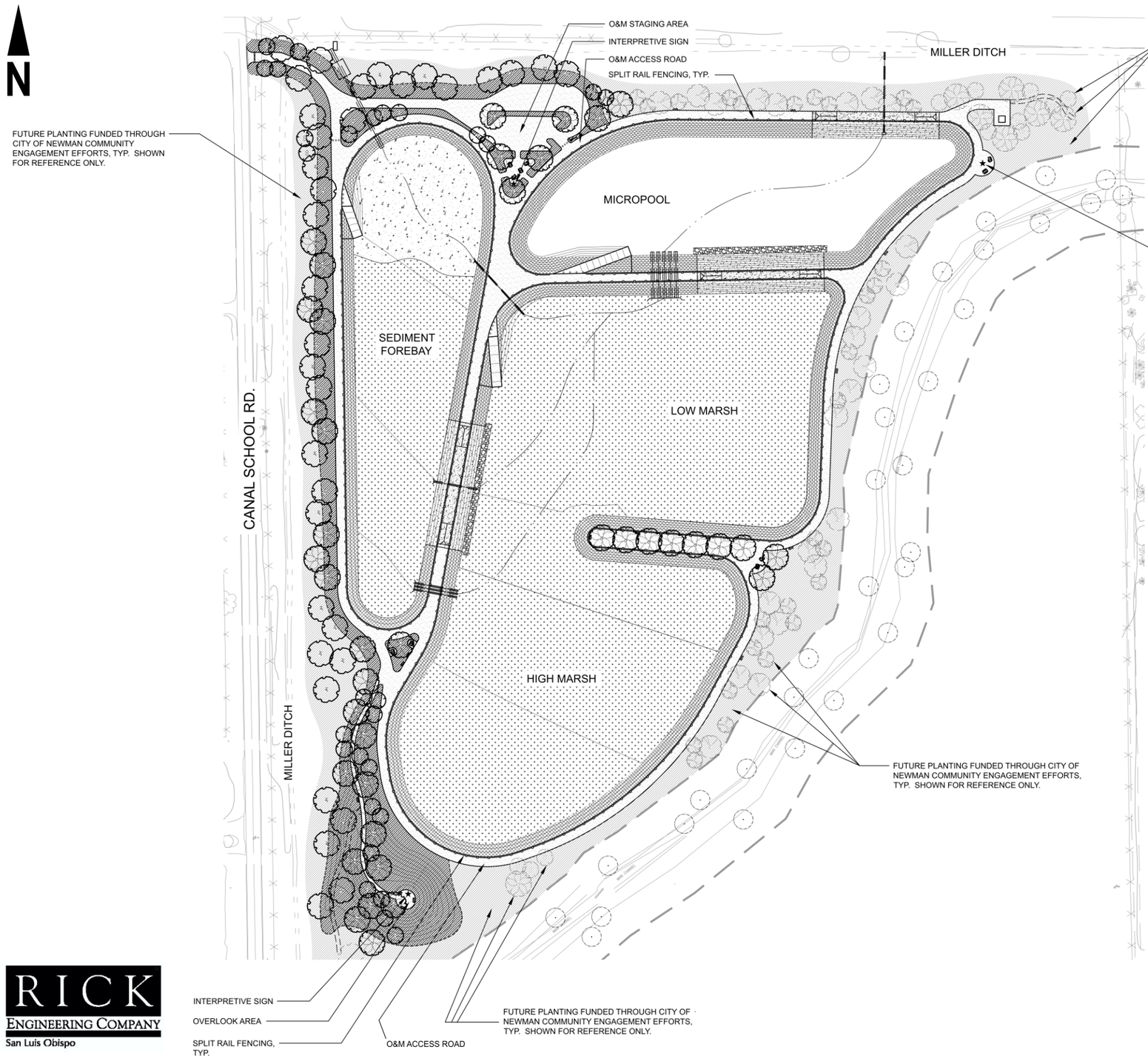
Additional native trees and shrubs would be planted along the access roads/trails at the west side of the forebay, and bordering the wetland area and micropool, for a total of approximately 110 trees and 5,300 shrubs in addition to the 520,000 square feet of wetland vegetation planted in the treatment ponds (Figure 2-5, which also shows the locations of additional interpretive signage along the O&M access/trails). Non-woody native understory species would be included with the tree and shrub plantings where appropriate. Table 2-5 shows the proposed plant palette by planting zone; as indicated on Figure 2-5, plantings would include a combination of container stock of various sizes and hydroseeding. Further tree plantings, also shown on Figure 2-5, may be added by future City projects in collaboration with the community.

During the vegetation establishment period immediately following planting, temporary irrigation would be provided along Canal School Road and for the basin slope and gateway planting areas. Long-term irrigation would be provided for the gateway area but is not expected to be necessary in other portions of the NEWS project footprint. Irrigation would be water-efficient drip or rotor/rotator overhead spray type. Extension of City water service to support gateway irrigation is discussed further in *Water Service Extension* below.

Table 2-5. NEWS Project Plant Palette

Location	Species
Uplands, including gateway area	**Trees:** western redbud (*Cercis occidentalis*) black walnut (*Juglans hindsii*) California sycamore (*Platanus racemosa*) Valley oak (*Quercus lobata*) blue elderberry (*Sambucus nigra*) **Shrubs:** marsh baccharis (*Baccharis douglasii*) golden bush (*Isocoma menziesii*) California rose (*Rosa californica*) **Non-woody species:** common yarrow (*Achillea millifolium*)

Source: *modified from* RICK Engineering. 2020. Improvements Plans for Newman Environmental Wetland System, Newman, CA, 30% Construction Documents (04/10/2020), Sheet 11: Overall Site Plan, scale: 1:960



Legend

TREES SUCH AS:

SYMBOL	BOTANICAL NAME / COMMON NAME	SIZE
QL	Quercus lobata / Valley Oak	24" Box / 36" Box
JH	Juglans hindsii / Black Walnut	36" Box
PR	Platanus racemosa / California Sycamore	24" Box
CO	Cercis occidentalis / Western Redbud	15 Gal. /
SN	Sambucus nigra / Blue Elderberry	15 Gal. /
·	Riparian tree species (By others)	N/A

SHRUBS
AT SEDIMENT FOREBAY, HIGH/LOW MARSH & MICROPOOL (BASIN SIDE-SLOPES) SUCH AS:

SYMBOL	BOTANICAL NAME / COMMON NAME	SIZE
	Anemopsis californica / Yerba mansa	4" Pot
	Baccharis douglasii / Marsh Baccharis	4" Pot
	Distichlis spicata / Saltgrass	4" Pot
	Leymus triticoides / Beardless Wild Rye	4" Pot

SHRUBS
AT UPLAND AREAS SUCH AS:

SYMBOL	BOTANICAL NAME / COMMON NAME	SIZE
	Rosa californica / California Rose	5 Gal
	Baccharis douglasii / Marsh Baccharis	1 Gal
	Isocoma menziesii / Golden Bush	5 Gal

HYDROSEED MIX
AT UPLAND AREAS SUCH AS:

SYMBOL	BOTANICAL NAME / COMMON NAME
	Achillea millifolium / Common Yarrow
	Festuca californica / California Fescue
	Eschscholzia californica / California Poppy
	Hordeum brachyantherum / California Meadow Barley
	Sysrinchium bellum / Blue-Eyed Grass
	Artemisia doulasiana / Douglas Mugwort

HYDROSEED MIX
AT SEDIMENT FOREBAY & HIGH/LOW MARSH (BASIN BOTTOM) SUCH AS:

SYMBOL	BOTANICAL NAME / COMMON NAME
	Schoenoplectus acutus / Common Tule
	Typha latifolia / Bulrush

0 80 160 240
FEET

RICK ENGINEERING COMPANY
San Luis Obispo

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Figure 2-5. NEWS Project Overview Planting Plan
Newman Community Conservation Area Master Plan
City of Newman

Location	Species
	Douglas mugwort (*Artemisia douglasiana*) California fescue (*Festuca californica*) California poppy (*Eschscholzia californica*) California meadow barley (*Hordeum brachyantherum*) blue-eyed grass (*Sisyrhinchium bellum*)
Basin side slopes (forebay, wetland area, micropool)	**Shrubs:** marsh baccharis (*Baccharis douglasii*) **Non-woody species:** yerba mansa (*Anemopsis californica*) saltgrass (*Distichlis spicata*) beardless wild rye (*Leymus triticoides*)
Forebay, high and low marsh basin bottom areas	**Wetland species:** common tule (*Schoenoplectus acutus*) bulrush (*Typha latifolia*)

Wetland Project

The wetland project would occupy the majority of the central swale on the 78-acre parcel and extend to the 24-acre parcel (Figure 1-2), recreating a connected mosaic of wetland and perennial grassland habitat resembling historic conditions on the NCCA site as inferred based on historic aerial photographs, historic topographic maps, and intact natural reference sites in the vicinity. As shown on Figure 2-6, this would include:

- enhancement of 1.4 acres of existing marsh habitat in the central swale (0.78 acre on the 78-acre parcel and 0.626 acre on the 24-acre parcel)
- reestablishment of another 6 acres of marsh within the central swale (4.55 acres on the 78-acre parcel and 1.49 acres on the 24-acre parcel)
- reestablishment of 0.14 acre of seasonal wetlands adjacent to the central swale in the northeast corner of the 78-acre parcel
- planting of at least 50 riparian trees along the south edge of the central swale on the 78-acre parcel
- reestablishment of native perennial grasslands in disturbed upland areas south of the central swale on the 78-acre parcel
- enhancement of existing ephemeral wetlands on the 24-acre parcel
- discontinuation of the current practice of flood irrigation that introduces unseasonable water flows to the NCCA parcels
- modifications to the grazing regime on the 78-acre parcel, under a new Grazing Management Plan tailored to supporting wetland function and value

Table 2-6 shows the anticipated plant palette for the wetland project. Trees planted along the central swale would either be appropriate nursery stock or cut stakes from a donor site that offers appropriate species. Plantings in marsh and seasonal wetland areas would likely rely primarily on division and replanting of common tule and broadleaf cattail already present on the site, although collected donor material and/or nursery stock may also be used, depending on availability and cost. Perennial grassland areas would be planted from commercial seed. Other upland areas disturbed during construction would also be planted with a commercial

seed mix, using species appropriate to the site. Inoculum[2] used to propagate suitable species in ephemeral wetland areas would be collected from suitable donor sites in the project region.

The City team has contacted land managers at Great Valley Grasslands State Park, San Luis National Wildlife Refuge, and a private landowner in the vicinity of the community of Ingomar. At present, the team is in the process of discussing and negotiating possible inoculum collection with all three of these entities. Meetings and site access agreements have been complicated by restrictions placed in response to the COVID-19 pandemic, so formal access authorizations have not been finalized at this time. The final location of inoculum collection is therefore undetermined as of the preparation of this Initial Study, but would be within the western San Joaquin Valley region as close to the NCCA site as possible, and would likely be one of these three potential sources.

Table 2-6. Wetland Project Plant Palette

Location	Species
Marsh and seasonal wetlands in central swale	common tule (*Schoenoplectus acutus*) broadleaf cattail (*Typha latifolia*) Mexican rush (*Juncus mexicanus*)
Central swale riparian areas	valley oak (*Quercus lobata*) black walnut (*Juglans hindsii*) California sycamore (*Platanus racemosa*) western redbud (*Cercis occidentalis*) blue elderberry (*Sambucus nigra*)
Perennial grasslands	beardless wild rye (*Leymus triticoides*) meadow barley (*Hordeum brachyantherum*)
Ephemeral wetlands	suitable inoculum from donor sites in project region
Disturbed upland areas	soft brome (*Bromus hordeaceus*) Mediterranean barley (*Hordeum marinum*)

Source: Vollmar Natural Lands Consulting 2020

Excess materials excavated during habitat enhancement and restoration would be placed within the Newman Nature Park footprint, where they would be contoured to integrate them into the landscape and revegetated with a native seed mix for stabilization and aesthetic appearance. The City intends to continue the collaborative charrette process to ensure that placement of excess materials is supportive of both projects, and that future development of Nature Park trails and other amenities is not impeded.

More detail on key aspects of the wetland project is provided in the paragraphs that follow. The location and extent of habitat features is shown in Figure 2-6, based on the 30% design for the wetland project. The new Grazing Management Plan is discussed further under *Project Operations & Maintenance* below.

Marsh Enhancement

The central swale currently supports approximately 1.76 acres of wetland, about 1.13 acres on the 78-acre parcel and about 0.63 acre on the 24-acre parcel. Except for a small patch of common tule and broad-leaved cattail at the east edge of the 78-acre parcel, these features generally lack marsh vegetation, instead supporting a mixture of seasonal wetland vegetation, including alkali-adapted species on the 24-acre parcel.

[2] *Inoculum* refers to an unsorted mixture of vegetation and soil containing appropriate seed bank that is collected from natural "donor" sites analogous to the habitat being restored. It is spread or placed in the restoration area to enhance colonization by vegetation suitable to the restored habitat. This is a standard practice in vernal pool/ephemeral wetland restoration.

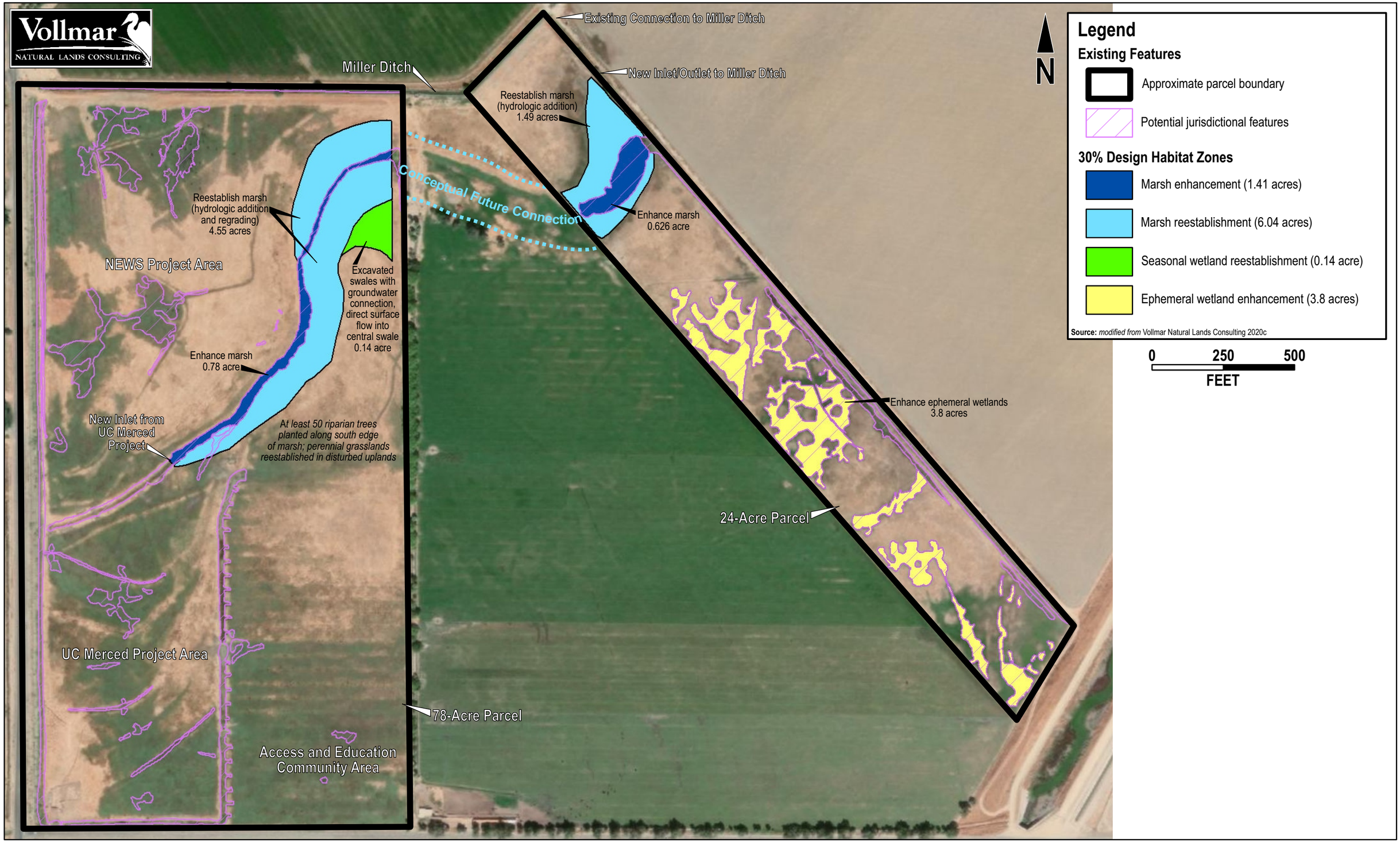

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Figure 2-6. Wetland Project 30% Design
Newman Community Conservation Area Master Plan
City of Newman

Little or no topographic modification would be needed for the portions of the swale that are already wetlands. In these areas, enhancement would rely primarily on addition of water from the Miller Ditch. On the 78-acre parcel, water would be added from the west end of the central swale. In the next few years, water would be diverted directly into the central swale from the Miller Ditch, but when the MDTW project is completed, its outflow (treated Miller Ditch water) would be directed into the west end of the central swale as a long-term source to support improved marsh quality. On the 24-acre parcel, Miller Ditch water would be added to the central swale from the east end, out of the Miller Ditch via an existing ditch and weir.

Over the long term, the City hopes to reconnect the central swale between the 78-acre and 24-acre parcels, enabling throughgoing west-to-east flow similar to the historic condition of this disconnected tributary channel. Water would be diverted from the Miller Ditch at the south end of the 78-acre parcel, move through the MDTW treatment wetlands, enter the west end of the central swale, and flow across both parcels, returning to the Miller Ditch at the north end of the 24-acre parcel, via the existing ditch and weir system. This is outside the scope of the projects analyzed in this Initial Study and is not possible at the present time as the intervening parcel is privately owned and is currently under cultivation. However, the City has discussed the potential to purchase all or part of this parcel with the owner at some point in the future and will continue to explore a possible reconnection of the central swale (which would be analyzed in a separate future CEQA document) if a purchase becomes feasible.

Marsh Reestablishment

On both parcels, the central swale includes additional low areas that do not presently support wetlands. On the 78-acre parcel, topographically lower portions of these areas support ruderal grasslands and higher portions support non-native annual grasslands. On the 24-acre parcel, they support ruderal alkali habitat. These areas would be converted to marsh habitat through a combination of the addition of Miller Ditch water and grading to broaden the low areas of the swale. This would result in the reestablishment of up to 6 acres of marsh habitat.

A total of about 550 cubic yards of soil would be removed for marsh reestablishment. The maximum cut depth to would be approximately 2 feet, with an average cut depth across the reestablishment area of < 0.5 foot. Finished side slopes following restoration would be within the existing slope range for the central swale (0% – 6.5%).

Riparian Plantings

At least 50 riparian trees from the project planting list (Table 2-6) would be planted in suitable locations along the south side of the central swale, both inside and outside the wetland area. The intent is to create broad a broad vegetated marsh lined with riparian trees in a quasi-riparian corridor.

Perennial Grassland Reestablishment

Native perennial grasslands would be reestablished in disturbed upland areas surrounding the reestablished wetlands on the 78-acre parcel. Placement of fill soils excavated during wetland establishment would create unvegetated areas. Selected portions of these disturbed areas totaling at least 1 acre would be broadcast-seeded with a native grass seed mix composed primarily of beardless wild rye and meadow barley, as identified in Table 2-6.

Ephemeral Wetland Enhancement

The 24-acre parcel currently supports approximately 3.8 acres of former ephemeral wetland habitat that has been degraded by the addition of unseasonable summer irrigation water to improve grazing. Historically, these areas would have been subject only to winter inundation from direct precipitation, overland runoff, and sub-

surface flow from their immediate surroundings. They would historically have supported a mix of native annual and perennial herbs and cool-season grasses. At present, due to summer irrigation, they are dominated by perennial non-native warm-season grasses such as bermuda grass (*Cynodon dactylon*).

At least 2.5 acres and as much as all 3.8 acres of these degraded areas would be restored to their historical function. Restoration would consist primarily of discontinuing unseasonable irrigation by repairing the berms between this parcel and neighboring irrigated fields. Additional minor earth-moving may be conducted to open breaks in berms that have been constructed across the 24-acre parcel. Additionally, to speed up recolonization by native species, portions of the pools would be scraped to remove competing non-native vegetation, and seeded with inoculum collected from extant ephemeral wetlands in the region. Grading in this area would be limited; no more than about 50 cubic yards of soil would be removed, and side slopes and pool depths would remain at their current elevations. No on- or off-site water flow is expected in this area; all precipitation onto this area should remain in place and infiltrate or evaporate over the course of weeks to months, as in natural ephemeral wetland systems.

Inoculum volumes for vernal pool restoration projects range from about 1 cubic yard per acre up to hundreds of cubic yards per acre. Typically, the high end of this range is used only when the donor pools are being destroyed by a project, and the material is being donated to created mitigation pools. Because of constraints on transportation between donor and project sites, 5 – 10 cubic yards of inoculum are expected to be used for the wetland project. To minimize disturbance to the donor wetlands, inoculum would likely be harvested by mowing and vacuuming of donor wetlands, rather than using a bulldozer or other heavy equipment to scrape the soil surface. Inoculum would be spread in the restored pools at the beginning of the wet season, ideally just before a heavy rain, which would help to prevent inoculum blowing away before germination. As mentioned above, the City's consultant team is in the process of identifying a location or locations where suitable inoculum can be harvested for ephemeral wetland restoration. Possibilities include Great Valley Grasslands State Park, San Luis National Wildlife Refuge, and privately owned lands in the vicinity of Ingomar.

Newman Nature Park

The Newman Nature Park would be located within the 78-acre parcel. As shown on Figure 2-7, the heart of the project would be a new community area located at the southeast corner of the parcel. Various facilities are possible in this area, potentially including a central plaza, an outdoor classroom area, wildlife and native plant demonstration gardens, a rainwater harvesting and reuse demonstration area, composting and greywater demonstration areas, a nature-themed play area, an open-air shade structure, and a picnic area. Larger demonstration gardens are tentatively envisioned as at-grade areas defined by appropriate edging materials, but some of the smaller gardens could be placed in raised beds to increase their visibility and facilitate accessibility to visitors of all ages and abilities.

In addition to the facilities selected with community input, the community area would also offer restrooms, a hydration station, and wildlife-proof trash and recycling receptacles as well as an O&M storage building. The restrooms would be equipped with composting toilets. Handwashing sinks located outside the restrooms are planned to drain to a vegetated planter and French drain system intended to demonstrate infiltration of greywater, following applicable County standards. The outdoor classroom area would also include an outdoor sink draining to the same type of greywater demonstration planter/French drain. All facilities would meet ADA accessibility standards.

A 10-foot-wide "main trail" would extend from the community facilities area. As shown on Figure 2-7, two alignments are under consideration. Ultimately, the City hopes to construct a perimeter trail circling the 78-acre

Aerial Photograph Source: GoogleEarth (imagery date 07/18/2019, downloaded 02/09/2021)

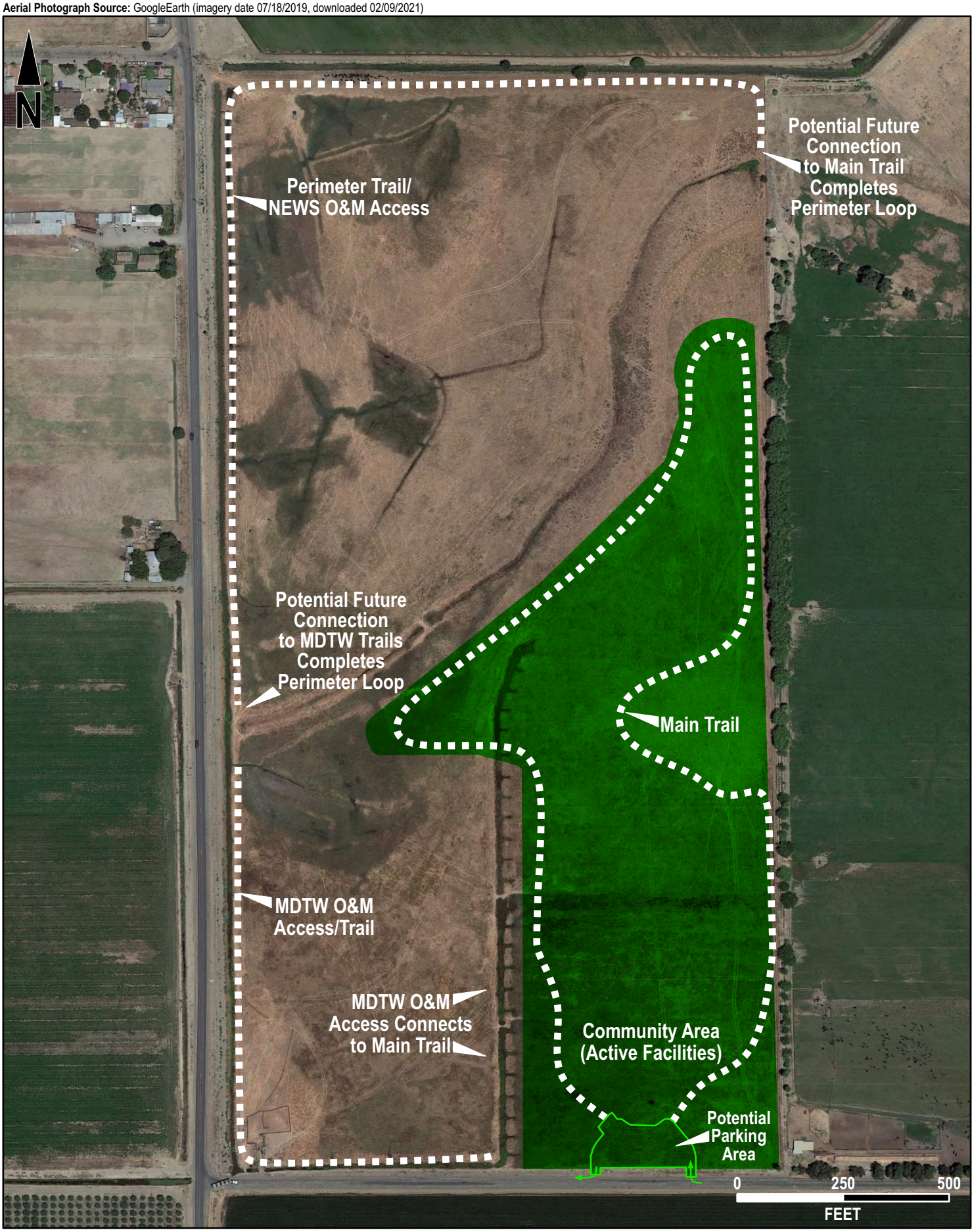

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Figure 2-7. Newman Nature Park Concept
Newman Community Conservation Area Master Plan
City of Newman

parcel, connecting the community area with the NEWS and MDTW project trails and enabling visitors to view the restored wetlands and the NEWS and MDTW project facilities. In the interim, however, depending on funding availability, the City may construct a shorter trail loop focused in the eastern portion of the 78-acre parcel and offering views of the restored wetlands. The perimeter trail could then be completed over the longer term by connecting the shorter loop with O&M access/trails constructed as part of the NEWS and MDTW projects. This is shown very conceptually on Figure 2-7; internal O&M access/trail configurations within the NEWS and MDTW projects may evolve, and there would be multiple options to connect the perimeter trail with the Nature Park main trail.

The City is also considering creating a network of 6-foot-wide trails that branch from the main Nature Park trail in the east-central portion of the 78-acre parcel (Figure 2-7), but their configuration has not been laid out in detail at this time and may depend on community input.

As Figures 1-2 and 2-7 show, Nature Park trails would be constructed in close proximity to habitat restored—and protected over the long term—under the wetland project. As mentioned in *Wetland Project* above, the City intends to continue the collaborative charrette process to ensure that the Nature Park trails are configured in a way that respects the long-term commitment to preservation of enhanced and restored wetland, riparian, and native grassland habitat while enabling the community to view and enjoy these resources.

All of the Nature Park trail(s) would be suitable for pedestrian, bicycle, and other non-motorized use and would meet ADA accessibility standards. For much of their length, they would be surfaced with decomposed granite (DG) but elevated boardwalks could be used for segments where a trail is adjacent to or crosses through sensitive restored habitat. Rustic split-rail or other suitable fencing would be used along key sections to discourage access into sensitive areas.

At strategic locations along the main trail, "trail nodes" would provide shade, seating, and interpretive signage with information on site habitats and wildlife as well as the Newman area's Native American heritage. Signage would be bilingual in Spanish and English. Signage addressing Native American heritage will be co-developed with local tribal parties to ensure accuracy and sensitivity. Trail nodes would also offer wildlife-proof trash and recycling receptacles to discourage littering. Nature-themed play equipment and additional outdoor learning areas could also be provided at trail nodes, depending on the community's preferences.

Vehicle parking would be located adjacent to Brazo Road, with driveway access from the road clearly marked, potentially by an entry monument sign. For purposes of this analysis, a total of 35 parking stalls, including 5 ADA stalls, is assumed, although this may be adjusted going forward. With the exception of the ADA parking stalls, which would be concrete or asphalt, the parking area would be DG-surfaced for a more natural appearance and improved permeability. A site entry adjacent to the parking area would provide wayfinding signage; depending on the final trail configuration, an additional site entry with similar signage may be included to welcome visitors accessing the community area via trails from the north side of the parcel. Pending further community input, it is also anticipated that bicycle parking would be provided in the community area, with a bus drop-off at the front of the community area complex to convenient access for larger groups, including school groups and seniors. If outdoor classroom areas are provided at trail nodes, they would also provide bicycle parking to accommodate bicycle access to the outlying classroom areas. Solar-powered nighttime security lighting would be provided where appropriate.

Newman Nature Park facilities would be designed in a regional vernacular style, focused on agricultural forms, functionality, longevity, and access to local materials. Landscaping in the parking area—and elsewhere, if provided—would use site-appropriate California native species.

Use of hardscape would be minimized to the extent feasible at the Newman Nature Park. Where hardscape is necessary, it would be graded to drain to adjacent planted areas (gardens or landscaping) to maximize rain capture. Drainage would be via sheet flow, with cobbled inlets where needed.

MDTW Project

The MDTW project is being designed to focus on removal or nitrate and phosphorus, key contaminants in agricultural tailwater. It would occupy about 16 acres in the southwest quadrant of the 78-acre parcel. This project is still in preliminary planning stages, but Figure 2-8 illustrates the conceptual design and general location of project features.

Flow from the Miller Ditch would be routed to the project forebay via the existing un-named ditch that parallels the south boundary of the 78-acre parcel along Brazo Road, entering the project at its southeast corner. As at the NEWS project, the forebay would serve to capture sediment load and prevent siltation of the treatment wetlands, and the proximal portion of the forebay would be hardscaped to facilitate periodic sediment removal. Hardscape is expected to have an extent on the order of 0.5 acre.

From the forebay, water spreaders would distribute flows into a sinous series of vegetated wetland cells for treatment by natural wetland processes of settlement, uptake, adsorption, degradation, oxidation, and reduction. Unlike the NEWS project, wetland cells at the MDTW project are intended to retain some water throughout the year, since flow in the Miller Ditch is year-round. Because recent soil studies suggest that soils are fairly permeable in the project footprint (Vollmar Natural Lands Consulting 2020), the wetland cells are expected to be lined by installing a lift of low-permeability clay or an approved artificial liner in the shallow subsurface.

Table 2-7 summarizes estimated normal-year input, ouflow, and retention times at the MDTW project. Total input to the MDTW would include diversions from the Miller Ditch, plus a minor contribution from direct rainfall received by the wetlands. Flow in the Miller Ditch in turn reflects two sources: diversions from the CCID's main canal to the west, and return flow of agricultural tailwater from surrounding cultivated lands. Figures in Table 2-7 reflect results of preliminary flow monitoring in the Miller Ditch (Rodal Morales et al. 2020) and modeled values for agricultural runoff and wetland evapotranspiration. As shown in the table, Miller Ditch inflow to the MDTW is expected to average about 3,723 cubic meters per day (m^3/day) or 1.52 cfs, total input would average about 3,759 m^3/day (1.54 cfs), and outflow would average about 3,321 m^3/day (1.36 cfs).

Table 2-7. MDTW Project Monthly Inflow, Outflow, and Retention

Month	Miller Ditch Inflow (m^3/day)*	Total Input* (m^3/day)**	Wetland Evapotranspiration (m^3/day)	Outflow (m^3/day)	Retention Time (days)
January	6,808	6,920	83	6837	4
February	5,356	5,444	158	5286	5
March	3,268	3,322	286	3035	9
April	2,900	2,939	507	2432	10
May	644	647	745	0	—
June	500	500	900	0	—
July	2,419	2,419	938	1481	14
August	6,774	6,774	821	5953	4
September	7,000	7,000	645	6355	4

Source: *modified from* Rodal Morales pers. comm. **Aerial Photograph Source:** GoogleEarth (imagery date 07/18/2019, downloaded 03/16/2020)

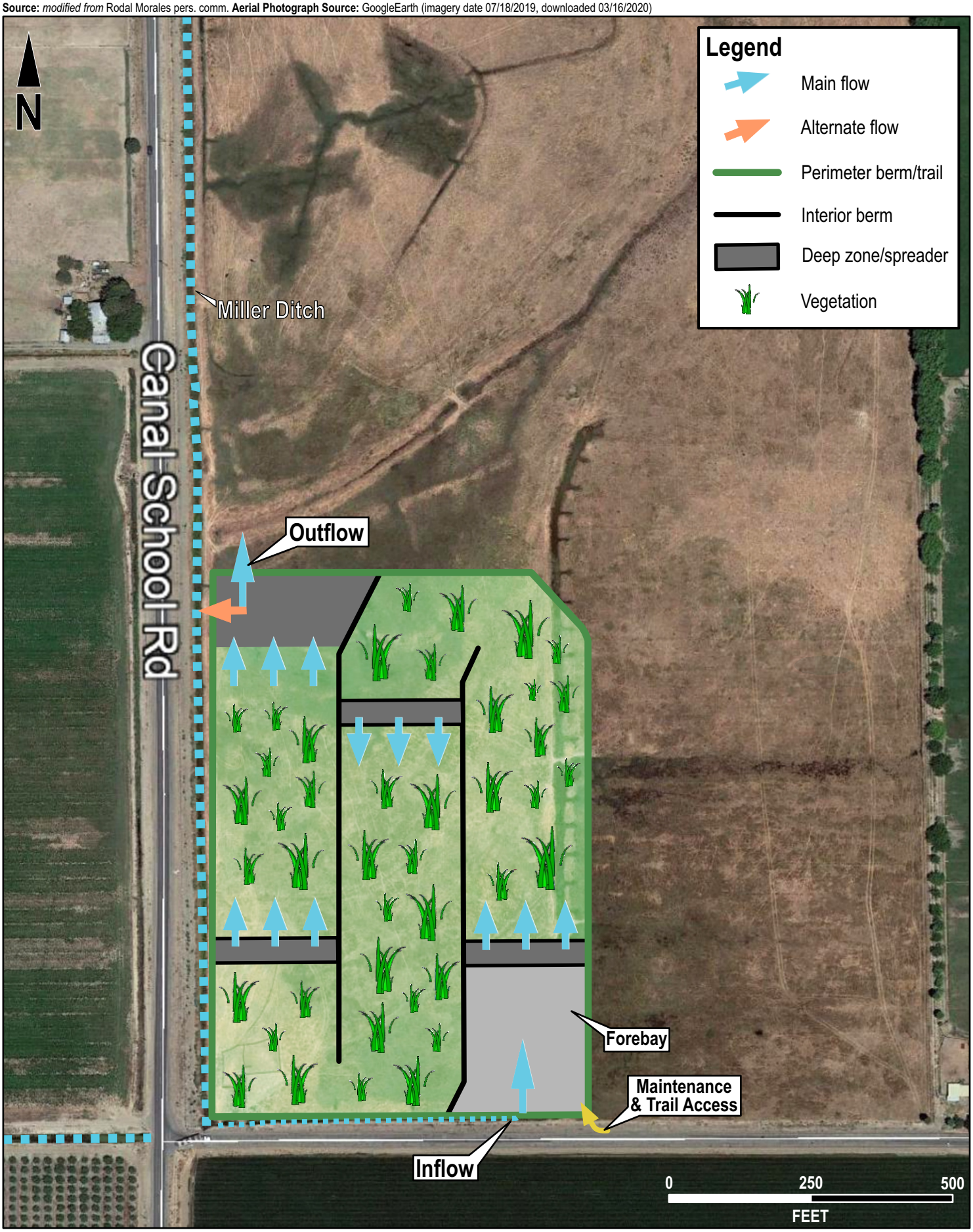

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Figure 2-8. MDTW Project Concept
Newman Community Conservation Area Master Plan
City of Newman

Month	Miller Ditch Inflow (m^3/day)*	Total Input* (m^3/day)**	Wetland Evapotranspiration (m^3/day)	Outflow (m^3/day)	Retention Time (days)
October	1,397	1,412	394	1018	23
November	3,443	3,499	181	3318	8
December	4,165	4,233	96	4137	6
Annual average:	***3,723***	***3,759***	***479***	***3,321***	***9***

*m3/day = cubic meters per day
**total input = Miller Ditch inflow + anticipated precipitation into wetlands

Source: Rodal Morales and Beutel 2021

Treated flow would exit the MDTW at its northwest corner and would primarily be directed into the central swale to replace Miller Ditch diversions in supporting the riparian habitat created by the wetland project. An alternate outflow returning flows to the Miller Ditch would also be provided to enable operational flexibility in wet years and high-flow periods.

O&M and non-motorized recreational access would be provided by unpaved trails on the tops of the berms separating the wetland cells, with driveway ingress from Brazo Road. Split-rail or similar fencing would be installed where needed to provide for public safety and protect the function of the treatment wetland. The MDTW project is also expected to include bilingual (English/Spanish) informational signage, similar to the NEWS project.

Water Service Extension

The NEWS project and Newman Nature Park are expected to be served by City water. At the NEWS project, this would support water-efficient irrigation in the gateway area, and at the Nature Park, it would be used for irrigation in the demonstration gardens and parking area landscaping, and for the hydration station, learning area sink, and handwashing facilities.

Water service would be extended from the City's existing 8-inch-diameter water pipeline at the corner of Canal School Road and Inyo Avenue. The new extension is expected to be 4-inch- or 6-inch-diameter. It would be equipped with a backflow preventer and valves housed in small at- or above-grade valve boxes. Meters would also be provided where service extends to the two projects.

Service could be extended directly from the pipeline to the NEWS project at the northwest corner of the 78-acre parcel (Figure 2-9). There are two possible alignments to serve the Newman Nature Park. Option 1 (Figure 2-9) would involve installing new pipeline south along Canal School Road and then east on Brazo Road, entering the 78-acre parcel via the future location of the Nature Park driveway. Option 2 would extend along the north edge of the 78-acre parcel, paralleling and just south of the Miller Ditch, and then south along the east property boundary to reach the community area. Since both Options for water service extension to the Nature Park remain under evaluation, they are both are considered in this Initial Study.

Project Construction

Based on the current availability of funding, the City anticipates the following overall construction schedule for the NCCA projects.

- Wetland project: 2021 – 2022

- NEWS project: 2021 – 2023
- Newman Nature Park: potentially as early as 2023 – 2024
- MDTW project: beginning in 2024 or later

Like all City Public Works undertakings, construction of the NCCA projects will be required to conform with applicable portions of the City's current *Improvement Standards and Standard Details* and with the City's adopted building code, which is the 2019 version of the California Building Standards Code (California Code of Regulations, Title 24).

Among their provisions, the *Improvement Standards* require traffic control and safety measures during construction, as follows.

- Public rights-of-way must be maintained such that public use is not unreasonably hindered or made inconvenient
- Roadway closures are generally prohibited; whenever possible, at least 1 lane for each travel direction must remain open, unless flaggers are onsite to direct traffic
- Barriers and signage may be required to provide for safe vehicle passage and protect people and animals using public rights-of-way; where these are used, they must meet California Department of Transportation (Caltrans) standards
- Safe access to private property must be maintained

In general, construction in the City is limited by General Plan Policy HS-6.9 to the hours between 7 AM and 7 PM on weekdays and 8 AM to 7 PM on Saturdays (City of Newman 2007). Work is typically confined to the daylight hours. This gives a slightly longer workday during the spring and summer dry season when the majority of construction work for the NCCA projects is expected to occur. Night and weekend work is not anticipated for the NCCA projects, but if it becomes necessary, the City expects to provide advance written notice to neighboring landowners and residents, and additional traffic control provisions from the *Improvement Standards* will be in effect for roadway safety where appropriate.

Contractor activities, including access and staging, will also be required to conform to a number of measures adopted by the City specifically for the NCCA projects, to protect existing environmental values on and around the NCCA parcels. These are laid out in the NCCA Master Plan (Appendix A to this Initial Study) and are also detailed in *Avoidance and Minimization Measures* at the end of this Section.

The following sections provide more detail on construction of each of the NCCA projects.

NEWS Project

Construction Process

Table 2-8 provides an overview of construction process, equipment, and staffing for the NEWS project. In addition to the contractor staff listed in Table 2-8, additional personnel making daily visits to the site would include 1 – 2 biologists inspecting special-status species protection measures, a SWPPP[3] inspector verifying

[3] *SWPPP* stands for Stormwater Pollution Prevention Plan, a requirement of the State Water Resources Control Board to protect nearby water bodies from construction site runoff. This is discussed in more detail in the *Geology & Soils* and *Hydrology & Water Quality* portions of the Section 3 Initial Study checklist.

Aerial Photograph Source: GoogleEarth (imagery date 07/18/2019, downloaded 03/16/2020)
For illustration only; locations not field-verified

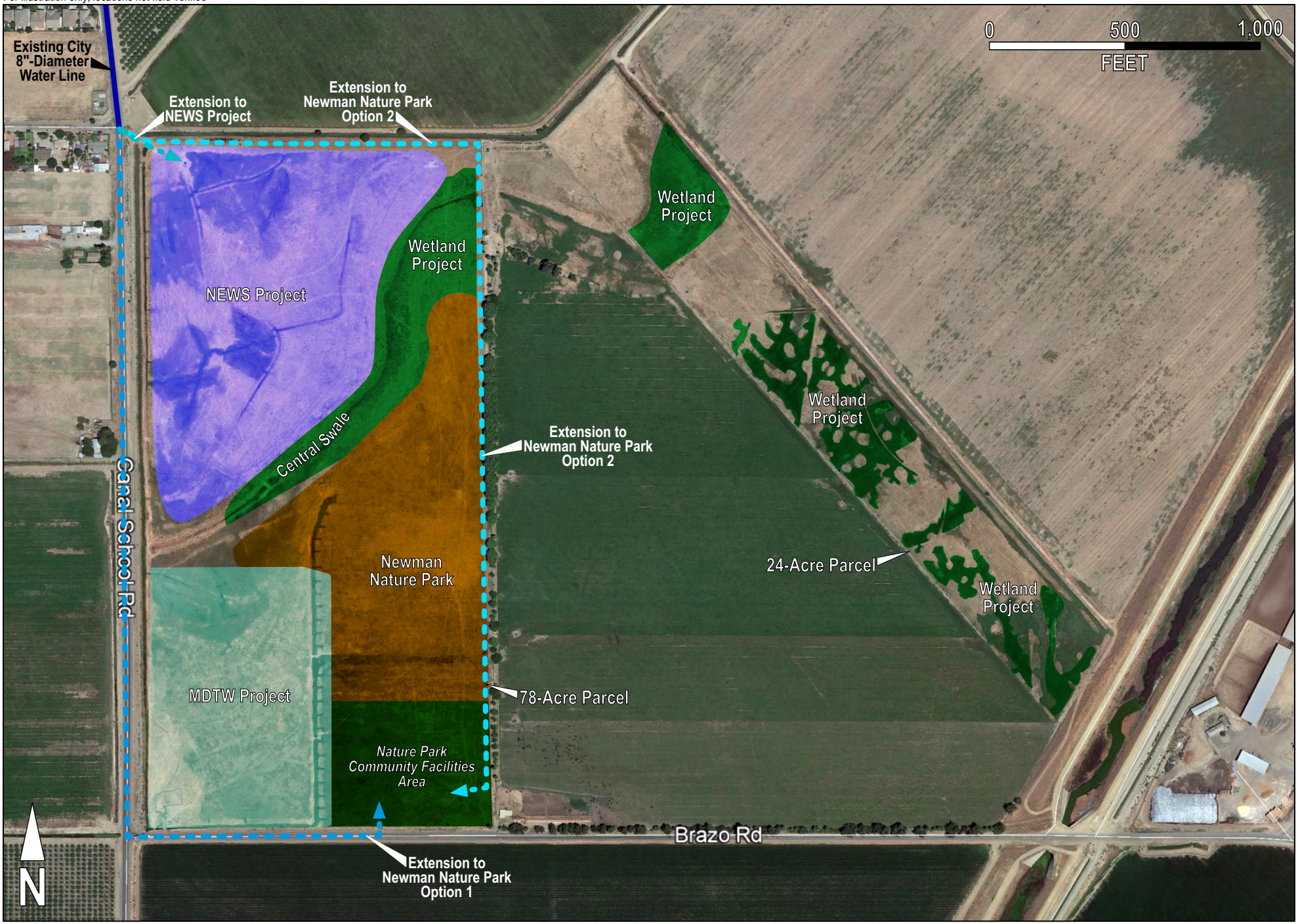

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Figure 2-9. Options for Water Service Extension to NEWS and Newman Nature Park Projects
Newman Community Conservation Area Master Plan
City of Newman

that erosion control and runoff protection measures are in place and functioning properly, and 1 – 2 City construction management and inspection staff.

Table 2-8. NEWS Project Construction

Construction Phase	Equipment	Staffing
Clearing and grubbing	1 – 2 tractors with mower/disk attachment (Tiger TM72) 2 – 4 excavators (Cat 326) 2 – 4 skid steers (Cat 262D3)	Construction staff, including equipment operators: 6 – 12
Grading		
Berm construction	2 – 4 medium dozers (Cat D6) 1 – 2 medium loaders (Cat 966) 1 – 2 compactors (Cat CP563) Water truck(s)	Construction staff, including equipment operators: 6 – 12 SWPPP inspector: 1 City construction manager/inspector: 1
Pond and berm finishing	2 – 4 medium dozers (Cat D6) 1 – 2 medium loaders (Cat 966) 1 – 2 motor graders (Cat 24) Water truck(s)	
Access/trail finishing*	2 – 4 motor graders (Cat 24) 1 – 2 rollers (Cat CS563) Water truck(s)	Construction staff, including equipment operators: 6 – 12
Construction of concrete pad in forebay	Concrete trucks (Kenworth W900)	Construction staff: 8
Culvert installation	1 – 2 small loaders (Cat 930) 1 – 2 medium excavators (Cat 326)	Equipment operators: 2 – 4 Laborers/carpenters: 4 – 6
Finishing/stabilization**	Water truck(s) 1 – 2 hydroseeders (Finn T60) 1 – 2 excavators (Cat 326)	Equipment operators: 2 – 4 Laborers: 4 – 6

* Aggregate base placed on berm tops and compacted for stability
** Planting installation and hydroseeding, fence construction, signage installation

Source: Whitaker Construction 2020, Martin pers. comm.

Haulage requirements for NEWS project construction are estimated as follows (Whitaker Construction Group 2020).

- **Removal of excavated materials from site.** Offhaul is estimated at between 100,693 cubic yards (CY) and 107,789 CY, depending on shrinkage and subsidence factors. Assuming transfer or bottom dump trucks typical for an operation of this size, this translates to about 120 truckloads per day over a period of 53 days
- **Aggregate base delivery.** Approximately 3,800 tons of aggregate would be required to surface the access roads/trails on top of the berms containing the forebay, wetland areas, and micropool. This is expected to represent about 158 truck trips, again assuming typical large transfer or bottom dump trucks
- **Concrete delivery.** About 1,200 CY or 120 truckloads of concrete would be required to construct the pad in the forebay, assuming typical equipment

A small number of additional truck trips would be required to deliver materials to construct inlet, outlet, and connecting culverts, fencing, and signage as well as plant stock, seed mix, and other materials for landscaping and planting

Contractor Staging

The final selection of the staging area would likely depend on input from the contractor selected for construction, but staging is expected to occur within the footprint of the future gateway/O&M parking area at the northwest corner of the 78-acre parcel. This would provide convenient access to the work area and avoid impacts on adjacent areas outside the NEWS project footprint.

Construction Schedule

NEWS project construction is anticipated to take about 12 months in total. Table 2-9 lays out the anticipated durations of each construction phase.

Table 2-9. Anticipated NEWS Project Construction Schedule

Construction Phase	Timing
Clearing and grubbing	5 – 10 days
Grading	20 – 40 days total
Berm construction	*5 – 10 days*
Pond and berm finishing	*15 – 30 days*
Access/trail finishing	5 – 10 days
Construction of concrete pad in forebay	40 – 60 days
Culvert installation	20 – 30 days
Finishing/stabilization	15 – 20 days

Source: Whitaker Construction 2020, Martin pers. comm.

Wetland Project

Construction Process

Table 2-10 provides an overview of construction process, equipment, and staffing for the wetland project.

Table 2-10. Wetland Project Construction

Construction Phase	Equipment	Staffing
1: Grading Recontour central swale to broaden low areas Excavate seasonal wetland area to create wetland swales Scrape ephemeral wetland area to remove invasive nonnative vegetation and seed bank	3 – 5 pieces of heavy equipment anticipated onsite: • Self-loading scraper(s) • Dozer(s) (small, likely Caterpillar D6 – D8 or equivalent) • Small excavator or backhoe Water truck Survey gear (traditional ground-based and drone)	• Contractor staff (equipment operators, laborers): 3 – 8 • Qualified biologists, design staff: 1 – 2 • Construction management staff: 1 – 2, intermittent
2: Civil Construction On 78-acre parcel, construct new weir and diversion from Miller Ditch to west end of central swale	1 – 2 small loaders (Cat 930) 1 – 2 medium excavators (Cat 326)	Equipment operators: 2 – 4 Laborers/carpenters: 4 – 6

Construction Phase	Equipment	Staffing
On 24-acre parcel, construct new inlet/outlet weir connecting east end of central swale to existing Miller Ditch connection		
3: Live Plant Material Collection If possible, collect up to 100 propagules (stakes) from locally native live plant materials at nearby donor site; if donor site is not feasible or cannot supply adequate materials, obtain container-grown nursery stock	Hand tools Pickup truck Trailer	Qualified biologists: 2 – 4
4: Planting Install cuttings and/or container stock onsite per project plans; revegetate upland areas via seeding	Pickup truck Skid-steer Skid-steer mounted trencher ATV-mounted rakes and seeders Hand tools	Contractor staff (laborers): 1 – 3 Qualified biologists: 1 – 4
5: Inoculum Collection Collect vernal pool inoculum (soil containing seed bank and vernal pool branchiopod cysts) from donor site by surface vacuuming	Ride-on vacuum Tractor with mower attachment Pickup truck Trailer	Qualified biologist permitted to handle special-status fairy shrimp: 1 Laborers: 1 – 2
6: Inoculum Spreading Spread inoculum in vernal pool areas	Pickup truck Hand tools	Qualified biologists: 1 – 2 Laborers: 1 – 2

Contractor Staging

Staging for wetland project construction activities on the 78-acre parcel is expected to occur in the southeast corner of the parcel (future footprint of the Newman Nature Park community center and/or parking area), since this would minimize the potential for impacts on existing wetland habitat. Access would be from Brazo Road. Limited staging for work on the 24-acre parcel could also occur on the north portion of the parcel (north of the central swale), or in the south portion of the parcel, although in both of these locations, it would be important to avoid existing wetlands and distributions of Parry's rough tarplant, discussed in *Project Setting* above. Depending on the location(s) selected for staging, access would be from the north along the Miller Ditch levee and/or from the south along the Newman Wasteway service road.

Construction Schedule

Table 2-11 lays out the anticipated schedule for wetland project construction by phase.

Table 2-11. Anticipated Wetland Project Construction Schedule

Construction Phase	Timing
1: Grading	September 1 – 30, 2021
2: Civil Construction	October 1 – October 31, 2021
3: Live Plant Material Collection	October 1 – December 31, 2021
4: Planting	Planting will be timed to coincide with forecast of upcoming rainy weather, and will take place following plant material collection, between October 15 and December 31, 2021. Duration of planting activities is expected to be 3 – 10 days
5: Inoculum Collection	During dry season following planting (March 15 – October 15, 2022). Duration of collection activities is expected to be 1 – 3 days

Construction Phase	Timing
6: Inoculum Spreading	Following inoculum collection, during dry season 2022; duration of inoculum spreading activities is expected to be 1 – 2 days

Newman Nature Park

Construction Process

Table 2-12 provides an overview of construction process, equipment, and staffing for the Newman Nature Park.

Table 2-12. Newman Nature Park Construction

Construction Phase	Equipment	Staffing
Clearing and grubbing	1 tractor with mower/disk attachment 1 excavator 1 – 2 dump trucks 1 – 2 skid-steers	Construction staff, including equipment operators: 8 – 10 SWPPP inspector: 1 City construction manager/inspector: 1
Grading	1 excavator 1 – 2 scrapers 1 – 2 grading blades 1 – 2 sheepsfoot rollers 1 – 2 smooth drum rollers 1 – 2 dump trucks 1 water truck	Construction staff, including equipment operators: 12 – 16 SWPPP inspector: 1 City construction manager/inspector: 1
Access/circulation and utilities	1 excavator 1 – 2 skid-steers 1 – 2 grading blades 1 sheepsfoot roller 1 smooth drum roller 1 backhoe 1 trencher 1 concrete truck (1 dump truck 1 water truck	Construction staff, including equipment operators: 14 – 16 SWPPP inspector: 1 City construction manager/inspector: 1
Site improvements and furnishings*	2 – 4 flatbed trucks 1 crane 1 – 2 forklifts 1 backhoe 1 trencher 1 front-end loader 1 – 2 skid-steers	Construction staff, including equipment operators: 12 – 16 SWPPP inspector: 1
Planting	2 – 4 pickup trucks 1 – 2 skid-steers 1 – 2 seeders Hand tools	Construction staff, including equipment operators: 8 – 10 SWPPP inspector: 1 City construction manager/inspector: 1

* *Site furnishings* refers to benches, trash receptacles, and other prefabricated items that are delivered "ready to go" and installed at the site.

Contractor Staging

Staging for construction of the Newman Nature Park is expected to occur at the southeast corner of the 78-acre parcel, in the approximately 0.5-acre area designated for the future parking area (see Figures 1-2 and 2-7). This would reduce the potential for compaction of the site by heavy equipment. Construction access would be from Brazo Road. Additional staging for construction related to the trail network could occur at the northwest corner of the 78-acre parcel with access from Canal School Road. Depending on whether the NEWS or Newman Nature Park is constructed first, this would either be within the NEWS project gateway area, or within the larger NEWS footprint outside of, and buffered from, existing wetland areas.

Construction Schedule

Table 2-13 lays out the anticipated schedule for Newman Nature Park construction by phase.

Table 2-13. Anticipated Newman Nature Park Construction Schedule

Construction Phase	Timing
Clearing and grubbing	45 days
Grading	90 days
Access/circulation and utilities	60 days
Site improvements and furnishings	120 days
Planting	60 days *Planting of irrigated areas or areas where temporary establishment irrigation is provided would occur following completion of site improvements and installation of furnishings. Planting of areas without irrigation may be timed to coincide with the rainy season*

MDTW Project

Construction Process

Detailed construction information for the MDTW project is not available at this time, since the project is still in the preliminary stages of planning. However, because of the project's general similarity to the NEWS project—both are constructed water treatment wetlands that will require grading to create wetland cells, embankments or berms that contain the cells, unpaved maintenance access/trails, informational signage, and safety fencing—the overall construction process, construction phasing, equipment use, and contractor staffing are expected to be similar to what is described for the NEWS project above. Construction duration would likely be similar to or slightly shorter than that for the NEWS project, since the MDTW project is about the same size (about 16 acres in extent vs. 21 acres for the NEWS project) and would involve similar recountouring to create wetland cells and intervening berms with top-of-bank O&M access roads/trails.

Contractor Staging

The MDTW project is the farthest out on the implementation horizon, and likely would not be constructed until the NEWS project, wetland project, and Newman Nature Park are already complete. As a result, staging within the boundaries of the 78-acre parcel is not expected to be available for the MDTW project. Staging on the 24-acre parcel is also considered unlikely since habitat on the parcel would be enhanced under the wetland project and it will be important to avoid unnecessary disturbance in the vicinity of this sensitive habitat. As a result, the City anticipates approaching neighboring agricultural landowners to negotiate an agreement for temporary use of private property for MDTW project construction staging. The City would work only with willing landowner(s), and would negotiate a staging agreement well in advance of beginning construction.

Construction Schedule

The MDTW project would not be constructed until funding becomes available. The City is currently exploring possibilities for grant funding to implement the project, but the construction schedule is not reasonably foreseeable at this time. However, it would likely be similar to that laid out for the NEWS project (see Table 2-9), based on the similar size and nature of the two projects.

Water Service Extension

Construction Process

Water service extension is expected to rely on conventional "open cut" or "cut and cover" installation. In this method, a trench is first opened, a layer of appropriate bedding material is laid, the new pipe is placed on the bedding material, and the trench is backfilled. Within roadways, roadway paving and striping are then restored. For safety, and to reduce traffic disruption and other disturbance, trenching and pipeline installation—especially within active roadways—typically proceed in sections about 100 feet long, with each section backfilled or covered with driveable trench plates by the end of the work day. With a 4-inch-diameter to 6-inch-diameter extension planned, the trench would be about 2 feet wide and 30 inches deep.

Table 2-14 provides an overview of construction process, equipment, and staffing for extension of water service to the NEWS project and Newman Nature Park.

Table 2-14. Water Service Extension Construction

Construction Phase	Equipment	Staffing
Excavation, pipe laying, trench backfill	1 – 2 excavators 2 – 4 "10-wheelers" (10–cubic yard dump trucks) 2 walk-behind compactors 1 generator 1 air compressor 1 loader and/or 1 skid steer 1 water truck 1 street sweeper 1 – 2 crew trucks (F-150, F-450 or similar)	1 foreman 1 equipment operator 3 – 7 laborers
Paving	1 concrete truck 1 "10-wheeler" 1 rolling compactor 1 sawcutter 1 oil barrel 1 water truck	1 foreman 1 – 2 equipment operators 4 – 6 laborers

Water service extension would be timed for greatest efficiency and minimum disturbance and would be coordinated with NEWS project and/or Newman Nature Park construction. Service could be extended to each project at the time it is constructed, although if the City elects to use Option 2 (see Figure 2-9), and the NEWs project is funded before the Nature Park, it would make sense to install the extension along the north property boundary at the time the NEWS project is constructed, completing the southward extension along the east property boundary when funding becomes available for the Newman Nature Park. Alternately, depending on the exact alignment, it may also be preferable to construct the extension as soon as possible, potentially in conjunction with the NEWS project. This is because the Option 2 alignment would parallel the east boundary of

the 78-acre parcel in close proximity to the wetland project footprint, and one of the City's commitments under the DFW grant funding the wetland project is that all habitat restored and created by the project will be protected in perpetuity.

Contractor Staging

Staging for water service extension would depend in part on the relative timing for the NEWS project and Newman Nature Park—on what portions of the NCCA site have been developed by the time each extension occurs. Staging for the extension to the NEWS project, and possibly also the extension along the northern boundary of the 78-acre parcel (Option 2 on Figure 2-9), if this is constructed in conjunction with the NEWS project, would likely occur along with NEWS project staging in the NEWS project gateway area. Staging for the extension to the Nature Park could occur in the future parking area. As an alternative, if additional space for laydown is needed, the City may negotiate an agreement with a neighboring agricultural landowner for temporary use of private property. As discussed above for the MDTW project, it is the City's policy to work only with willing landowner(s), and to negotiate offsite staging agreements well in advance of the anticipated construction start date.

Construction Schedule

The timing of water service extension would depend on the timing of NEWS project and Newman Nature Park construction. Assuming the NEWS project is constructed before the Newman Nature Park—which seems likely, as the NEWS project has been funded and the Nature Park is still seeking funding—the short extension serving the NEWS project is expected to be constructed along with the NEWS project. If Option 2 (see Figure 9) is selected for extension of service to the Nature Park, it could also be constructed in conjunction with the NEWS project to reduce the potential for disturbance to the wetland project. If the in-roadway alignment (Option 1 on Figure 2-9) is selected, it would presumably be added when the Nature Park is constructed.

The specific schedule for water service extension would depend on the alignment selected, on the timing of installation and on coordination with the NEWS and/or access education project(s). If Option 2 is selected, and is installed in phases, this would also affect schedule details. Overall, however, Option 1 is about 3,515 feet long, and Option 2 is about 3,856 feet long. Assuming a typical installation rate of about 100 linear feet per day, the total duration of installation would be on the order of 35 days for Option 1 and 39 days for Option 2.

Project Operations & Maintenance

The following paragraphs describe the O&M activities anticipated for each of the NCCA projects. To protect the sensitive habitat that would be restored and created at the NCCA, all O&M would be subject to the same AMMs required for construction, described in *Avoidance and Minimization Measures* at the end of this Section.

NEWS Project

Because the NEWS project would rely on natural wetland processes for water treatment, O&M would focus not only on the physical integrity of the facility but also on maintaining habitat function and value in the created wetlands.

The following activities are anticipated. O&M visits would typically involve no more than 1 – 2 vehicles and 1 – 4 staff, and would be combined for efficiency where possible.

- **Weekly,** conduct visual inspections and remove windblown and roadside trash and debris

- **Monthly** in dry season, inspect gateway area landscape irrigation for integrity and function[4]
- **As needed,** conduct minor vegetation maintenance such as pruning or localized clearing to prevent clogging of inlet/outlet culverts, and replanting or reseeding with appropriate stock if plantings are not thriving. This work is expected to use hand tools for the most part but could occasionally require small equipment such as a skid-steer or tractor
- **Before the start of each year's rainy season** (around October 15), **following storm events,** and **following the end of the rainy season** (around April 15), check diversion structure and trash capture device. Remove trash/debris and perform any routine maintenance required by manufacturer O&M indicators. Removal of trash from the trash capture device would require a vacuum truck with a pressure washer attachment
- **Annually and following each major storm event,** conduct visual inspections to verify site condition and proper function of diversion structure, trash capture device, and culverts
- **Every 2 – 4 years,** conduct operational evaluation to assess the time required to drain the maximum design storm (85th percentile, 24-hour event) runoff and return the various wetland pools to their design water levels. If drain time has changed, evaluate inlet and outlet structures and take appropriate measures to reestablish proper function, such as localized vegetation trimming/removal, sediment removal, or removal and replacement of culvert to adjust invert elevation. A variety of types of equipment could be required for corrective measures, ranging from hand tools for vegetation trimming and removal to heavy equipment if culverts must be replaced or reset
- **When sediment in forebay reaches 50% of forebay capacity** as indicated by the permanent sediment accumulation markers, conduct sediment removal to restore capacity. This is expected to occur every 5 – 10 years on average, and would require heavy equipment entry into the forebay area

Wetland Project

Over the long term, grazing or other vegetation management is expected to be important for the health of the restored vernal pools and ephemeral wetlands, as discussed in more detail below. In the short and mid-term immediately following restoration, grazing animals would need to be excluded from portions of the restoration area to protect the perennial grasslands and tree plantings as they become established. Depending on the final project design, either barbed-wire fencing or movable electric fencing may be installed to protect these habitats during establishment.

Once the wetland project has become fully established, it is expected to require very little O&M activity since it is being designed to restore functional habitat appropriate to the site's regional and local watershed context as well as soil and hydrologic conditions onsite. However, because of the project's proximity to roadways, and (over the longer term) recreational uses, routine trash removal would probably be required. This is expected to be carried out by City staff in conjunction with NEWS project and/or Newman Nature Park inspections and trash removal, and could occur as often as daily, depending on need. Each visit would involve a maximum of 2 – 3 staff and 1 – 2 vehicles.

Additionally, at least until the MDTW becomes operational, the ditches and weirs enabling diversion of Miller Ditch flows into the central swale would need to be inspected, operated, and maintained. Inspections and

[4] During the vegetation establishment period, inspections of temporary irrigation on the basin side slopes would also be required, but these would no longer be necessary when irrigation is discontinued in these areas.

operational visits would occur seasonally, and would typically involve 1 – 2 City vehicles and a maximum of 2 – 3 staff. Maintenance would be more infrequent. All visits could be combined with other O&M activity at the site for greater efficiency. Once the MDTW project comes online, the diversion from the MDTW to the central swale would require similar O&M. The Miller Ditch diversion may be removed at this time, but would likely remain in service to provide operational flexibility.

Over the long term, grazing is expected to continue within at least parts of the wetland project footprint, although it would likely be discontinued on the remainder of the NCCA site. As mentioned above, the City is in the process of developing a Grazing Management Plan in collaboration with DFW, as part of its responsibilities under the grant that will fund the wetland project. A key goal of the Grazing Management Plan is to limit grazing use to a level that can be sustained without irrigation and to avoid overgrazing while still providing for invasive species control and fuel load reduction to reduce fire risk.

At present, as discussed above, the 78-acre parcel is grazed year-round, which is possible in part due to summer flood irrigation of the site. The overall duration and extent of grazing would both be reduced following restoration (and the discontinuation of summer irrigation), although the number of animals per unit area may be increased at times. Grazing would be excluded from the tree planting areas until the newly planted trees are sufficiently established to withstand grazing, with most foliage above browse height and trunks strong enough to withstand animal rubbing. Grazing may be completely excluded from the perennial grassland area, or may be allowed under a schedule that maximizes the competitiveness of the native perennial grasses. Grazing of the restored vernal pools, epehemeral wetlands, and surrounding uplands would likely be limited to winter months when cool-season grasses are actively growing under the site's natural rainfall regime. Summer grazing would likely be discontinued as the lack of forage on unirrigated grassland could drive animals to damage restoration plantings and infrastructure. The Grazing Management Plan will provide for ongoing monitoring and adaptive management to maximize the efficacy of the new regime.

Corrals for grazing animals may be provided in the vicinity of the Newman Nature Park parking area, with an access route into the wetland project defined by fencing or another appropriate medium. This and other details to facilitate appropriate grazing at the wetland project without impeding the achievement of the other projects' goals are being finalized as part of the charrette process for the four NCCA projects.

Additionally, as discussed above, irrigation would largely be discontinued on the NCCA parcels, with the exception of landscape irrigation in the NEWS project gateway area and in the Newman Nature Park community area, and temporary irrigation of restoration plantings to ensure establishment. With wetland hydrology restored to a more natural condition and the marsh area fed by Miller Ditch/MDTW project flows as well as rainfall and direct inflow, irrigation should not be necessary in the restored wetlands over the long term.

Newman Nature Park

O&M at the Newman Nature Park facilities is expected to include the following activities.

- **Regular inspections.** City staff are expected to visit the Newman Nature Park facilities daily for a quick visual check of their condition. This would likely involve no more than 1 – 2 staff and 1 vehicle and would include restocking restroom supplies and restroom cleaning as needed
- **Routine removal of trash and recycling.** Trash and recycling removal is expected to occur 1 – 3 times per week based on experience with other City facilities. Trash and recycling removal visits would be combined with trash removal at the other NCCA projects for efficiency, and would likely involve 2 – 3

City staff and 1 – 2 vehicles. Additional visits for trash/recycling removal could be required following educational events and gatherings at the community plaza

- **Periodic upkeep** of the composting toilets in the restrooms, including removal of composted waste for offsite disposal or reuse
- **Maintenance of the demonstration gardens,** such as weeding, harvesting, and replanting. This would occur weekly or monthly and would also probably involve no more than 2 – 3 staff and 1- 2 vehicles
- **Routine inspections** of fencing and boardwalks to ensure integrity; minor repairs and replacements when needed. Inspections would likely be combined with other O&M visits for efficiency, and staffing would be similar to routine trash removal and demonstration garden maintenance. Repairs or replacements would use hand tools and small equipment to reduce impacts; heavy equipment is unlikely to be needed. Staffing would be similar to demonstration garden maintenance
- **Upkeep** of facilities, including sweeping or blowing to maintain a neat and welcoming appearance, trimming and other maintenance of landscaping in the parking area, and painting and minor repairs to structures, signage, and lighting. Staffing would be similar to demonstration garden maintenance

MDTW Project

As discussed above for construction, the MDTW project is in the preliminary planning stages at this time, and detailed information on O&M needs is not available. However, the general nature and frequency of O&M activities at the MDTW is expected to be similar to O&M for the NEWS project because of the general similarities between the two projects.

Water Service Extension

Once installed, the new water service to the NCCA site would be operated and maintained as part of the larger City water distribution system. Operations would be controlled through the City's centralized SCADA (supervisory control and data acquisition) system, which is used to operate all City water infrastructure. Meters would be read monthly, the backflow preventer would be tested annually, and the line would be periodically inspected for leaks. Future repairs or maintenance to the extended water service, if needed, would occur as part of the City Public Works Department's routine O&M program for City water infrastructure.

Preservation of Restored & Created Habitat at the NCCA

The City is committed to long-term preservation of the habitat restored and created at the NCCA, although the terms of such preservation are still being defined, and will almost certainly differ from project to project.

The conditions of the DFW grant that is funding the wetland project require that enhanced and created habitat be protected for a minimum of 50 years. Similar multi-decade terms are envisioned as a minimum for the other projects, and if self-mitigating status[5] is sought for the NEWS and/or MDTW projects, in-perpetuity preservation of at least some of the created and restored habitat will be required. For the NEWS and MDTW projects, habitat

[5] Projects that impact state- or federally jurisdictional wetlands and other waters are typically required to provide or preserve other similar habitat to compensate for habitat loss or disturbance within the project footprint. The resource agencies may agree to consider a project "self-mitigating" if it would create or restore sufficient habitat to adequately compensate for the loss or disturbance it results in. The City is exploring this possibility for the NEWS project, and may also explore it for the MDTW project as planning moves ahead.

preservation will also need to be balanced against the demand for routine O&M to ensure that the treatment wetlands continue to function as designed, providing the target level of water quality benefit.

Avoidance & Minimization Measures

Table 2-15 presents a suite of AMMs—originally laid out in the NCCA Master Plan (City of Newman 2021, Appendix A to this Initial Study)—that will be implemented to reduce the potential for adverse effects on sensitive habitats, water bodies, and the special-status plants and wildlife that may be present on the NCCA parcels. The AMMs will apply to initial construction of the NCCA projects and will be incorporated into the construction documents for each of the NCCA projects to ensure that requirements and limitations are clear and binding for contractor staff. The AMMs will also apply to installation of the water service extension to serve the NEWS project and Newman Nature Park. All AMMs will also apply to implementation of mitigation measures identified in this Initial Study and if mitigation requires the preparation of construction documents will be incorporated into those documents.

Additionally, the AMMs will continue to be in effect for future maintenance or repair activities that have the potential to disturb habitat or otherwise affect special-status species, and as individual O&M plans are developed for the each of the NCCA projects, they will incorporate the AMMs, with additional detail as appropriate to facilitate straightforward and effective implementation on a project-specific basis. New AMMs may also need to be developed as the details of project O&M are further developed.

The AMMs presented below are based on current (2020) habitat conditions on the NCCA parcels. The NEWS, wetland, and MDTW projects would modify habitat on the parcels substantially, and conditions may continue to evolve as the projects become increasingly established over time. In addition, O&M activities and the introduction of recreational and educational access would increase human presence and activity at the NCCA site over the long term. As a result, there may be changes in the types of AMMs that are needed—some AMMs may become less relevant, some may need to be amplified, and new measures may become appropriate. With this in mind, AMM-1 provides for routine re-evaluation to verify site conditions and support review and—if needed—updates to the AMMs to enable adaptive management throughout the lifespan of the NCCA projects.

Additionally, it should be noted that the AMMs are intended to dovetail with the requirements of resource agency permits authorizing the NCCA projects. In particular, in the years immediately following completion of each project, permit terms and conditions may require more frequent and intensive monitoring of restored and created habitat. In that case, the permit terms and conditions for each project will temporarily supersede the NCCA-wide AMMs within that project's footprint; elsewhere at the NCCA, the AMMs will continue to apply in their most current form.

Table 2-15. AMMs for NCCA Project Construction, Operations, and Maintenance

Measure	Requirements
AMM-1. Routine Reassessment & AMM Updates	At the completion of each NCCA project, GIS-based habitat mapping for the Plan Area parcels[6] will be updated to document changes in habitat distribution as a result of the project. Over the long term, the Plan Area parcels will be reevaluated for habitat conditions and potential special-status species use every other year. Reevaluation will also include updating maps delineating populations of rare plant species (i.e., plants assigned a California Rare Plant Rank by the California Native Plant Society and plants state- or federally listed as Threatened or Endangered). The evaluation will be conducted by a qualified biologist/ecologist who has experience with wetland and upland habitats

[6] Throughout Table 2-15, *Plan Area parcels* refers to the 78-acre and 24-acre parcels that together make up the NCCA site

Measure	Requirements
	in the west-central San Joaquin Valley, will cover both Plan Area parcels in their entirety, and will include, at a minimum, the following activities. • Assessment of habitat distribution to determine whether the most recent habitat and rare plant mapping is still accurately representative of conditions on the Plan Area parcels • California Rapid Assessment Method (CRAM) assessment of wetland health and performance Results will be documented in an NCCA Habitat Assessment Report for City records. The Habitat Assessment Report will also identify the date of the next routine re-survey, enabling survey frequency to be adjusted (increased or decreased) if appropriate based on the rate and nature of change in conditions on the Plan Area parcels. In addition, depending on the extent and nature of changes in Plan Area conditions and the City's planned activities during the next few years, the Survey Report may recommend more detailed reassessment, potentially including re-mapping of habitat, updated delineation of state and federally jurisdictional habitat (wetlands and waters of the United States and State of California), and/or focused surveys for special-status plant and/or wildlife species. In addition to documenting current Plan Area Conditions, the Habitat Assessment Report will include an evaluation of the AMMs in place at the time of the reassessment, and will identify any needed changes to the AMMs, potentially including modification or discontinuation of existing AMMs and/or establishment of new AMMs. Changes to AMMs will only be instituted in the interests of better preserving and protecting habitat values on the Plan Area parcels, in balance with appropriate O&M and recreational/educational access. If adverse changes in habitat conditions or the status of rare plant populations are identified, the Habitat Assessment Report will also include recommendations for corrective action(s). The City will maintain Habitat Assessment Reports and other relevant documentation such as habitat and jurisdictional delineation mapping and special-status species sighting reports (see AMM-6) on file for ongoing reference in managing the NCCA. If corrective actions are identified as necessary, the City will be responsible for ensuring that they are promptly implemented by qualified personnel.
AMM-2. Appropriate Long-Term Public Access	All public access, including access roadways opened for public trail use, will incorporate appropriate measures to prevent accidental incursions—and discourage intentional access—into sensitive habitat. Measures will be designed for aesthetic consistency with their natural surroundings, such that they foster a positive and welcoming user experience while protecting sensitive resources to the extent possible. Measures may include carefully selected trail routing as well as split-rail or other suitable fencing, strategically located plantings, and the use of elevated boardwalks. Signage will also be used to inform the public of sensitive resources and foster appreciation for the need to protect them. All signage will be bilingual in English and Spanish to reflect the City's diverse population. Wildlife-proof trash and recycling receptacles will be provided at regular intervals along all trails to discourage littering.
AMM-3. Worker Awareness Training	All construction personnel will be required to attend environmental awareness training before beginning work. All O&M staff and any future interns, student employees, and volunteers will also receive environmental awareness training as part of their routine City training. Training will be provided bilingually in English and Spanish if appropriate. Training will be delivered by a qualified biologist/ecologist and will provide information on the sensitive habitats within the Plan Area (based on the most recent surveys of the Plan Area per AMM-1), the special-status species that are known or potentially present, and measures required to protect water quality and sensitive habitats under AMM-4. For each special-status species, training will include information on listing status, habitat preferences, distinguishing physical characteristics, causes of decline, and measures required to protect the species within the Plan Area. Training will include a hard copy handout that summarizes information presented in the training and includes photographs of habitat resources and species to facilitate identification in the field by construction and O&M personnel.
AMM-4. Wetland & Water Quality Protection	Best management practices will be implemented for all ground-disturbing activities to prevent siltation and contaminated runoff to wetlands and water bodies within and adjacent to the Plan Area. During construction, this may take the form of a SWPPP prepared and implemented by appropriately qualified/certified personnel. For O&M activities that involve ground disturbance, similar measures will be implemented by City staff. BMPs will also be implemented for all O&M activities that require handling of

Measure	Requirements
	fuels, lubricants, paints, solvents, and other substances with the potential to degrade water quality. BMPs will include, but will not necessarily be limited to, the following. • Before work begins, a qualified biologist/ecologist will delineate sensitive areas to be avoided, using pin flags, temporary construction fencing, or another appropriate low-impact medium. No entry (personnel, equipment, or materials) will be permitted into delineated avoidance areas • If excavation or ground disturbance is necessary, runoff control measures such as straw wattles, filter rolls, filter fences, or silt fences will be installed to contain disturbed soil materials. Runoff control will be in place prior to groundbreaking. If straw wattles are used, they will consist of certified sterile, weed-free rice straw or similar, suitable for use in sensitive habitat. If filter fences or mesh are used, they will consist of materials, and employ a design, approved by DFW and USFWS as safe for amphibians and reptiles • If ground disturbance occurs in a vegetated area, the disturbed area will be reseeded immediately following the completion of repairs, using a certified weed-free native species seed mix appropriate to the location and approved by a qualified biologist/ecologist • Excavated materials will be stockpiled away from sensitive habitat, in areas that are relatively level, and relatively free of vegetation. Stockpiles will be located as far as reasonably feasible from the limits of sensitive habitat, and runoff control measures as described above will be used to prevent delivery of sediment to wetlands and ditches. If wattles are used, they will consist of certified sterile, weed-free materials, as identified above. Any excavated materials not reused on site will be promptly removed to appropriate permanent disposal locations following the completion of work • All diesel- and gasoline-powered construction equipment and tools, including generator units, will be inspected for leaks and damage prior to mobilization • Fueling, lubrication, and maintenance of vehicles and equipment will be conducted as far as reasonably feasible from wetlands and waterbodies, and will take place offsite if possible. Equipment staging will also be located as far as reasonably feasible from wetlands and water bodies. If onsite fueling, maintenance, or repairs are required, containment measures such as drip pans will be required • To the maximum extent possible, materials staging will also be restricted to paved, surfaced, or upland areas away from wetlands and watercourses • During all work, appropriate types and quantities of materials will be maintained onsite to contain any spills or releases of materials and prevent them from entering sensitive habitat and jurisdictional waters • In the event of a spill, appropriate spill response procedures will be initiated as soon as the incident is discovered. If contractor staff are involved, the contractor will be required to notify City staff as soon as feasible, and in no case more than 24 hours after the occurrence; a designated City contact will be specified in the project construction documents for this purpose. If there is any potential for the spill to enter jurisdictional waters, the City will notify the RWQCB • Food waste will be appropriately contained and disposed, and trash generated during construction and O&M activities will be promptly and properly removed from the site
AMM-5. Special-Status Plant Protection	Before any work begins at the NCCA site, existing occurrences of rare plant taxa (as defined in AMM-1) will be delineated on GIS-based maps for future reference, based on the results of protocol-level peak blooming period surveys.[7] Mapping will be regularly updated as part of the routine re-surveys required under AMM-1. Work will be planned to avoid delineated rare plant occurrences to the extent feasible. Prior to the start of construction and O&M work in the vicinity of delineated occurrences of rare plants, a qualified biologist/ecologist will define the current extent of the occurrence in the field using pin flags, temporary construction fencing, or another appropriate low-impact medium. The delineated avoidance area will

[7] Initial mapping was completed in 2020.

Measure	Requirements
	include a setback buffer appropriate to the species involved and the nature of the work planned. No entry, staging, or other activity within delineated avoidance areas will be permitted. If an occurrence of rare plants cannot be entirely avoided, the following additional measures will apply. (1) Plants that can be avoided will be demarcated by an exclusion area as described above (2) If possible, work will be scheduled for timeframes when the special-status taxa occurring in the work area are senescent and/or after seed has set (3) If an individual or group of individuals must be removed, one of two options may be employed, followed by monitoring, and, if needed, further corrective action to ensure that over the long term no net loss of the species occurs i. Seeds from the affected species may be collected from existing onsite populations or from another population within the Bennett Valley – San Joaquin River watershed and distributed in the work area following completion of work, or, if the work area cannot be reseeded, in another appropriate location within the Plan Area. Appropriate locations will be identified based on currently prevailing soil characteristics, site hydrology, and overall habitat conditions at the time of the restoration ii. A nursery with experience growing special-status plants of the western San Joaquin Valley region may be contracted to grow seedlings of the species from locally native seeds (collected from the work area or from another population in the Bennett Valley – San Joaquin River watershed). Seedlings may be planted in the work area following completion of work, or, if this is not possible, may be planted in another appropriate location within the Plan Area. As identified in (i) above, appropriate locations will be identified based on currently prevailing soil characteristics, site hydrology, and overall habitat conditions at the time of the restoration Note that seeds derived from plants in the Bennett Valley – San Joaquin River watershed may be available from local nurseries, and local nurseries may also be able to propagate seeds from adults grown from locally native collected seeds. In this case, seeds do not need to be collected from the work area. Prior to impacts and reseeding or replanting, a qualified biologist/ecologist will develop a monitoring and corrective action plan for the revegetated area. The plan will include at least the following components. • Interim and final success criteria for the revegetated area. The goal will be to match or exceed pre-disturbance population levels in the Plan Area over the long term. Due to normal variations in population from year to year, average population data for annual taxa can be calculated from several years of data collected • Procedures for annual monitoring for a minimum of 3 years or until final success criteria are met • Low-disturbance methods for as-needed invasive species control within the replanted area, suitable to site conditions and the rare plant species involved • Corrective actions (additional seeding or planting) in the event interim success criteria are not met The City will be responsible for ensuring that the monitoring plan is implemented by qualified personnel, and that any corrective action identified as necessary is properly carried out.
AMM-6. Special-Status Wildlife Protection (General)	In the event of a known or potential sighting of special-status wildlife in or near any construction or O&M work area, the following requirements will apply. • Personnel will avoid the animal and will immediately notify designated City staff and the City's on-call biologist, who will advise them on how to proceed; if warranted (depending on the species involved), the biologist will consult with resource agency (DFW and/or USFWS) staff for guidance • The biologist will respond onsite to relocate the animal or assist in implementing other protective measures, guided by agency input

Measure	Requirements
	• If the sighting is confirmed by the biologist, the species and location will be reported to DFW for inclusion in the California Natural Diversity Database (CNDDB). The biologist will be responsible for making the report The biologist will also provide a brief memorandum documenting the sighting and any follow-up actions, including CNDDB documentation, for City records.
AMM-7. Western Spadefoot Protection	To the extent feasible, construction and O&M activities will be conducted during the dry season (May – October), or will avoid entry into and disturbance of ponded features. If work within or in proximity to ponded features occurs during the rainy season, a qualified biologist will delineate areas to be avoided to prevent impacts on breeding special-status amphibians, using pin flags, temporary construction fencing, or another appropriate low-impact medium. No entry (personnel, equipment, or materials) will be permitted into delineated avoidance areas. If work would impact areas with burrows, a qualified biologist will evaluate the burrows to determine whether they are suitable for use by western spadefoot, and will scope any suitable burrows. If any western spadefoot individuals are found within burrows to be impacted, they will be safely excavated from the burrow by hand or small excavator, either by the biologist or under biologist oversight, and will be relocated to a suitable burrow location outside the disturbance area and far enough away that they would not be expected to return.
AMM-8. Giant Garter Snake Protection	To the extent feasible, all construction and O&M activities will avoid impacting or working within 200 feet of the drainage ditches in the Study Area. Once the NEWS and MDTW projects become operational, the same precautions will apply to created water bodies. Appropriate silt fencing, flagging, and/or other measures will be employed to protect the drainage ditches and other aquatic habitat from direct and indirect impacts, as described in AMM-4. If work within 200 feet of suitable habitat for giant garter snake is necessary (e.g., for NEWS and MDTW project O&M), the following additional measures will be required. (1) If possible, work within 200 feet of suitable habitat will be conducted between May 1 and October 1, when the species is more active and mortality is less likely (2) At all times of year, prior to work within 200 feet of suitable habitat, before work begins, a qualified biologist will conduct a pre-construction survey of the work area (including access and staging) for giant garter snake. If the species is present, the biologist will notify the City and work will be delayed until the biologist can consult USFWS regarding next steps. Work will not proceed until USFWS has recommended appropriate next steps and these have been implemented. Once work has begun, if activity is suspended for 2 weeks or more, the survey—and, if needed, follow-up—will be repeated
AMM-9. Northwestern Pond Turtle Protection	Prior to the start of construction or O&M activities, a qualified biologist will conduct a pedestrian preconstruction survey for northwestern pond turtle. The survey will be conducted no more than 24 hours prior to start of work, and will include walking the work area limits and interior and investigating all areas that could be used by the species. If northwestern pond turtle individuals are found, the biologist will relocate them to suitable habitat outside the disturbance area and far enough away that they would not be expected to return.
AMM-10. Nesting Bird Protection	To the extent feasible, construction will be scheduled outside the February 1 – September 15 nesting season. O&M activities reasonably expected to generate substantial sustained disturbance above Plan Area baseline levels and O&M activities that would involve ground disturbance or vegetation removal or trimming will also be scheduled outside the nesting period if possible. If the types of activities identified above would commence during the nesting season, a qualified biologist will conduct a preconstruction survey for nesting birds. The survey will be conducted within 2 weeks of the start of work, and will cover the entire work footprint, including access and staging, plus a 500-foot-wide buffer. If active nests are found within the survey area, a no-disturbance zone will be established around the nest for the duration of the nesting season, or until the biologist determines that the young have fledged and left the nest, or that the nest has been abandoned. No entry into the no-disturbance zone will be permitted. The no-disturbance zone will be delineated in the field by or under the supervision

Measure	Requirements
	of the biologist, using temporary construction fencing or another suitable low-impact medium. The width of the no-disturbance zone will be determined by the biologist, based on • the location of the nest and the amount of vegetative and other screening between the nest and areas where work will take place • noise and human disturbance levels at the site at the time of the survey and the noise and disturbance expected during the work • the sensitivity of the species involved and behaviors of the nesting birds, and, if appropriate, • other site- or species-specific factors If special-status species are involved, the biologist will consult with the appropriate resource agency(ies) (DFW and/or USFWS) in determining the width of the no-disturbance zone. If work during the nesting season is suspended for more than 1 week and then recommences, an additional survey will be conducted before work is reinitiated, and the same no-disturbance zone requirements will apply in the event active nests are found.
AMM-11. Western Burrowing Owl Protection	If construction will take place during the western burrowing owl breeding season (February 1 – August 31), protocol-level preconstruction surveys will be conducted for this species. O&M activities reasonably expected to generate substantial sustained disturbance above Plan Area baseline levels and O&M activities that would involve ground disturbance will also be subject to this requirement. Surveys will be conducted by a qualified biologist and will follow the methodology described in DFW's current Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012, or future reports that supersede the 2012 version). Four surveys will be conducted within 2 hours of sunrise or sunset, with the final survey occurring 24 hours prior to the start of construction activities. If active nest burrows are found, the no-disturbance zone requirements described in AMM-10 will apply. If work during the burrowing owl nesting season is suspended for more than 1 week and then recommences, an additional survey will be conducted before work is reinitiated, and the same no-disturbance zone requirements will apply in the event active nests are found.

Source: City of Newman 2021

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3

Environmental Impacts

Introduction

This section analyzes the anticipated environmental impacts of the NCCA projects and describes the measures the City will implement to avoid or reduce impacts identified as potentially significant.

On the next page is an overview of *Environmental Factors Potentially Affected*. This is followed by a series of checklist matrices itemizing the proposed project's environmental impacts by resource topic. The checklist matrices are based on the sample initial study checklist provided in Appendix G of the state's *CEQA Guidelines* and incorporate changes to the *CEQA Guidelines* adopted in December 2018. Text after each matrix discusses the findings presented in the matrix. Unless otherwise noted, boxes checked in the matrices refer to all four of the NCCA projects; where findings are different for one or more of the projects, more than one box is checked and notes are included to identify the project(s) to which each finding applies.

The following terminology is used to assess impact severity.

- **Potentially Significant Impact** – It is reasonably foreseeable (that is, substantial evidence suggests) that the proposed project would alter conditions from the existing pre-project baseline condition, and the change would be substantial or important enough to exceed a threshold of significance representing the level at which an impact becomes a concern
- **Less than Significant with Mitigation Incorporated** – The proposed project's impact would be significant, but mitigation measures will be adopted to lessen the effect, reducing it below the threshold of significance, and therefore below the level of concern. Where this finding is made, the specific mitigation measures are identified, including the timing of implementation, the entity or entities responsible for implementation and any required follow-up activities, and applicable performance standards
- **Less than Significant Impact** – It is reasonably foreseeable that the proposed project would alter conditions from the pre-project baseline condition, but the change would be small enough to fall below the threshold of significance
- **No Impact** – The proposed project would not materially change conditions from the existing pre-project baseline condition
- **Beneficial Impact or Benefit** – The proposed project would improve conditions by comparison with the pre-project baseline

In the explanatory text that follows each checklist matrix (*Discussion of Checklist Responses*), impacts of the

four NCCA projects are discussed together where their impacts would be similar enough to result in the same assessment of impact severity, and separately where their impacts or the assessment of impact severity differs. As noted in Section 1, community outreach for the Newman Nature Park is ongoing as of February 2021, and the City intends to finalize the configuration of the Nature Park to reflect community priorities; to support a comprehensive analysis, however, the Nature Park was assumed to include all of the potential features and facilities discussed in the *Project Elements* portion of Section 2. If the project changes significantly, the City will conduct additional CEQA review consistent with requirements of the CEQA statute and the state's *CEQA Guidelines*.

Impacts of extending water service to the 78-acre parcel (see Section 2) were considered as part of the NEWS and Newman Nature Park projects, as appropriate, but are discussed separately where the nature or degree of impacts warrants more detailed examination. As discussed in Section 2, once the extended water service to the 78-acre parcel is installed, it would be operated and maintained as part of the larger City water distribution system. Operational activities, inspections, and testing can be predicted at this time, since they are part of routine water system operations; they are included in the analysis presented below. However, future maintenance and repair needs are not reasonably foreseeable at this time. If needs arise, future maintenance/repairs would occur as part of the City Public Works Department's routine upkeep of City water infrastructure and would constitute separate projects subject to future CEQA analysis. As a result, water service maintenance and repairs are not discussed further in this document.

Analysis presented in this section was conducted consistent with the requirements of CEQA, the state's *CEQA Guidelines*, and prevailing standards of practice for each resource topic. Analysis and findings represent the City's independent judgment as lead agency under CEQA.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by at least one of the proposed projects, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

■ Aesthetics	☐ Agriculture & Forestry Resources	☐ Air Quality
■ Biological Resources	■ Cultural Resources	☐ Energy
■ Geology & Soils	☐ Greenhouse Gas Emissions	■ Hazards & Hazardous Materials
☐ Hydrology & Water Quality	☐ Land Use & Planning	☐ Mineral Resources
■ Noise	☐ Population & Housing	☐ Public Services
☐ Recreation	■ Transportation	☐ Tribal Cultural Resources
☐ Utilities & Service Systems	☐ Wildfire	■ Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project could not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project may have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Kathryn Reyes
Director of Public Works

Date

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Environmental Checklist

I. AESTHETICS *Except as provided in Public Resources Code Section 21099[a], would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Have a substantial adverse effect on a scenic vista?	☐	■ (construction, all projects)	■ (visual recovery period, all projects except water service Option 1; long term, all NCCA projects; potential Benefit, all projects)	■ (visual recovery period, water service Option 1; long term, water service) (potential Benefit)
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views[b] of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	☐	■ (construction, all projects)	■ (visual recovery period and long term, alll projects; potential Benefit)	■ (visual recovery period, water service Option 1; long term both water service options)
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	■ (glare from built features, long-term, all but wetland project; light, long-term, NEWS project and Newman Nature Park)	■ (glare, construction, all projects; glare from water surface, long term, NEWS, wetland, and MDTW projects; light and glare, water service)	■ (light, construction, all projects)

[a] Under Public Resources Code Section 21099 (Section 21099 of the CEQA statute), the aesthetic impacts of certain projects in transit priority areas are not considered significant impacts on the environment.

[b] *Public views* refers to views that are experienced from a publicly accessible vantage point.

Discussion of Checklist Responses

Evaluating the aesthetic quality of existing views and determining the importance of changes in those views can be challenging because aesthetics are highly subjective, can be culturally specific, and may involve a highly personal, sometimes emotional, component. To address this, portions of the analysis discussed below relied on a slightly modified version of the Federal Highway Administration (FHWA) methodology (Federal Highway Administration 1981), which was originally developed for use in analyzing the visual outcomes of major transportation projects, but is now used for a wide variety undertakings at all scales. The FHWA methodology offers the advantage of a systematic and reasonably objective way to approach an inherently subjective topic.

Under the FHWA methodology, the significance of a visual change is evaluated in consideration of three factors: the inherent visual character and quality of the view, who the viewers ("viewer groups") are, and how sensitive each viewer group is expected to be to changes in the view. In essence, the FHWA methodology seeks answers to two questions:

- How, and to what extent, would the proposed undertaking change the way the project area looks?
- Would viewers experience those changes as positive or negative?

Overall viewer exposure—the number and location of viewers affected by visual changes and the duration of their views—may also be a factor in determining the significance of visual effects (Federal Highway Administration 1981).

Visual character and quality are evaluated in terms of three characteristics: *vividness*, *intactness*, and *unity*. *Vividness* describes the "memorability" of a view based on the distinctive and striking visual pattern of its contrasting elements. *Intactness* assesses the visual order of a view's natural and built components, and the extent to which the view is free of encroachment. *Unity* describes the degree to which the different elements within a view combine to form a compatible visual pattern with compositional harmony (Federal Highway Administration 1981). All three of these concepts can be applied to natural landscapes, rural settings, and developed areas; impacts on visual resources are identified by comparing pre- and post-project vividness, intactness, and unity of views in the project area.

Evaluating whether project-related visual changes would be viewed as positive or negative depends on an assessment of the anticipated viewer experience. How viewers experience changes in their visual environment ("viewer response" in the FHWA's terminology) depends on the duration and nature of their exposure combined with their level of sensitivity. Viewer sensitivity in turn is influenced by the context of viewing (when and how views are seen): recreational viewers, for instance, are often highly sensitive to visual character and quality, particularly if they are engaged in activities where aesthetics are integral to the quality of the recreational experience, such as nature viewing, camping, hiking, and bird watching. Residential viewers are also typically considered highly sensitive to their visual surroundings, since their views are prolonged and daily, and because aesthetics may also relate indirectly to economics through the nexus with property value. Commuters who are focused on reaching the workplace may be less sensitive to aesthetics since their views are generally more fleeting, and, because they must focus on traffic conditions, external views are peripheral to their immediate driving activity. The sensitivity of other drivers may vary depending on the purpose of the drive and whether it is a repeated, routine, or infrequent activity.

Consistent with prevailing CEQA practice, the NCCA projects' potential to affect officially designated scenic resources, conflict with regulations governing scenic quality, and result in new sources of light or glare, was assessed independent of anticipated viewer response.

Potential for Adverse Effects on a Scenic Vista

Neither the City nor the County of Merced has officially designated scenic vistas, although the County General Plan (County of Merced 2013) recognizes the importance of scenic resources and includes a goal and policies for their protection, as summarized in Table 3-1.

Table 3-1. County General Plan Protection for Scenic Resources

Goal	Policy
Goal NR-4: Protect Scenic Resources	**Policy NR-4.1: Scenic Resource Preservation** Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the County's scenic resources
	Policy NR-4.2: Special Review Process for Structures Adjacent to Scenic Highways Coordinate with Caltrans, during the review of proposed structures and activities located adjacent to [s]tate-designated scenic highways, to ensure that scenic vistas and local scenic values are not significantly degraded
	Policy NR-4.3: Building Design Require that siting and design of buildings protect, improve, and enhance the scenic quality of the built and natural environments and take full advantage of scenic resources through site orientation, building setbacks, preservation of viewsheds, height limits, and the use of appropriate construction materials and exterior modulation
	Policy NR-4.5: Light Pollution Reduction The County shall develop and implement a lighting ordinance to require good lighting practices, such as the use of specific light fixtures that reduce light pollution, minimize light impacts, and preserve views of the night sky. The ordinance shall contain standards to avoid light trespass, particularly from developed uses, to sensitive wildlife corridors and refuges

Source: County of Merced 2013

As described in Section 2 of this Initial Study, the NCCA site is currently undeveloped. Both parcels support a mixture of primarily non-native grasslands and disturbed wetlands that are seasonally irrigated to improve grazing. The site is surrounded on all sides by extensive agricultural lands cultivated for row and orchard crops. Several semi-rural residences and appurtenant structures as well as the existing City stormwater pump station are adjacent to the northwest corner of the 78-acre parcel, across the Miller Ditch and Canal School Road, with the south edge of the urbanized City just beyond. The channelized Newman Wasteway borders the south edge of the 24-acre parcel with additional agricultural structures present to the south on the far side of the Wasteway. Beyond the immediate site vicinity, the Coast Range foothills provide a backdrop to the west, and on a clear day, the Sierra Nevada may be visible to the east.

Because of their open, agricultural character, lands at and surrounding the NCCA site are considered among the scenic resources protected under County General Plan Policy NR-4.1 (Table 3-1). Views in the project vicinity are expansive and attractive but are evaluated as moderately rather than highly vivid since they are typical of areas in the western San Joaquin Valley where agricultural uses meet the edge of development. Visual intactness is considered moderate due to the encroachment of developed elements on the agricultural and open space features of the viewshed. Visual unity ranges from moderate to high, depending on the direction of view: higher as viewed to the south and east, where developed uses are less intrusive on open agricultural space, and slightly lower—at least for some viewers—as viewed to the north and west, where built elements are more evident.

Primary viewer groups include the following.

- Nearby residents
- Agricultural employees
- Drivers along adjacent arterial routes (Canal School Road, Inyo Avenue, and Brazo Road)

Residential viewers are expected to be highly sensitive to visual changes, as discussed above. The sensitivity of agricultural viewers and drivers on adjacent roadways is harder to gauge, but for purposes of this analysis, they are also treated as potentially highly sensitive to visual changes based on the assumption that they have chosen to live and/or work in the Newman area and value its resources, including visual character. Many drivers on adjacent roadways are expected to be area residents and/or agricultural workers, with commensurate sensitivity. Other drivers are generally expected to be less sensitive to changes in the viewshed.

Construction Period Impacts on Scenic Vistas

The NCCA projects are expected to be implemented incrementally, one at a time, as funding becomes available. Construction for each of the NCCA projects would temporarily disrupt visual intactness and unity due to the disturbance associated with vegetation removal and grading, along with the presence and activity of heavy equipment and construction crews and the need for materials and equipment staging. Disruption would be broadly similar to, but much more intensive than, the disruption caused by routine agricultural grading, and would be perceptually exacerbated by being "out of place" in the visual landscape, unlike agricultural grading and cultivation activities. At worst, impacts could be Significant, at least for some viewers. To address this, the City will require implementation of the following mitigation measures. With Measure AES-1 and AES-2 incorporated, the visual impacts of construction would be reduced to the extent feasible, and in light of their temporary duration, are considered Less than Significant. No additional mitigation is required.

Mitigation Measure AES-1. Construction Site Housekeeping and Visual Screening

In order to reduce adverse aesthetic effects related to vegetation removal, earthwork, civil construction, construction staging, and other project-related activities, all NCCA project construction documents will require "good construction site housekeeping" measures such that visual disruption is minimized and the appearance of the active work site is as orderly as possible. At a minimum, this will include the following requirements.

- Work and staging areas will be maintained in a clean, orderly condition at all times
- When not in use, equipment and materials will be stored in construction staging areas
- To the extent feasible, staging areas will be located away from public view; visual/aesthetic factors will be considered in locating staging areas
- Staging areas will be visually screened, using 8-foot-high chainlink fencing covered with a fabric or other non-reflective material of a neutral color
- Debris such as excavation spoils and vegetation slash not slated for onsite reuse will be removed promptly at regular intervals and properly disposed of

Mitigation Measure AES-2. Visual Disturbance Coordinator

During construction of each of the NCCA projects, informational signage posted at the work site will include the name and contact information for a City staff person to serve as the designated Visual Disturbance Coordinator. The Visual Disturbance Coordinator will be available during regular business hours to monitor concerns and will be responsible for responding to public complaints regarding construction visual disturbance. In the event a visual disturbance complaint is received, they will be responsible for determining the cause of the complaint and ensuring that reasonable measures are implemented to correct the problem.

Visual disruption associated with water service extension would be similar to that from the NCCA projects if Option 2 (Figure 2-9) along the north and east boundaries of the 78-acre parcel is selected, and arguably somewhat less if Option 1 is selected, since work would be almost entirely confined within existing roadways and green space would only be impacted where the new service enters the 78-acre parcel. To reduce impacts under both scenarios, the City will require Mitigation Measures AES-1 and AES-2 for water service extension. With these measures in place, similar to the NCCA projects, construction visual impacts would be reduced to the extent feasible, and in light of their temporary duration, are considered Less than Significant.

Post-Construction Visual Recovery Period

The three habitat-related projects (NEWS project, wetland project, and MDTW project) would each involve plantings that would require months to years to become fully established and achieve their long-term appearance. As a result, for each of these projects, there would be a visual recovery period representing an aesthetic transition from the level of disturbance associated with construction to the finished, mature site appearance discussed in *Long-Term Impacts on Scenic Vistas* below. During this period, visual disturbance would be substantially reduced from that experienced during construction, since earthwork would be complete, heavy equipment would no longer be present on the site, and materials staging would no longer be needed. The appearance of the completed project sites would be neat and orderly, would be generally consistent with the cultivated character of surrounding agricultural lands, and is not expected to substantially affect the visual intactness or unity of views in the vicinity of the site. Some viewers may also experience the addition of water features associated with the NEWS and MDTW projects and the tree plantings associated with the NEWS and wetland projects as Benefits to the vividness of area views. Additionally, the City would be monitoring and maintaining the new plantings to ensure their success, as discussed in Section 2 of this Initial Study. As a result, the appearance of each of the completed projects would improve progressively during the transition period, becoming increasingly consistent with the green character of surrounding agricultural lands, and progressively increasing any Benefits derived from the addition of water features and additional green elements.

The NCCA projects' impacts on scenic vistas during the visual recovery period are accordingly evaluated as Less than Significant. No mitigation is required.

If Option 2 (Figure 2-9) is selected, visual impacts of water service extension would be the same as those described for the NCCA projects since the installation alignment would undergo the same visual recovery as the associated project footprint. Impacts would be Less than Significant, and no mitigation is required. If Option 1 is selected, there would be no visual recovery period since the new extension would be entirely underground except for minor at-or above-grade appurtenances such as valve boxes, and roadway paving and striping would be restored to its pre-project condition immediately following installation. There would thus be No Impact on scenic resources during the visual recovery period under Option 1.

Long-Term Impacts on Scenic Vistas

As identifed above, the NCCA projects are expected to be implemented one at a time, as funding becomes available. Once each project has attained its mature appearance with all plantings fully established, the NEWS project, wetland project, and MDTW projects would add green elements to the viewshed, all of which would be generally consistent with the character of surrounding agricultural lands and—as discussed above for the transition period—are not expected to substantially affect the visual intactness or unity of views in the vicinity of the site. As discussed above, some viewers may also experience the addition of water features associated with the NEWS and MDTW projects and the tree plantings associated with the NEWS and wetland projects as Benefits to the vividness of area views.

In addition to plantings in the demonstration garden areas, the Newman Nature Park would add built features to the local viewshed, potentially including a community plaza/outdoor learning area complex, picnic area, shade structure, and parking area as well as additional trails. The architectural site improvements (outdoor learning areas, shade structures, restroom structure, storage, and signage) would be designed in a regional vernacular style, focused on agricultural forms, functionality, longevity, and access to local materials. As a result, the new facilities would be suitable to their natural and agricultural setting and would not appear out of place in their visual context at the interface between extensive working agricultural lands and the developed portion of the City. They are therefore not expected to materially degrade either the intactness or the unity of views in the project area, and may be experienced by some viewers as a Benefit to the memorability of views.

Accordingly, the NCCA projects' long-term impacts on scenic resources are considered Less than Significant, and no additional mitigation is required.

As identified above, the new water service extension would be entirely underground with the exception of small at- or above-grade features such as valve boxes and meters. These minor appurtenances would be inconspicuous in the larger landscape and would not be out of character with similar facilities already in place for existing agricultural and residential uses in the vicinity. The water service is therefore expected to have No Impact on scenic resources over the long term. No mitigation is required.

Potential for Damage to State Scenic Highway Resources

The State of California designates and protects certain state highways under the Scenic Highway Program, overseen by Caltrans. State scenic highways in the NCCA vicinity include Interstate (I) 5 from the Stanislaus County/Merced County line north to I 580 and State Route (SR) 140 from SR 152 north through Merced County. At their closest approach, these routes are several miles from the NCCA site; when it is visible at all, the NCCA site appears as a small part of the larger mosaic of middle-ground or background views to drivers along these routes. Moreover, both during and after construction, the NCCA projects would be generally consistent with the visual character and quality of surrounding agricultural lands and would not result in long-term degradation of visual character or quality. Consequently, there would be No Impact on scenic resources associated with state scenic highways as a result of any of the NCCA projects or the planned water service extension, and no mitigation is required.

Potential to Degrade Visual Character or Quality

As described in Section 2 of this Initial Study, the NCCA site is located in an agricultural and largely non-urbanized area. It is outside Newman city limits and as such is not subject to zoning by the City. It is zoned A-1 (General Agriculture) by the County, which protects scenic resources through its General Plan (County of Merced 2013) (see Table 3-1). Impacts on County-protected scenic resources are discussed in *Potential for Adverse Effects on a Scenic Vista* above. As discussed under that item, there would be some potential for degradation of public views during construction of each of the NCCA projects and the planned water service extension. The City will address this by implementing Mitigation Measure AES-1 (*Construction Site Housekeeping and Visual Screening*) and Mitigation Measure AES-2 (*Visual Disturbance Coordinator*). With these measures in place, the visual impacts of construction would be reduced to the extent feasible, and in light of their temporary duration, are considered Less than Significant. Construction-period impacts related to degradation of the character or quality of public views are also considered Less than Significant with Mitigation Measures AES-1 and AES-2 incorporated; no additional mitigation is required.

As further discussed in *Potential for Adverse Effects on a Scenic Vista* above, impacts during the visual recovery period as vegetation is becoming established at each of the projects, and over the long term once the

projects reach maturity, are also evaluated as Less than Significant, with no further mitigation required. As discussed above, under Option 1, the planned water service extension would have No Impact during the visual recovery period, and both Option 1 and Option 2 would have No Impact over the long term.

In this context, the NCCA projects and water service extension are considered consistent with County policies protecting scenic quality; there would be No Impact related to a conflict with these policies, and no additional mitigation is required.

Potential to Create New Sources of Light or Glare

Construction Period

During construction of each of the NCCA projects and the water service extension, there would be some potential for new or increased glare, primarily associated with reflections from the glass and painted metal surfaces of construction equipment. However, construction would be temporary and comparatively short-term, as discussed in Section 2 of this Initial Study, and would be visible to a limited number of viewers: nearby residents and agricultural workers, as well as drivers on adjacent roadways, who would experience only fleeting views. Because of the short duration and limited visibility of construction-related glare, potential construction-period impacts related to new sources of glare are considered Less than Significant. No mitigation is required.

Night work is not expected to be necessary for the NCCA projects or for the water service extension, so construction would not introduce new sources of lighting to the viewshed. There would be No Impact associated with new construction-period light sources. No mitigation is required.

Long Term

Once construction is complete, the NEWS and MDTW projects would have the potential to introduce limited new sources of long-term glare, including

- reflection from the water surface during periods of ponding in inundated areas
- glare from access road and O&M staging area surfaces

The wetland project may also slightly increase glare generation due to the increased extent and duration of ponding in enhanced and restored wetland areas.

Periodic ponding currently occurs on the NCCA site during the winter rainy season and also in the summer when the parcel is irrigated. With the completion of the NEWS, MDTW, and wetland projects, glare may increase slightly since the total ponded area at the site would likely increase and the water surface would be smoother due to increased ponding depth in some areas. The nature of glare generation would be similar, however, and many viewers would likely also view the water features as a positive addition to the viewshed, potentially offsetting reactions to the slight increase in glare. Potential impacts associated with increased water-surface glare are therefore considered Less than Significant. No mitigation is required.

Glare generated by the DG surfaces of the new access roads and parking areas would be limited and would be similar to that associated with existing unsurfaced agricultural roads in the NCCA vicinity. However, the Newman Nature Park would introduce a number of new structures to the southeast portion of the 78-acre parcel, with the potential for increased glare generated by (permeable) hardscape and painted wood and metal surfaces. At worst, impacts related to increased glare associated with new built elements could be experienced as Significant, at least by some viewers. To address this, the City will implement Mitigation Measure AES-3.

With this measure incorporated, impacts related to long-term increases in glare are considered Less than Significant, and no additional mitigation is required.

Mitigation Measure AES-3. Use of Non-Glare Finishes

In order to minimize glare generated by new built elements at the NCCA site, all NCCA project construction documents will stipulate the use of low-sheen, non-glare, and non-reflective surface materials. Unpainted metal surfaces will not be permitted unless they have been treated for a low-glare weathered or rusted appearance, and gloss paints will not be used. Wall surfaces and hardscape will be matte and roughened; smooth trowelled surfaces will not be permitted.

The operations and maintenance plan for each of the NCCA projects will also be written to require periodic assessments of the appearance of hard surfaces, with touch-up or replacement of the finish when necessary. The City will be responsible for long-term assessment and maintenance to ensure that the new built elements at the NCCA do not generate excess glare.

Nighttime security lighting would likely be provided for the parking area at the Nature Park community complex. The NEWS project gateway area is not currently planned to include nighttime lighting, but the City may add limited solar-powered lighting in the future. In both locations, with nighttime lighting in place, there would be some potential for light spill to become a nuisance to project neighbors and/or for disturbance of wildlife. At worst, impacts could be Significant. To address this, the City will implement Mitigation Measure AES-4. With this measure incorporated, impacts related to new sources of nighttime lighting would be reduced consistent with current best practices and are considered Less than Significant. No additional mitigation is required.

Mitigation Measure AES-4. Standards for Nighttime Security Lighting

To minimize effects of nighttime security lighting on the community and on wildlife, all NCCA project construction documents will require that any exterior lighting installed at the NCCA meet the following standards.

- Use of nighttime lighting limited to the minimum needed to provide for public and facility safety
- Lighting equipped with photosensor or timer switches, such that lighting is on only when needed (dark hours)
- Full cut-off, shielded luminaires to reduce light spill
- Downward-directing lighting only; no use of uplights
- Lighting sources restricted to those that provide good color rendering such as light-emitting diodes (LEDs) and metal halide lamps; no use of high- or low- pressure sodium lamps or mercury vapor lamps

The planned water service extension would involve only minor at- or above-grade facilities such as valve boxes and meters. It therefore would have extremely limited potential to result in new sources of light and glare. Impacts, if any, would be Less than Significant, and no mitigation is required.

References Cited in this Section

California Department of Transportation. 2011. California Scenic Highway Mapping System. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed: January 2019.

City of Newman. 2007. Newman 2030 General Plan. Available: http://www.cityofnewman.com/docman/community-development-department/36-general-plan-final-version/file.html. Downloaded: November 2019.

County of Merced. 2013. 2030 Merced County General Plan. Available: https://www.co.merced.ca.us/100/General-Plan. Downloaded: May 2020.

Federal Highway Administration (FHWA). 1981. Visual Impact Assessment for Highway Projects. Available: https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx. Accessed: August 2020.

II. AGRICULTURE & FORESTRY RESOURCES *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) 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?	☐	☐	☐	■
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
(c) 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])?	☐	☐	☐	■
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
(e) 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?	☐	☐	☐	■

Discussion of Checklist Responses

Potential for Conversion of Farmland to Non-Agricultural Use

The Land Resource Protection Division (LRPD) of the state's Department of Conservation is charged with protecting California agricultural lands as well as open space resources. To that end, the LRPD's Farmland Mapping and Monitoring Program (FMMP) evaluates and rates agricultural lands based on factors such as soil quality and irrigation status. The highest-quality lands are designated Prime Farmland. Other important agricultural lands are designated Farmland of Statewide Importance (similar to Prime Farmland but with minor shortcomings) or Unique Farmland (farmland that has lower quality soils but is important for production of the state's leading agricultural crops). Additional designations include Farmland of Local Importance (lands used for production of crops important to the local agricultural economy) and Grazing Land. Collectively, these agricultural lands warranting protection are often referred to as Farmland. Every 2 years, the FMMP produces updated GIS-based maps showing the location and extent of California's Farmland (California Department of Conservation 2017a, 2017b).

Figure 3-1 shows state-designated Farmland in the vicinity of the City and NCCA. Extensive tracts of Prime Farmland surround the City to the north, west, and south, with a mosaic of Prime Farmland and Unique Farmland, and small areas of Farmland of Local Importance to the northeast, east, and southeast. Farther east are extensive areas of Grazing Land.

At the NCCA site, the 78-acre parcel is designated as Farmland of Local Importance and the 24-acre parcel as "nonagricultural or natural vegetation" by the FMMP (California Department of Conservation 2016) (Figure 3-1). Consequently, none of the NCCA projects would result in direct conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

Approval of the NCCA projects would not alter agricultural zoning on surrounding parcels, nor would it extend urban development or reduce the importance of agriculture to the local or regional economy. As a result, the NCCA projects would not create pressure that could indirectly result in conversion of Farmland to non-agricultural use over the long term.

There would be No Impact related to direct conversion of Farmland or pressures indirectly resulting in or fostering Farmland conversion, and no mitigation is required.

Potential to Conflict with Existing Agricultural Zoning or Williamson Act Contract

As identified in Section 2, the NCCA site is outside City limits and is not subject to City zoning. It is zoned A-1 (General Agriculture) by the County. Permissible uses on A-1 zoned lands include public parks and recreation areas and wildlife management areas; the wetland project and the Newman Nature Park are therefore considered consistent with existing zoning. Constructed water treatment wetlands are not mentioned in the County zoning code, although the City has reached out informally to the County and the County has indicated that they are generally supportive of the NCCA concept and projects. The City will work closely with the County to ensure that any concerns are addressed such that the County can approve the NEWS and MDTW projects. In this context, No Impact related to conflict with existing agricultural zoning is anticipated, and no mitigation is required.

Under the California Land Conservation Act of 1965 (Williamson Act), local governments may establish contracts with local landowners to restrict specific parcels to agricultural or open space use (see California Department of Conservation 2017). The NCCA parcels are not under Williamson Act contracts (City of Newman

Source: *modified from* California Department of Conservation 2016

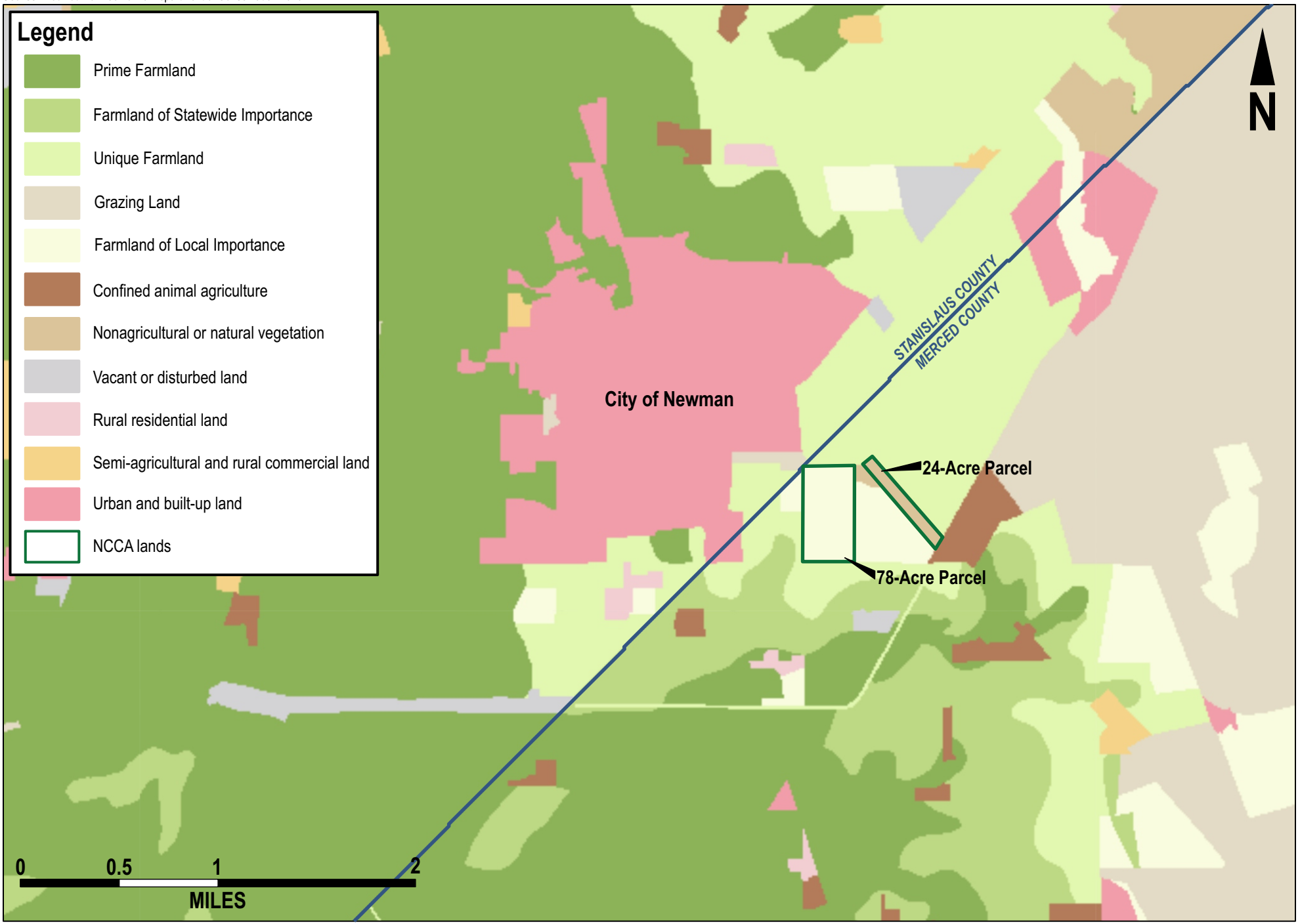

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Figure 3-1. Farmlands in NCCA Vicinity
Newman Community Conservation Area Master Plan
City of Newman

2021). There would be No Impact related to conflict with existing Williamson Act contracts, and no mitigation is required.

Potential to Conflict with Existing Forest or Timberland Zoning

Section 12220[g] of the California Public Resources Code defines *forest land* as land that can support 10% native tree cover 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." Public Resources Code Section 4526 defines *timberland* as non–federally owned land that is available for, and capable of, growing commercial tree crops used to produce lumber and other forest products. There are no lands of either type at or in the immediate vicinity of the NCCA site.

Under Section 51104 of the California Government Code, a timberland production zone is an area that is "devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses" and is under zoning established through a specific process stipulated by law. There are no timberland production–zoned lands at or in the immediate vicinity of the NCCA site.

With no forest or timberland zoning in the vicinity of the NCCA site, there is no potential to conflict with such zoning. There would be No Impact, and no mitigation is required.

Potential to Result in Loss or Conversion of Forest Land

As identified in the previous item, there is no forest land in proximity to the NCCA site. The NCCA projects would therefore have no potential to result in the direct loss or conversion of forest land. The NCCA projects also would not alter land use designations or zoning or affect planned levels of development in the City, its Sphere of Influence, or surrounding portions of the County. As a result, the NCCA projects would have no potential to create indirect pressures contributing to loss or conversion of forest lands in the vicinity of the site or elsewhere in the region. There would be No Impact related to loss of forest land or conversion of forest land to non-forest use, and no mitigation is required.

Potential for Other Changes

As discussed in the previous item, the NCCA projects would not alter land use designations or the planned level and extent development in and around the City. The NCCA parcels do not qualify as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or forest land, and there are no forest lands or timberland production–zoned lands in the vicinity of the site. The projects would therefore have no potential to directly result in or indirectly contribute to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use or conversion of forest land to non-forest use. There would be No Impact related to such conversion, and no mitigation is required.

References Cited in this Section

California Department of Conservation. 2016. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed: August 2020.

California Department of Conservation. 2017a. Farmland Mapping and Monitoring Program. Available: http://www.conservation.ca.gov/dlrp/fmmp. Accessed: November 2020.

California Department of Conservation. 2017b. Important Farmland Categories. Available: www.conservation.ca.gov/dlrp/fmmp/Pages/mccu/map_categories.aspx. Accessed: July 2018.

California Department of Conservation. 2016c. Williamson Act/Land Conservation Act. Available: http://www.conservation.ca.gov/dlrp/lca. Accessed: July 2018.

City of Newman. 2021. Newman Community Conservation Area Master Plan. (Third Administrative Draft.) (February.) Prepared for City of Newman by Redtail Consulting, Fremont, CA. Appendix A to this Initial Study.

III. AIR QUALITY *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
(c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number people?	☐	☐	■	☐

Discussion of Checklist Responses

Background

Air quality is evaluated with respect to different types of pollutants. For one set of pollutants, the federal Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for their concentrations, based on health-based criteria and factoring in an adequate margin of safety (42 USC 7409 Section 109[b][1]). Attainment of these standards—and analogous California Ambient Air Quality Standards (CAAQS) set by the state—is typically assessed at the level of regional air quality basins. The six "criteria pollutants" covered in the NAAQS and CAAQS are:

- ozone
- particulate matter smaller than 10 micrometers (µm) in diameter (PM10) and particulate matter smaller than 2.5 µm in diameter (PM2.5)
- carbon monoxide
- nitrogen dioxide
- sulfur dioxide
- lead (particulate)

The City is located in the San Joaquin Valley (SJV) Air Basin. NAAQS and CAAQS attainment status for the SJV Air Basin is summarized in Table 3-2.

Table 3-2. Attainment Status for Criteria Air Pollutants, San Joaquin Valley Air Basin

Pollutant	NAAQS	CAAQS
Ozone, 1-hour average	N/A (no NAAQS)	**Nonattainment (Severe)**
Ozone, 8-hour average	**Nonattainment (Extreme)**	**Nonattainment**
PM10	Attainment	**Nonattainment**
PM2.5	**Nonattainment**	**Nonattainment**
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment

Note:
CAAQS are also established for certain non-criteria pollutants (hydrogen sulfide, sulfates, visibility reducing particles, and vinyl chloride); however, the only portion of the state still identified as in Nonattainment for any of these non-criteria CAAQS is the Searles Valley portion of the Mojave Desert.

Source: San Joaquin Valley Air Pollution Control District 2020a

While the SJV Air Basin has not attained the current federal or state standards for ozone and PM, Figures 3-2 and 3-3 show that there has been improvement over time.

In addition to the criteria air pollutants, other air pollutants are classified as *toxics* because they are known (or reasonably anticipated) to be carcinogenic, mutagenic, teratogenic, or neurotoxic, to cause reproductive dysfunction, and/or to cause acute or chronic toxicity. Almost all of the toxics are also classified as reactive organic gases (ROG) or PM. The EPA maintains a list of hazardous air pollutants (HAP), and California has a list of toxic air contaminants (TAC) that largely incorporate the HAP as well as several additional toxics. Not all of the toxics are carcinogenic, but when screening risks, lifetime cancer risk (i.e., the odds of contracting cancer at some point within a person's lifetime) is often identified as the most important metric with regard to toxics. The lifetime cancer risk for the population as a whole—caused by any and all factors—is approximately 400,000 in a million (40%) (American Cancer Society, 2020). In communities that the California Air Resources Board (CARB) has designated as having some of the highest cumulative exposure burdens, the lifetime cancer risk associated with the TACs has been estimated to be potentially in excess of 1,000 to 2,000 in a million, most of which is attributed to PM emitted from diesel engines (California Air Resources Board 2020b).[1,2] Several of those communities are estimated to be in the top 10% in the state with regard to diesel PM exposures; however,

[1] All health risk estimates identified for California air planning are "potential" risks that "should not be interpreted as the expected rates of disease in the exposed population but rather as estimates of potential for disease, based on current knowledge and a number of assumptions"; the assumptions are not averages or "best estimates" of actual risk, but rather "are designed to err on the side of health protection in order to avoid underestimation of risk to the public" (Office of Environmental Health Hazard Assessment, 2015, pages 1-5 and 1-6).

[2] For example, in West Oakland, the Bay Area Air Quality Management District projected that in 2015, estimated potential lifetime cancer risk from TACs was in excess of 1,200 in a million using pre-2015 health risk assessment techniques, and identified that the estimated potential risk using the 2015 Office of Environmental Health Hazard Assessment methodology should be 70% higher than that; across the study area, they estimated that diesel PM accounted for approximately 70% of the total potential risk (Bay Area Air Quality Management District 2014). In West Long Beach and other areas, the South Coast Air Quality Management District modeled potential lifetime cancer risks from TACs as also being in excess of 1,200 in a million (using 2015 Office of Environmental Health Hazard Assessment methodology), and estimated that across the basin, diesel PM accounted for approximately 68% of the total potential risk (South Coast Air Quality Management District 2015).

estimated diesel PM exposures in the City are lower, ranking in the 30th – 40th percentile statewide (Office of Environmental Health Hazard Assessment 2020).

Projects can impact air quality by emitting air pollutants directly, or emitting precursors to those pollutants that subsequently react to form the pollutant in the ambient air. For example, the majority of the ozone in the ambient air is not emitted directly but is instead formed by sunlight-catalyzed chemical reactions between oxygen in the air and ozone precursors: i.e., ROG and oxides of nitrogen (NO_x, including both nitrogen monoxide and the criteria pollutant nitrogen dioxide). Accordingly, while ROG and NO_x are not truly criteria pollutants (because EPA does not establish NAAQS criteria for them), they are referred to as criteria pollutants for purposes of emissions inventories and air quality planning.

ROG are emitted from a variety of sources, including but not limited to evaporation of hydrocarbons (such as fuels, paints, cleaning solvents, and consumer/personal products) and fuel combustion sources (vehicles, other engines, boilers, etc.). NO_x emissions are predominantly produced from fuel combustion sources. Particulate matter (PM) can be either emitted directly or produced in the air by chemical reactions in the atmosphere between PM precursor gases, which include ROG, NO_x, sulfur dioxide, and ammonia.

Federal laws and regulations require areas to submit State Implementation Plans (SIPs) that identify how their regulations will result in attainment of the NAAQS, or maintain attainment of them. For example, since areas in the SJV Air Basin were previously classified as "Nonattainment" with regard to CO, it is considered a CO "maintenance" area. California also requires that air districts submit plans showing how they will attain the CAAQS and which additional measures it may consider for regulation. The SJV Air Pollution Control District (SJV APCD) has developed plans for ozone, PM, and CO (SJV APCD 2020b). HAP and TAC are regulated separately at the statewide level (for example, via CARB's Diesel Risk Reduction Plan), but there typically is no separate local plan for these; one exception is the AB 617 Community Air Protection Program for communities that CARB has designated as having some of the highest cumulative exposure burdens, but as identified above, the City is not one of these communities.

Potential to Conflict with or Obstruct Air Quality Plan Implementation

The SJV APCD considers "projects with emissions below the thresholds of significance for criteria pollutants "not [to] conflict [with] or obstruct implementation of the District's air quality plan" (San Joaquin Valley Air Pollution Control District 2015). In general, because the applicable plans consist of enforceable regulations, compliance with these regulations ensures that a project is not conflicting with or obstructing plan implementation. One potential exception to this pertains to projects that are projected to have relatively high criteria pollutant emissions and that are not subject to stationary source permitting for onsite sources of emissions; if emissions are sufficiently high, and the project would be located in an area classified as a Nonattainment or Maintenance area, such projects can be required to demonstrate conformity with the SIP (referred to as General Conformity) before they can receive any federal approvals.

In November 2020, the SJV APCD issued Small Project Analysis Level (SPAL) guidance which identifies that city parks 256 acres in size or smaller that generate no more than 1,100 average daily one-way trips (for non heavy-heavy duty trucks) and no more than 20 one-way trips (for heavy-heavy duty trucks) are not required to quantify criteria pollutant emissions for CEQA purposes (San Joaquin Valley Air Pollution Control District 2020c). However, to confirm General Conformity, and since the NCCA would host more than "just" park-related activities, these emissions were calculated using the current version of the California Air Pollution Control Officers Association's (CAPCOA's) CalEEMod model. Results are presented in detail in Appendix C to this Initial Study and compared to General Conformity and the SJV APCD's CEQA significance thresholds in Tables 3-3 and 3-4. Although construction emissions would be spread across multiple years (see the anticipated

Source: California Air Resources Board 2020a

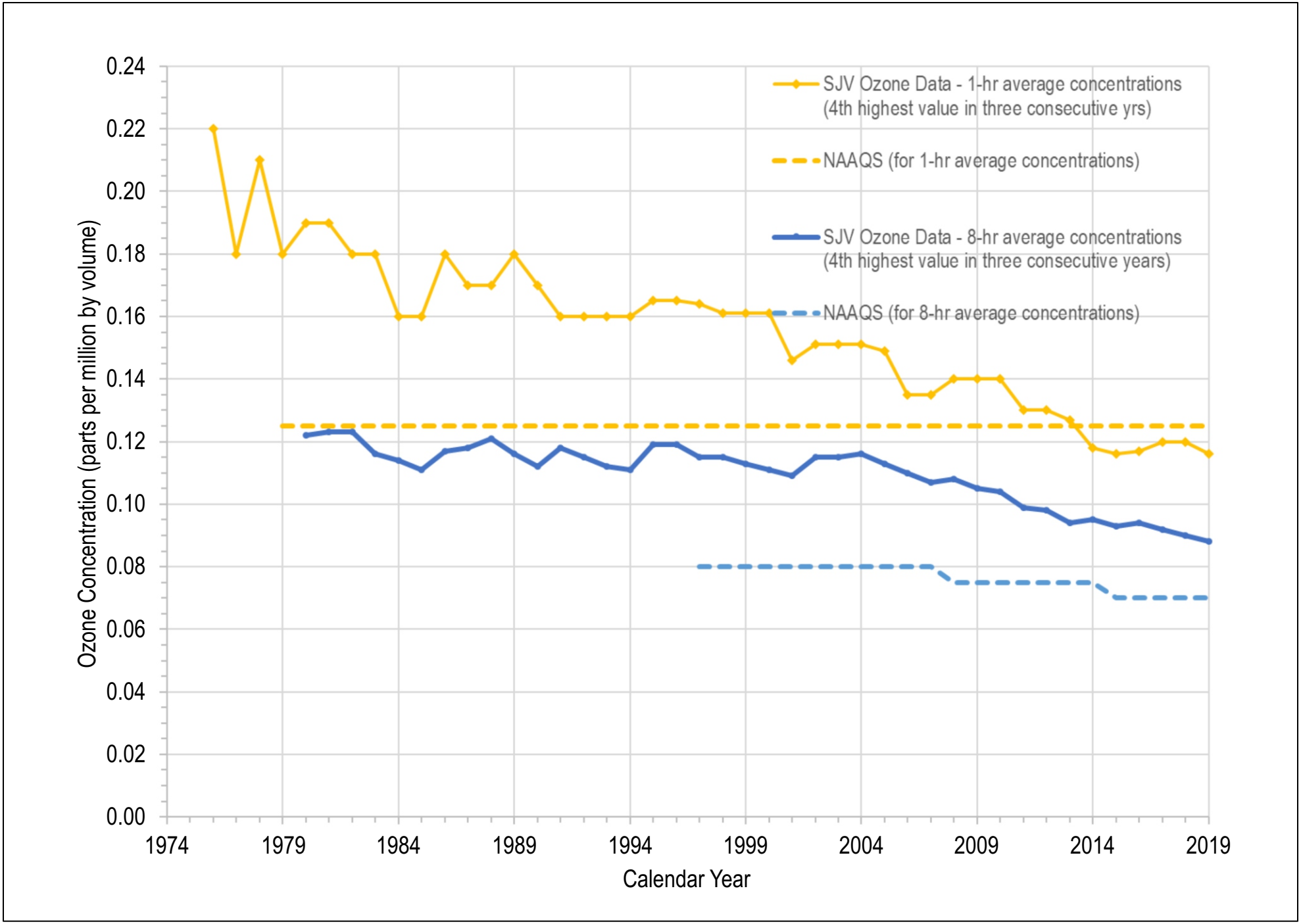

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Figure 3-2. Improvement in Ozone Concentrations Over Time
Newman Community Conservation Area Master Plan
City of Newman

Source: California Air Resources Board 2020a

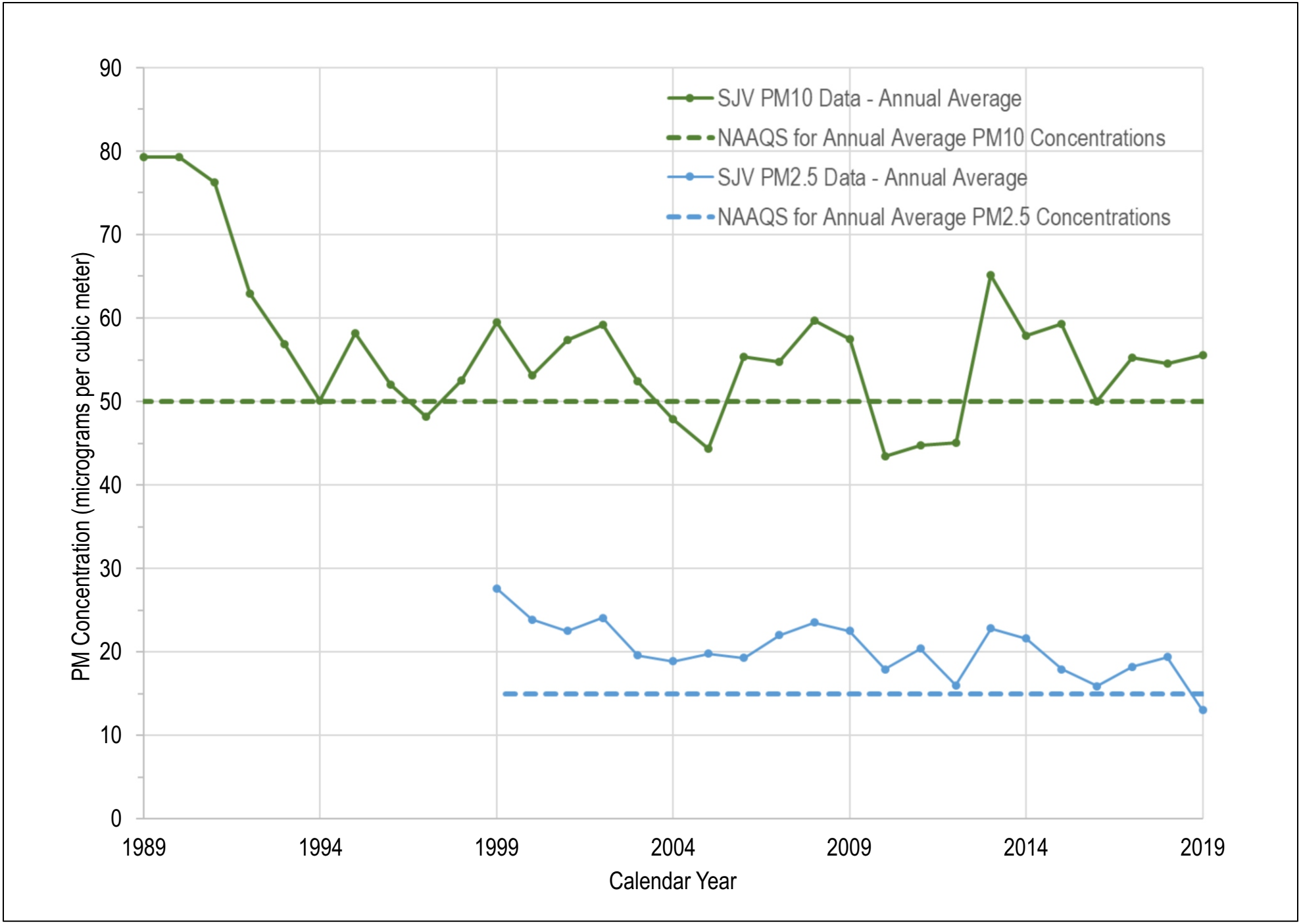

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Figure 3-3. Improvement in Pm10 and PM2.5 Concentrations Over Time
Newman Community Conservation Area Master Plan
City of Newman

construction schedules in Section 2), in total they would be well below both the *annual* thresholds for General Conformity and CEQA Significance, so for simplicity they have been totalled in Table 3-3 to illustrate this.

Table 3-3. Construction Emissions Compared to Thresholds

Pollutant	Total NCCA Construction Emissions (tons)	General Conformity Threshold (tons/year)	SJV APCD Significance Threshold (tons/year)	Impact
ROG	0.72	10	10	Conforms/Less than Significant
NO_x	7.7	10	10	Conforms/Less than Significant
PM10	0.63	100	15	Conforms/Less than Significant
PM2.5	0.33	100*	15	Conforms/Less than Significant
Sulfur dioxide	0.02	100	27	Conforms/Less than Significant
Carbon monoxide	5.0	100	100	Conforms/Less than Significant

Note:
The General Conformity Threshold for PM2.5 applies to total emissions of PM2.5 and PM2.5 precursors (sulfur dioxide, NO_x, volatile organic chemicals—essentially synonymous with ROG—and ammonia); the NCCA projects would not emit ammonia.

Sources: 40 CFR 93.153[b] thresholds, Tamura Environmental 2020 (Appendix C to this Initial Study)

Table 3-4. Operational Emissions Compared to Thresholds

Pollutant	Total NCCA Operational Emissions (tons/year)	General Conformity Threshold (tons/year)	SJV APCD Significance Threshold (tons/year)	Impact
ROG	0.76	10	10	Conforms/Less than Significant
NO_x	1.58	10	10	Conforms/Less than Significant
PM10	0.48	100	15	Conforms/Less than Significant
PM2.5	0.14	100*	15	Conforms/Less than Significant
Sulfur dioxide	0.01	100	27	Conforms/Less than Significant
Carbon monoxide	5.72	100	100	Conforms/Less than Significant

Notes:
1. As indicated in the note to Table 3-3, the General Conformity Threshold for PM2.5 applies to total emissions of PM2.5 and PM2.5 precursors (sulfur dioxide, NO_x, volatile organic chemicals—essentially synonymous with ROG—and ammonia); the NCCA projects would not emit ammonia.
2. Mitigation Measure HAZ-1 (see *Hazards & Hazardous Materials* section of this checklist) requires disposal of forebay sediment in a Class I landfill if testing shows that it qualifies as hazardous under State of California standards. Mitigation Measure HAZ-2 could also entail haulage and disposal at a Class I landfill. The closest such facilities (the Kettleman Hills and Buttonwillow landfills) are 150 – 200 miles from the NCCA site. Such conditional emissions are not included above. However, the pollutants emitted in the greatest quantities from haul truck trips would be NO_x (0.003 tons per trip) and CO (0.0006 tons per trip) and emission volumes would be insignificant compared to the emissions identified above.

Sources: 40 CFR 93.153[b] thresholds, San Joaquin Valley Air Pollution Control District 2015, Tamura Environmental 2021 (Appendix C to this Initial Study)

The principal SJV APCD regulations applicable to undertakings such as the NCCA projects are the Regulation VIII rules (8011-8071) that limit fugitive dust (including dust generated by construction) and the Indirect Source Rule (Rule 9510), which requires restrictions on construction equipment emissions from certain discretionary

projects before they can be approved. Per standard City policy, all NCCA projects will comply with applicable SJV APCD rules, which include the following.

- Develop, submit, and obtain SJV APCD approval for a Dust Control Plan in accordance with Rule 8021 (*Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*) to keep visible dust emissions to less than 20% opacity
- Control emissions from any bulk material handling, storage, or transport in accordance with Rule 8031 (*Bulk Materials*)
- Minimize emissions from vehicle carryout/trackout in accordance with Rule 8041 (*Carryout and Trackout*)
- Control emissions from any open area with 3.0 acres or more of disturbed surface area that has remained undeveloped, unoccupied, unused, or vacant for more than seven days, per Rule 8051 (*Open Areas*)
- Limit fugitive dust from unpaved vehicle/equipment traffic areas per Rule 8071 (*Unpaved Vehicle/Equipment Traffic Areas*), and optionally develop and implement a Fugitive PM10 Management Plan per Rule 8011 Section 7.0
- Implement any applicable NO_x/PM control measures required under Rule 9510 Section 6

In addition to the District Rules, CARB's diesel fuel regulations (California Code of Regulations, Title 13, Section 2281) limit the allowable sulfur content of diesel fuel to 15 parts per million by weight, and CARB vehicle regulations require fleets of both heavy-duty on-road diesel vehicles and of off-road diesel vehicles such as construction equipment to meet increasingly stringent emissions standards, submit compliance information to CARB, and comply with anti-idling provisions (California Code of Regulations, Title 13, Sections 2025, 2449, and 2485). The contractor(s) selected to carry out the proposed work will be required to meet these standards. With all of these provisions in place, there would be No Impact related to conflict with or obstruction of any of the applicable air quality plans, and no mitigation is required.

Potential for Cumulatively Considerable Increase in Criteria Pollutant(s) in Nonattainment

The SJV APCD (2015) notes that "[i]f a project is significant based on the thresholds of significance for criteria pollutants, then it is also cumulatively significant." The SJV APCD also recognizes that even if a project's impacts are found to be Less than Significant at the project-specific level "[t]his does not imply that … it cannot be cumulatively significant" (San Joaquin Valley Air Pollution Control District 2017). A specific hypothetical example that the District provides is one in which simultaneous proposals for two sources are each below the significance threshold, but an air quality analysis of the combined impact shows an exceedance of an air quality standard.

As shown in Table 3-2, the SJV Air Basin is currently in Nonattainment for state ozone (1-hour and 8-hour), PM10, and PM2.5 standards, and for federal ozone (8-hour) and PM2.5 standards. Analysis of the NCCA projects' individual and collective contributions to these cumulative air quality impacts focused on the ozone precursor NO_x and particulate matter. Project-specific impacts were considered in the context of the SJV APCD's project-specific thresholds of significance, since these also function as a first-level test to identify the level at which emissions become Cumulatively Considerable.

Construction Period

As shown above, *total* construction emissions from all four NCCA projects and the accompanying water service extension would be well below the SJV APCD's adopted *annual* significance thresholds for construction emissions (Table 3-3): total emissions of 1.58 tons for NO_x, versus a threshold of 10 tons/year, and total emissions of 0.49 tons and 0.14 tons for PM10 and PM2.5 respectively, versus thresholds of 15 tons/year. Maximum *annual* emissions would be even lower by comparison since construction of each project would take 2 – 3 years (see *Project Construction* in Section 2). Each project's contribution would represent a percentage of the annual emissions budget. With both total and annual construction emissions 1 – 2 orders of magnitude below the level of project-specific significance under the worst-case construction scenario, the individual and collective (cumulative) contributions of the NCCA projects to cumulative nonattainment of ozone, PM10, and PM2.5 standards are evaluated as Less than Cumulatively Considerable. No mitigation is required.

Operations

Onsite emissions from routine O&M would be substantially lower than those generated by construction, since activities would be short-term and intermittent, would use less heavy equipment, and would involve less ground disturbance. The majority of the emissions totals shown in Table 3-3 would be from regional visitor trips to the site. As shown in Table 3-4, even at buildout, with all four NCCA projects in operation, these figures are also 1 – 2 orders of magnitude below the SJV APCD's significance thresholds. They are therefore considered Less than Cumulatively Considerable based on the same reasoning laid out for construction emissions. No mitigation is required.

Potential to Expose Sensitive Receptors to Pollutants

The key concern with regard to exposure of sensitive receptors to pollutants focuses on nearby residences and potential exposure to diesel exhaust. The closest sensitive receptors are residences along Canal School Road, Inyo Avenue, and slightly farther away at the south edge of the City proper. Other sensitive receptors such as schools, care facilities, and hospitals are more than 0.5 mile away to the north and west from the nearest corner of the site.

Health concerns associated with the toxic impacts of diesel exhaust are associated with chronic, long-term exposure rather than temporary or short-term exposure. Overall emission levels for construction of the NCCA projects would be low—well below applicable standards, as discussed above, even with more than one project potentially under construction at the same time. Additionally, for each of the NCCA projects, construction activity would take place across a relatively large area; much of the work would be at a substantial distance from any sensitive receptors, and work in proximity to the closest residences would be very short-term and temporary. O&M activities involving diesel heavy equipment would be even more limited in duration, and would use fewer pieces of equipment, reducing emission levels. As a result, both construction and operational impacts related to potential exposure of sensitive receptors to air pollutants are therefore considered Less than Significant, and no mitigation is required.

Potential for Other Emissions

"Other emissions" include emissions from particularly odorous sources that may not impact attainment of air quality standards or pose risks due to toxicity, but which can nonetheless be a nuisance and a concern for the community. Potential odor sources identified by the SJV APCD include facilities such as wastewater treatment facilities, landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical or fiberglass manufadturing, painting/coating operations such as auto body shops, food processing facilities, feed lots, dairies, and rendering plants. The NCCA would not involve any such sources. Any odors related to construction or operations, such as diesel exhaust, which may be intermittently perceptible at the nearest

residences, would be temporary, intermittent, and short term. Consequently, the potential for the NCCA projects to create objectionable odors is evaluated as Less than Significant. No mitigation is required.

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IV. BIOLOGICAL RESOURCES *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) 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 Wildlife or U.S. Fish and Wildlife Service?[3]				
(i) Special-status plants	☐	■ (Parry's rough tarplant, construction period, NEWS and wetland projects)	■ (other species, construction; all species, long term) (potential long-term Benefit)	☐
(ii) Northwestern pond turtle	☐	☐	■ (long-term Benefit)	☐
(iii) Western spadefoot	☐	☐	■ (long-term Benefit)	☐
(iv) Giant garter snake	☐	☐	■ (long-term Benefit)	☐
(v) Burrowing Owl	☐	☐	■	☐
(vi) Tricolored Blackbird	☐	☐	■ (adult impacts, construction and O&M; change in habitat over time) (long-term Benefit to breeding)	■ (nesting, short-term)
(vii) Swainson's Hawk	☐	☐	■ (long-term Benefit to breeding)	☐

[3] The potential for special-status species presence at the NCCA site is discussed in Section 2 of this Initial Study, and in more detail in Appendix B. This checklist matrix lists only the special-status species identified as having potential to be present on the site.

IV. BIOLOGICAL RESOURCES *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(viii) Northern Harrier	☐	☐	■ (long-term Benefit to breeding)	☐
(ix) Loggerhead Shrike	☐	☐	■ (adult impacts, construction and O&M; change in habitat over time) (long-term Benefit)	■ (nesting, short-term)
(x) Yellow-billed Magpie	☐	☐	■ (overall long-term Benefit)	■
(xi) Non-listed MBTA[a]-protected species	☐	☐	■ (long-term Benefit)	☐
(xii) American badger	☐	☐	■	☐
(xiii) San Joaquin kit fox	☐	☐	■	☐
(b) 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 Wildlife or U.S. Fish and Wildlife Service?	☐	■ (potential for damage as a result of human incursions)	■ (all projects, construction, O&M) (long-term Benefit)	☐
(c) 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?	☐	☐	■ (long-term Benefit)	☐
(d) 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?	☐	☐	■	☐
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■

IV. BIOLOGICAL RESOURCES *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

[a]Federal Migratory Bird Treaty Act

Discussion of Checklist Responses

Potential for Adverse Effects on Special-Status Species

Under CEQA, *special-status species* is understood to refer to plants and wildlife considered at risk and protected under a variety of federal, state, and local regulations, including:

- wildlife species that are listed, proposed, or candidates for listing as Threatened or Endangered under the federal or state Endangered Species Act
- wildlife designated as Species of Special Concern by DFW and/or Species of Concern by USFWS
- wildlife identified as Fully Protected under the California Fish and Game Code
- additional wildlife species included on DFW's Special Animals List[4]
- birds identified as federal Birds of Conservation Concern
- birds protected under the federal Migratory Bird Treaty Act and their active nests
- plants that are state- or federally listed as Rare, Threatened or Endangered, are candidates for state or federal listing, are proposed for state or federal listing, or are identified by the California Native Plant Society's *Inventory of Rare and Endangered Plants of California* as Rank 1, 2, 3, or 4 species

The special-status plant and wildlife species with potential to occur at the NCCA site are discussed in more detail in Section 2 of this Initial Study, including Tables 2-2 and 2-3, and in the Biological Resources Evaluation prepared for the NCCA projects (Appendix B to this Initial Study). The NCCA projects' potential to affect special-status species is discussed in the following paragraphs.

For special-status plants, analysis considered effects during the construction period for each of the NCCA projects, effects during ongoing O&M at the site, and effects as a result of long-term change in the habitat mosaic on the NCCA parcels. For special-status birds, analysis considered construction- and O&M-related impacts on adults of each species, near-term effects on species breeding, and longer-term effects on the species as a result of the changing habitat mosaic over time at the NCCA site, including longer-term effects on breeding. For other special-status wildlife, analysis considered construction- and O&M-related impacts and impacts related to long-term changes in habitat at the site.

[4] *Special Animals* is DFW's term for all species tracked in the California Natural Diversity Database, regardless of legal or protection status. The Special Animals List identifies the species DFW considers to be in greatest need of conservation.

Special-Status Plants

Construction Period. As discussed in more detail in Section 2 and Table 2-3, Parry's rough tarplant is known to occur on both of the NCCA parcels (see Appendix B, Figure 3). The majority of the Parry's tarplant occurrences documented in the 2020 protocol surveys are located on the 24-acre parcel, with larger concentrations (more than 100 square feet in extent) in the north and central portions of the parcel, and more restricted occurrences to the south. Several smaller concentrations are located within the NEWS project footprint on the 78-acre parcel (Vollmar Natural Lands Consulting 2021a). Several other special-status plant species also have some potential to be present, including heartscale, crownscale, lesser saltscale, vernal pool smallscale, and San Joaquin spearscale. None of these species is state- or federally listed; all qualify for special status because the California Native Plant Society considers them Rare. Parry's rough tarplant and crownscale are CRPR 4.2 "watch list" species. The other species are all CRPR 1B.1 or 1B.2 species, reflecting a higher degree of rarity and threat (see Table 2-3).

Although Parry's rough tarplant is the only species known to be present on the NCCA site, the potential for presence of heartscale, crownscale, lesser saltscale, vernal pool smallscale, and San Joaquin spearscale cannot be entirely ruled out, since suitable habitat is present, the site is within the documented range of all species, and presence and local distribution can vary from year to year. Construction of the NCCA projects is therefore considered to have the potential to affect all of these species, as follows.

- As identified above, one of the distributions of Parry's rough tarplant documented in the spring – summer 2020 protocol surveys for special-status plants is located in the northwest quadrant of the 78-acre parcel, and would likely be removed by construction of the NEWS project
- Additional distributions of Parry's rough tarplant are located within and adjacent to the wetland project footprint on the 24-acre parcel, with a larger concentration near the northern end of the parcel, where limited construction staging for the wetland project could be located. Some or all of these occurrences could be disturbed or removed by wetland project construction and/or staging
- Wetlands on both parcels offer suitable habitat for heartscale, crownscale, and vernal pool smallscale; wetlands and mesic uplands offer suitable habitat for lesser saltscale and San Joaquin spearscale. None of these species were observed during the 2020 protocol surveys, but if they are present in future years, they could potentially be affected by construction of any of the NCCA projects, depending on their location and distribution

Parry's rough tarplant is widely distributed in the northern San Joaquin Valley, and numerous occurrences are known, including populations in northern and central San Joaquin County, southern Stanislaus County, and central Merced County (e.g., CalFlora 2021). Nonetheless, substantial reduction of this localized population in northern Merced County could rise to the level of a Significant impact. To address this, the City will implement the following mitigation measure. With Mitigation Measure BIO-1 incorporated, impacts on Parry's rough tarplant would be reduced to the extent feasible, and residual impacts, if any, are evaluated as Less than Significant, particularly as this is considered a watch list species that is only moderately threatened in California.

Mitigation Measure BIO-1. Protection and Recovery of Parry's Rough Tarplant at NCCA Site

Design of the wetland project will be configured to avoid removal of existing Parry's tarplant populations to the extent feasible while still accomplishing the project's habitat objectives, based on the mapping developed during the 2020 protocol-level surveys, or the most current updated mapping.

Prior to construction of the NEWS and wetland projects, the City will retain a qualified biologist, botanist, or ecologist with experience in western San Joaquin Valley special-status plants to demarcate

avoidance zones around the existing populations of Parry's tarplant that are planned to remain in place, using temporary construction fencing or another appropriate low-impact medium. The avoidance zone around each occurrence will include a 20-foot-wide buffer to reduce the potential for inadvertent and indirect impacts. Entry into Parry's rough tarplant avoidance zones will be prohibited and all construction and staging activity will be excluded.

Additionally, prior to construction of the NEWS project, which is expected to remove occurrences of Parry's rough tarplant, seed will be collected from existing onsite populations of the species and will be included in the seed mix used for the wetland project's native grassland restoration. This requirement will also apply if the wetland project would remove Parry's rough tarplant occurrences. Monitoring protocols and interim and final success criteria for recovery of Parry's rough tarplant in the wetland project native grassland area will be included in the Monitoring Plan developed for the wetland project and will thus be subject to DFW review and approval and to ongoing DFW oversight as monitoring proceeds. Corrective actions in the event Parry's rough tarplant within the native grassland area fails to meet interim success criteria will also be stipulated in the Monitoring Plan, potentially including, but not necessarily restricted to, reseeding in place with seed from onsite sources, and reseeding with onsite seed in other portions of the NCCA site that offer suitable habitat and can be protected over the long term. If corrective action includes reseeding outside the wetland project footprint, the additional reseeded area will be added to the area protected under the wetland project grant contract with DFW and will be monitored and maintained under the wetland project Monitoring Plan.

The City will be responsible for ensuring proper implementation of avoidance, protection, and recovery measures for Parry's rough tarplant.

Disturbance or removal of heartscale, crownscale, lesser saltscale, vernal pool smallscale, and/or San Joaquin spearscale, in the event they are present at the site in the future, could also rise to the level of a Significant impact. However, as discussed in Section 2 of this Initial Study, the City has committed to an AMM for the protection of special-status plants (AMM-5, Table 2-15). This measure requires that the City document and avoid existing populations of rare plants via GIS-based mapping. Under AMM-5, if a known population of rare plants cannot be avoided, seeds from the existing population—or, if this is not feasible, from another population within the Bennett Valley – San Joaquin watershed—must be collected for use in reseeding to restore the population. Reseeding will occur within the affected area if possible; if the affected area cannot be reseeded, reseeding will take place in another suitable location at the NCCA site, identified based on soil characteristics and currently prevailing site hydrology. Alternately, seed may be collected in advance and used to grow seedlings for replanting. Before construction begins, a qualified biologist or ecologist will be contracted to develop a monitoring and corrective action plan for the revegetated area. The plan will provide interim and final success criteria and will provide for corrective action and extended monitoring in the event interim success criteria are not met. The City will be responsible for contracting qualified personnel to implement monitoring and any needed corrective action, and for ensuring proper implementation of monitoring plan requirements.

In addition, recognizing that the NEWS, wetland, and MDTW projects would alter habitat conditions at the NCCA site, AMM-1 (see Table 2-15) provides for routine resurvey of the site to ensure that documentation of sensitive resources—including rare plant populations—is kept up to date as the site evolves. AMM-1 also provides for updates and modification of the other adopted AMMs, and for addition of new AMMs if warranted, as conditions at the site change, and for development of corrective action if detrimental conditions are identified. Thus, if site conditions change sufficiently that other special-status plants (in addition to the species discussed above) are identified as having the potential to occur on the site before all of the NCCA projects have been implemented, AMM-5 will be updated to include protection for these additional species.

With AMM-5 and AMM-1 in place, construction-period impacts on known and potential populations of special-status plants at the NCCA site would be reduced to a Less than Significant level. No mitigation is required.

Operations & Maintenance. For all of the NCCA projects,O&M activities that require ground disturbance, vegetation removal, or vegetation trimming would have the potential to disturb or remove special-status plants that may occur at the site, with the potential for impacts rising to a level considered Significant under CEQA. To provide for long-term protection of resources at the NCCA site, however, O&M will be required to incorporate the same AMMs required for construction (see *Avoidance & Minimization Measures* in Section 2). AMM-5 and AMM-1, discussed above, would afford long-term protection to Parry's rough tarplant outside the wetland project footprint as well as other special-status plant species that may be present in the future. The Grazing Management Plan currently being developed to meet the City's commitments under its contract for the DFW grant funding the wetland project will also include considerations for best management practices for special-status plants documented on the NCCA site, specific to potential impacts due to grazing. With AMM-5, AMM-1, and the Grazing Management Plan (which will be subject to DFW review and approval before implementation) in place, O&M-related impacts on special-status plants would be reduced to a Less than Significant level. No mitigation is required.

Habitat Change over Time. As discussed above, habitat distribution and quality on the NCCA site would change over time; in particular, the extent, quality, and diversity of wetland habitat is expected to increase substantially as a result of the NEWS project, wetland project, and MDTW project, the extent of native grasslands would increase as a result of the wetland project, and the wetland project would also add quasi-riparian habitat to the site. However, the site is expected to continue to offer habitat suitable for Parry's rough tarplant and the other five special-status plants that currently have the potential to be present: wetland habitat would be expanded and improved, vernal pool habitat would be restored, and mesic upland habitat would continue to be available on both the 78- and 24-acre parcels. No Impact on special-status plants is expected as a result of long-term habitat change on the NCCA site, and there is potential for a Benefit to these and other rare plant species with implementation of AMM-1 and AMM-5, overall improvement in habitat function and value, and long-term preservation of habitat at the site. No mitigation is required.

Special-Status Wildlife

Special-Status Amphibians and Reptiles. Several special-status amphibians and reptiles have at least some potential to be present at the NCCA site: northwestern pond turtle (state Species of Special Concern), western spadefoot (state Species of Special Concern), and giant garter snake (state- and federally listed as Threatened, state Species of Special Concern). Impacts by species are discussed below.

- The closest documented occurrence of **northwestern pond turtle** is 2 miles from the NCCA, and the Miller Ditch adjacent to the site offers only marginal habitat, but the species is highly mobile and there is some potential that it could pass through or use the site during movement between areas of better habitat. In the near term, construction activities affecting the Miller Ditch for the NEWS and MDTW projects could result in injury or mortality of northwestern pond turtles if any individuals are present. Construction and O&M activities in adjacent uplands and wetlands would also have the potent to injure or kill individuals dispersing through the site. To address this, the City has committed to implement an AMM for northwestern pond turtle protection (AMM-9, Table 2-15), which requires preconstruction surveys and relocation of any individuals found to suitable habitat at a distance from the work area, to be performed by qualified personnel. With AMM-9 in place, construction and O&M-related impacts on northwestern pond turtle would be Less than Significant, and no mitigation is required.

Over the longer term, the NCCA projects are expected to improve habitat for northwestern pond turtle: the NEWS and MDTW projects in particular would increase the extent and quality of ponded marsh habitat on the site, likely offering better opportunities for the species. Additionally, bank areas adjacent to the NEWS project wetlands could also offer sites for egg-laying, if the substrate is sufficiently sandy, and the species would continue to be protected from O&M disturbance by the life-cycle requirement for implementation of AMMs. Long-term impacts on northwestern pond turtle are therefore considered Less than Significant on balance, with a potential for long-term Benefit. No mitigation is required.

- **Western spadefoot** is considered unlikely to be present on the NCCA site; burrows in uplands on the site offer suitable dry-season refugia but breeding habitat is marginal due to the shallow depth and short ponding duration of seasonal wetlands in a typical year, and the closest documented occurrence of the species is almost 7 miles away. However, the species' presence cannot be conclusively ruled out. If western spadefoot individuals are present, they could be adversely affected by construction and O&M activities in both wetland and upland areas. To address this, the City has committed to an AMM for western spadefoot protection (AMM-7, Table 2-15). AMM-7 requires that construction and O&M be conducted during the dry season if possible and that work conducted during the wet season avoid entry into sensitive areas identified by a qualified biologist. During all seasons, AMM-7 also requires preconstruction "scoping" surveys by a qualified biologist for work that would affect potential refugial burrows in upland areas, followed by relocation outside the disturbance area if any individuals are found. With AMM-7 in place, construction- and O&M-related impacts on western spadefoot are expected to be Less than Significant, and no mitigation is required.

  Over the long term, the NEWS, wetland, and MDTW projects would all reduce the overall extent of upland habitat for western spadefoot at the NCCA site. However, some upland habitat would remain, and the wetland project in particular would increase the extent and quality of potentially suitable native grassland habitat. Additionally, all of these projects, and especially the wetland project, would increase the extent of potentially suitable breeding habitat in ephemeral wetland areas. On balance, impacts of long-term habitat change on western spadefoot are considered Less than Significant, with a potential for long-term Benefit to the species' breeding opportunities. No mitigation is required.

- **Giant garter snake** populations in the western San Joaquin Valley are well documented. There is only one known breeding population, located at the Volta Wildlife Area about 12 miles south-southeast of the NCCA site, and the species is not known to occur in close proximity to the site; the closest known occurrence is 2 miles away. Nonetheless, ditches at the site, which connect to the Newman Wasteway and ultimately the San Joaquin River, provide potentially suitable habitat. As a result, although the species is considered very unlikely to use the NCCA site, its presence cannot be conclusively ruled out. Construction and O&M activities are thus considered to have some potential to result in direct take of giant garter snake. Any such take would constitute a Significant impact. To address the potential for impacts on giant garter snake, the City has committed to implement an AMM for its protection (AMM-8, Table 2-15). To the extent feasible, AMM-8 requires construction and O&M to avoid impacting or working within 200 feet of drainage ditches and constructed water bodies at the NCCA site. Additionally, for all construction and O&M activities that must occur within 200 feet of habitat suitable for giant garter snake, AMM-8 imposes a seasonal restriction where feasible and requires a preconstruction survey by qualified personnel, followed by consultation with USFWS if the species is present, and implementation of additional measures if/as directed by USFWS. With AMM-8 in place, impacts on giant garter snake would be addressed consistent with regulatory agency guidance, and are thus considered Less than Significant. No mitigation is required.

Over the longer term, the increase in extent and quality of emergent marsh habitat at the NCCA as a result of the wetland and NEWS projects is expected to improve the quality of habitat for giant garter snake, with areas of emergent vegetation providing cover for foraging, and banks and adjacent uplands offering basking opportunities. If the species becomes more likely to use the NCCA as habitat conditions improve, there would be increased potential for exposure to risk from future construction and O&M, but ongoing implementation of AMM-8 during the lifespan of the NCCA would continue to protect the species. As a result, long-term impacts on giant garter snake are expected to be Less than Significant, with potential for a long-term Benefit to the availability of suitable habitat for the species. No mitigation is required.

Special-Status Birds. Two special-status bird species have been observed on the NCCA site: Swainson's Hawk (state-listed as Threatened) and Loggerhead Shrike (not listed, but a state Species of Special Concern), and several others have the potential to be present, including Tricolored Blackbird (federal Species of Concern, state Species of Special Concern), Burrowing Owl (state Species of Special Concern), Northern Harrier (state Species of Special Concern), and Yellow-billed Magpie (federal Bird of Conservation Concern). Additionally, mature trees just offsite along the east boundary of the 78-acre parcel may provide nesting habitat for numerous species that do not otherwise qualify for special status but are protected under the federal Migratory Bird Treaty Act. The potential for impacts by species is itemized below, beginning with the species known to be at least intermittently present at the NCCA site.

- **Swainson's Hawk** has been observed foraging at the NCCA site. Injury or mortality of Swainson's Hawk during construction or O&M for any of the NCCA projects would constitute take of a state-listed species, representing a Significant impact under CEQA. However, adults of the species, typical of raptors, are mobile and wary and are expected to be able to avoid active work areas, particularly as large tracts of suitable foraging habitat, as well as roosting opportunities, are available on nearby agricultural lands. Direct take of adult Swainson's Hawk as a result of construction or O&M at the NCCA site is not anticipated; construction- and O&M-related impacts on adult Swainson's Hawk, if any, are thus expected to be Less than Significant, and no mitigation is required.

  Swainson's Hawk is not expected to nest on either of the NCCA parcels, which do not offer suitable large trees, but may use trees adjacent to the east boundary of the 78-acre parcel for this purpose. Disruption of Swainson's Hawk nesting would also represent a Significant impact, but would be effectively avoided during both construction and O&M by implementation of AMM-10 for the protection of nesting birds (see Table 2-15), which requires pre-activity surveys for nesting birds before work begins, consultation with resource agencies if nesting protected species are observed, and establishment of a protected no-activity buffer zone around any occupied nests for the duration of nesting activity. With AMM-10 incorporated, impacts on Swainson's Hawk nesting are expected to be Less than Significant, and no mitigation is required.

  The NCCA parcels also currently provide open upland habitat suitable for Swainson's Hawk foraging. Uplands at the site would be reduced over the longer term as the NCCA projects are implemented and the extent of wetland habitats increases. This has the potential to reduce Swainson's Hawk foraging opportunities at the NCCA. However, this species forages widely in agricultural fields, and extensive agricultural lands would continue to be available adjacent to and surrounding the NCCA, while some improved foraging would remain available onsite in the wetland project native grasslands and adjacent upland areas. In this context, impacts related to localized decrease in the availability of Swainson's Hawk foraging opportunities are considered Less than Significant. Additionally, by creating a quasi-riparian corridor along the central swale, the wetland project may improve Swainson's Hawk nesting opportunities at the site, since the species prefers to nest in large trees in proximity to riparian areas;

large trees adjacent to the 78-acre parcel are generally suitable for Swainson's Hawk nesting but do not currently offer adjacent riparian habitat. There is thus the potential for a long-term Benefit to Swainson's Hawk breeding as habitat conditions at the NCCA evolve over the longer term. No mitigation is required.

- Currently, **Loggerhead Shrike** is thought to use the NCCA site's open uplands for foraging, while fencing at the site provides opportunities for roosting and resting. The species has been observed on the 78-acre parcel. Because the species is highly mobile, and other suitable habitat in the vicinity offers a retreat in the event of disturbance, impacts, if any on adult Loggerhead Shrikes during construction and O&M at the NCCA site are expected to be Less than Significant. No mitigation is required.

  Loggerhead Shrike is not expected to nest on or immediately adjacent to either of the NCCA parcels since suitable vegetation is not currently available. No Impact on nesting Loggerhead Shrikes is anticipated in the immediate term, and no mitigation is required.

  Over the long term, the availability of shrubby vegetation at the NCCA would increase slightly, due to plantings for the NEWS project (Table 2-5, Figure 2-5), and open areas would continue to be available in the wetland project footprint and portions of the NEWS and MDTW projects. This could be favorable for Loggerhead Shrike; in particular, as shrubby plantings become increasingly established over the longer term, the site could offer suitable nesting habitat—not currently available—as well as foraging and roosting opportunities. This would represent a Benefit. However, it would also create a potential for disturbance and disruption of Loggerhead Shrike nesting that does not currently exist at the site. Nesting disruption could occur as a result of O&M over the longer term, and could also result from construction of later-phase projects (NEWS project, Newman Nature Park, and MDTW project), depending on the lag between wetland project implementation and the construction of subsequent projects. This could rise to the level of a Significant impact but would be avoided by implementation of AMM-10 (Table 2-15). With AMM-10 in place, impacts on Loggerhead Shrike breeding would be Less than Significant, and would likely represent an overall Benefit. No mitigation is required.[5]

- **Burrowing Owl** has not been observed on either of the NCCA parcels, but suitable habitat, including abundant small mammal burrows, is present, and the parcels' generally open character with extensive ruderal uplands (particularly the 78-acre parcel) is generally hospitable to the species. Their presence therefore cannot be ruled out. Outside of the breeding season, construction- and O&M-related impacts on adult Burrowing Owls are expected to be Less than Significant, since adults of the species are both highly mobile and fairly disturbance-tolerant, and abundant suitable habitat is available in the near vicinity to which individuals disturbed by activity at the NCCA could retreat. No mitigation is required.

  During the breeding season, Burrowing Owls are considerably less mobile. Either construction or ground-disturbing O&M activity could result in injury or mortality of adults rearing their young in burrow nesting sites as well as destruction of nests and mortality of young. This could rise to the level of a Significant impact. However, the City has committed to implement an AMM for protection of breeding Burrowing Owls (AMM-11, Table 2-15), requiring preconstruction surveys for construction activities during the breeding season as well as for O&M activities that would involve ground disturbance or

[5] The same would be true for all bird species whose nesting opportunities are improved by habitat changes at the NCCA site: improving breeding habitat could be considered to create an "attractive nuisance" since breeding for these species is not currently occurring onsite, but habitat changes would make breeding possible, and could place nests at risk from future construction and O&M activities. However, AMM-10 for the protection of nesting birds of all species would continue to be required for the lifespan of the NCCA, and would reduce impacts to a level considered Less than Significant, with no mitigation required. For this reason, improved breeding opportunities for special-status birds of all species are considered a Benefit on balance. To avoid repetition, this aspect of the impacts of long-term habitat change at the NCCA is not addressed further.

would generate substantial sustained disturbance, followed by consultation with DFW and establishment of a no-activity buffer zone around any active nest locations for the duration of nesting activity. With AMM-11 in place, construction and O&M-related impacts on Burrowing Owl nesting would be reduced consistent with regulatory agency guidance and are considered Less than Significant. No mitigation is required.

Over the long term, Burrowing Owl opportunities at the NCCA may decrease somewhat as the extent of wetlands at the site increases and the extent of uplands decreases. However, some opportunities for both foraging and breeding would remain, in the levees along the Miller Ditch and in the wetland project grasslands. In addition, abundant suitable habitat would remain available in the vicinity, along the margins of agricultural lands and the levees of agricultural ditches and the Newman Wasteway. As a result, impacts on Burrowing Owl due to long-term change in the habitat mosaic on the NCCA parcels are evaluated as Less than Significant. No mitigation is required.

- **Tricolored Blackbird** has been documented less than 1 mile away from the NCCA site and may forage there, but is not expected to breed onsite; perennial marshland in the central swale is too small and degraded, and does not offer sufficiently dense vegetation growth to support Tricolored Blackbird nesting. Construction and O&M activities at the NCCA would have the potential to disturb Tricolored Blackbird foraging, but abundant suitable foraging habitat is available on nearby agricultural lands, and individuals would be expected to relocate if disturbance levels become excessive. Construction- and O&M-related impacts on Tricolored Blackbird are therefore expected to be Less than Significant. No mitigation is required.

  At present, the NCCA site does not offer suitable nesting habitat for Tricolored Blackbird. In the near term, No Impact on Tricolored Blackbird breeding is anticipated, and no mitigation is required.

  Over the longer term, habitat for Tricolored Blackbird at the NCCA site is expected to improve. The wetland project would expand and improve the quality of perennial emergent marsh in the central swale. The NEWS project would plant native shrubs on the edges of the wetland area, and would provide additional perennial or near-perennial emergent marsh habitat in the micropool. The MDTW project would also remain ponded year-round or nearly year-round. The added extent of open water, emergent vegetation, and shrubby growth could provide nesting opportunities that are not currently available at the site, while foraging opportunities would continue to be available in the wetland project grassland area and in nearby agricultural fields. Impacts on Tricolored Blackbird as a result of long-term habitat change at the NCCA are therefore considered Less than Significant, with potential for a Benefit to breeding. No mitigation is required.

- The closest documented occurrence of **Northern Harrier** is more than 13 miles away, but freshwater emergent wetland and grassland habitat at the NCCA site offer suitable foraging habitat and the species is sufficiently mobile that its presence cannot be ruled out. Similar to Swainson's Hawk, however, construction- and O&M-related impacts on foraging Northern Harrier adults are expected to be Less than Significant since there are abundant opportunities in the vicinity for individuals to relocate away from disturbance. No mitigation is required.

  Dense grassy upland habitat at the NCCA site, and emergent vegetation in adjacent ditches, may provide suitable nesting habitat for Northern Harrier. Both construction and O&M would thus have some potential to disrupt Northern Harrier nesting. However, as discussed for other species above, implementation of AMM-10, which would be required for construction and also for O&M throughout the lifespan of the NCCA projects, is expected to effectively address this potential. Impacts on nesting Northern Harrier are therefore considered Less than Significant, and no mitigation is required.

Northern Harrier is rarely observed in wooded areas. Thus, over the long term, as the quasi-riparian corridor created by the wetland project and the tree and shrub plantings at the NEWS project become increasingly established, opportunities for Northern Harrier at the NCCA site could be viewed as somewhat decreased. At the same time however, the increase in shrubby growth and the expanded extent and quality of emergent marshland habitat at the site (again, due to the NEWS and wetland projects, and likely also the MDTW project) are expected to improve nesting opportunities for the species, and potential foraging habitat would remain available in nearby areas. As a result, impacts on Northern Harrier as a result of long-term habitat change at the NCCA are considered Less than Significant, with a potential for Benefit to Northern Harrier breeding. No mitigation is required.

- Suitable habitat for **Yellow-billed Magpie** is offered by the NCCA grasslands and large trees along the east margin of the 78-acre parcel; the species may forage on the site and roost in adjacent trees. Like the other species discussed above, impacts on Yellow-billed Magpie adults during construction and O&M at the site are expected to be Less than Significant, since the suitable roosting trees are offsite and would not be directly affected by construction or O&M, and individuals disturbed by human and equipment activity could continue to forage in adjacent open croplands and could roost in large trees elsewhere in the vicinity (for instance, to the south along Brazo Road). No mitigation is required.

  Yellow-billed Magpie is not expected to breed on the NCCA site at present, since it requires large trees for nesting and none are present. It may, however, nest in the trees adjacent to the 78-acre parcels. Disturbance of Yellow-billed Magpie nesting as a result of construction or O&M could rise to a level considered Significant, but would be effectively avoided by implementation of AMM-10, as discussed for other special-status birds above. With AMM-10 in place, impacts on Yellow-billed Magpie breeding are expected to be Less than Significant. No mitigation is required.

  Over the longer term, establishment of the wetland project quasi-riparian corridor and the native tree plantings around the NEWS project would likely improve opportunities for Yellow-billed Magpie at the NCCA, since the species typically prefers open riparian and oak woodland settings in the vicinity of open grasslands, pasture, and croplands. This would include opportunities for nesting as the tree plantings become increasingly mature. Impacts on Yellow-billed Magpie as a result of long-term habitat change at the NCCA are accordingly considered Less than Significant, with a potential for overall Benefit to the species. No mitigation is required.

- As identified above, **other species protected by the Migratory Bird Treaty Act** may nest in mature trees adjacent to the east boundary of the 78-acre parcel. Construction and O&M activities in proximity to these trees would thus have the potential to disturb and disrupt protected bird breeding; impacts of interrupting nesting would have the potential to rise to a level considered Significant. However, AMM-10 would effectively address impacts on other protected birds not addressed above. With AMM-10 in place, impacts on nesting by Migratory Bird Treaty Act–protected species would be Less than Significant, and no mitigation is required. Over the longer term, as trees planted by the NEWS and wetland projects mature, new nesting opportunities are expected to become available on the NCCA site, representing a Benefit to nesting by Migratory Bird Treaty Act–protected species.

Special-Status Mammals. Two special status mammal species have the potential to occur at the NCCA site: American badger (state Species of Special Concern) and San Joaquin kit fox (state-listed as Threatened, federally listed as Endangered). Impacts by species are discussed below.

- The closest documented occurrence of **American badger** is almost 7 miles away from the NCCA site. Habitat at the site is marginal for this species, and no dens or other signs of its presence were

observed during the 2019 – 2020 biological surveys conducted for the NCCA projects. American badger is thus considered very unlikely to use the site; at most, it would be an infrequent and casual visitor. Although individuals could be disturbed by construction or O&M activities if present, they would be expected to relocate to better habitat if this occurs. As a result, impacts on American badger are expected to be Less than Significant, and no mitigation is required.

American badger prefers open areas and brushlands. Over the longer term, tree and shrub plantings at the wetland and NEWS projects would reduce the extent of open habitat, but would not create brushlands. As a result, the NCCA site is expected to become even less appealing to American badger as the NCCA projects become increasingly established; the potential for impacts on individuals or local populations of the species is expected to remain Less than Significant over the longer term, and would likely decrease with time. The decrease in habitat suitability at the site is also considered a Less than Significant impact, because the site does not offer important habitat resources for the species at present and is not thought to be used by the species currently. No mitigation is required.

- **San Joaquin kit fox** prefers annual grassland, scrub, and subshrub habitats. Grasslands at the NCCA site are suitable for the species, and its prey base of small mammals is present, but the NCCA site is largely disconnected from other suitable habitat in the region, the closest documented occurrence is almost 4 miles away, and no dens or other signs of its presence were observed during the 2019 – 2020 biological surveys conducted at the site. As a result, the species is considered unlikely to be present; at most, it may hunt there occasionally or pass through the site on its way to better-suited habitat. As with American badger, although San Joaquin kit fox individuals could be disturbed by construction or O&M activities if present, they would be expected to relocate to better habitat if this occurs. As a result, impacts on San Joaquin kit fox are expected to be Less than Significant, and no mitigation is required.

  Over the longer term, although the NCCA site may become somewhat less suitable for sustained usage by San Joaquin kit fox due to the increased extent of wetland and riparian habitat, opportunities for passage and hunting would remain available. The potential for impacts on individuals or local populations of the species is expected to remain Less than Significant over the longer term, potentially undergoing a slight decrease with time. Since the site does not currently offer important habitat resources and is not thought to be extensively used by San Joaquin kit fox at present, the slight long-term decrease in habitat suitability at the site is also considered a Less than Significant impact. No mitigation is required.

Potential for Adverse Effects on Sensitive Natural Communities

The following discussion focuses on sensitive natural communities; impacts on wetlands and other jurisdictional waters are addressed in the next item.

Construction Period

NCCA Site. As discussed in Section 2, the NCCA site supports a total of just over 13 acres of jurisdictional wetlands and waters, inclusive of the sections of the Miller Ditch that border the parcels. Of this, 0.142 acre consists of Coastal and Valley Freshwater Marsh, which is considered a sensitive natural community by DFW (Vollmar Natural Lands Consulting 2021a, 2021b). The site does not support any other sensitive natural communities.

The existing 0.142-acre extent of Coastal and Valley Freshwater Marsh is located in the northeast corner of the 78-acre parcel, where the berm blocking the “downstream” (east) end of the central swale (Figure 1-2) creates conditions of perennial or near-perennial ponding. It is within the footprint of the wetland project.

The wetland project is being designed to avoid impacts on existing wetlands to the extent this is feasible while still accomplishing the project's habitat enhancement and creation objectives; that is, the wetland project—like all of the NCCA projects—would avoid gratuitous impacts on existing habitat. There would nonetheless be some potential for direct impacts on this small area of Coastal and Valley Freshwater Marsh as a result of recontouring for habitat enhancement and reestablishment. There would also be potential for indirect impacts on the quality of this habitat as a result of soil disturbance, construction runoff, and siltation. Construction of the NEWS project adjacent to the east end of the central swale would also have the potential for indirect impacts on this small area of Coastal and Valley Freshwater Marsh.

However, the City has committed to an AMM with extensive provisions to protect wetland habitat and water quality during construction (AMM-4, Table 2-15). This would be required for construction of both the wetland project and the NEWS project. Additionally, because of the acreage involved, the wetland project will be subject to SWPPP requirements under the Construction General Permit and is expected to require permit authorization from DFW; the NEWS project would require permits from the Corps, DFW, and the RWQCB in addition to needing to meet SWPPP requirements. If the resource agencies view additional protection as necessary for either project, permit terms and conditions will include further requirements, potentially including a requirement for compensatory habitat mitigation, either in the form of habitat set-aside or purchase of mitigation credits from a bank in the area.

Neither of the other NCCA projects has the potential for direct impacts on existing Coastal and Valley Freshwater Marsh on the 78-acre parcel, because of the locations of their disturbance footprints in relation to this habitat, although there would be some potential for indirect impacts as a result of construction runoff during construction of the MDTW project and Newman Nature Park. However, both of these projects would also be required to incorporate AMM-4 and adhere to the terms and conditions of project-specific SWPPPs and applicable resource agency permits.

If the City elects to extend water service to the Newman Nature Park using Option 2 along the north and east margins of the 78-acre parcel (see Figure 2-9), there would be some potential for both direct and indirect impacts on Coastal and Valley Freshwater Marsh at the east end of the central swale. If the extension is installed after the wetland project is completed, direct impacts would be avoided since the terms of the City's grant contract with DFW require preservation of habitat enhanced and restored under the wetland project; however, indirect impacts could greater, since the wetland project would expand and improve Coastal and Valley Freshwater Marsh in this area. However, extension along the east margin of the parcel in conjunction with the Nature Park would need to be covered under the project SWPPP, would also be subject to AMM-4, and would be included in and subject to the conditions of regulatory permits authorizing the project.

With AMM-4 incorporated, implementation of project-specific SWPPPs, and adherence to the terms and conditions of regulatory permits, construction period impacts, if any, on Coastal and Valley Freshwater Marsh habitat on the 78-acre parcel would be reduced to a Less than Significant level. No mitigation is required.

Inoculum Donor Sites. As discussed in Section 2, the wetland project would use inoculum to foster growth of suitable vegetation within the ephemeral wetlands planned for enhancement on the 24-acre parcel. Inoculum would be collected from suitable donor sites in the western San Joaquin Valley region. Propagules such as cuttings and stakes may also be collected for plant propagation in other habitats enhanced or created by the wetland project. Like inoculum, propagules would be collected from local donor sites.

Improperly designed or carried out, collection of inoculum and propagules would have the potential to result in adverse effects on habitat at the donor sites, and some of these habitats may quality as sensitive natural

communities under DFW criteria. However, the wetland project design, including plans and specifications for inoculum and propagule collection, will need to be reviewed and approved by DFW under the terms of the DFW grant that is funding the wetland project. Additionally, planning for collection of these planting materials will incorporate measures to reduce impacts on the donor sites, which are expected to include inoculum collection by mowing and vacuuming rather than scraping (limiting the volume/amount of planting material collected at any one site and reducing the disturbance associated with collection), as well as methods for collecting cuttings, stakes, and other propagules. These measures will be developed with input and guidance from DFW. With DFW oversight of inoculum and propagule collection, including approval of impact-reduction measures, impacts of collecting inoculum and propagules on donor sites are expected to be Less than Significant. No mitigation is required.

Operations & Maintenance

As Section 2 discusses, once the wetland project becomes established, it is not expected to require operational intervention or maintenance other than periodic trash removal, and—in the near term, until the MDTW project comes on line—inspection, operation, and maintenance of the Miller Ditch weir and diversion supplying the central swale. Over the longer term, the outfall from the MDTW project to the central swale may require similar inspection, operation, and maintenance. All of this work is expected to be accomplished on foot, by hand or using hand tools, by City staff who have received worker awareness regarding sensitive habitats per the City's adopted AMM-3 (see Table 2-15). The Grazing Management Plan currently in development will also include best practices for the continued protection of sensitive habitats. As a result, O&M at the wetland project is not expected to result in substantial direct or indirect disturbance or damage to Coastal and Valley Freshwater Marsh within the central swale. Impacts would be Less than Significant, and no mitigation is required.

Ground-disturbing O&M at the other three NCCA projects, like construction, would have the potential to result in runoff that could deliver sediment or other pollutants to central swale marshland. However, like construction, ground-disturbing O&M activities would be required to implement the extensive water quality and habitat protection requirements of AMM-4 (see Table 2-15). With these precautions in place, impacts, if any, on Coastal and Valley Freshwater Marsh as a result of O&M at the NEWS, MDTW, and Newman Nature Parks are expected to be Less than Significant. No mitigation is required.

Opening the trails associated with the NEWS, MDTW, and Newman Nature Park projects would progressively increase public presence at the NCCA, with the potential for incursions into Coastal and Valley Freshwater Marsh within the central swale, including both accidental incursions and deliberate trespass or vandalism. Trail design and informational signage would be used to discourage accidental incursions, as discussed in Section 2. Deliberate trespass likely cannot be prevented without draconian measures that are considered counter to the spirit of the NCCA, which is intended to be a welcoming and inclusive community amenity, and could also discourage or prevent wildlife access to marshlands. Thus, although Significant impacts are not anticipated, they are a possibility. To address this, the City will implement Mitigation Measure BIO-2. With this measure incorporated, impacts on Coastal and Valley Freshwater Marsh would be Less than Significant. No additional mitigation is required.

Mitigation Measure BIO-2. Long-Term Protection and Restoration of Coastal and Valley Freshwater Marsh and Other Sensitive Habitats

If areas of Coastal and Valley Freshwater Marsh or another sensitive habitat at the NCCA site are disturbed or damaged by human incursion or other causes, the City will contract with a qualified biologist or ecologist to develop and implement a restoration plan appropriate to the extent and nature of the damage. Restoration measures may include, but will not necessarily be limited to, trash and

debris removal, reseeding, replanting from onsite or container stock, and if appropriate, localized recontouring. Exclusion fencing and/or hand watering may also be included, if the biologist/ecologist considers it appropriate to support vegetation reestablishment.

If the damage involves habitat recognized as a sensitive natural community by DFW, the restoration plan will be developed in consultation with DFW and will be required to meet with DFW approval. For all habitats, the restoration plan will be consistent with current best practices for restoration ecology, and will include provisions for follow-up monitoring, interim and final success criteria, and corrective actions such as additional replanting to ensure that damage is successfully restored and habitat function and value are maintained over the long term. The City will be responsible for proper development and implementation of the restoration plan and any follow-up monitoring and corrective action(s) it requires.

Potential for Long-Term Benefit

As described in Section 2 of this IS/MND, one of the wetland project's aims is to enhance the extent and quality of marsh habitat within the central swale. As a result, the wetland project is expected to result in a substantial long-term Benefit to the extent and quality of Coastal and Valley Freshwater Marsh at the NCCA site. No mitigation is required.

Potential for Adverse Effects on Protected Wetlands

Construction Period

Direct Impacts at NCCA Site. Figures 2-2 and 2-3 show the distribution of presumed state- and federally jurisdictional wetlands and waters at the NCCA site, and Figure 1-2 shows the approximate footprints of the four NCCA projects, subject to slight adjustment as design proceeds. As mentioned above, it is the City's intent to avoid unnecessary disturbance and loss of jurisdictional habitat; wetlands and other jurisdictional waters would only be affected where it is necessary to accomplish project objectives. Nonetheless, as the figures show, all four of the NCCA projects would directly affect existing protected wetlands and waters. The NEWS, wetland, and MDTW projects would also create and enhance habitat, resulting in a net increase in the extent and quality of jurisdictional wetlands and other waters at the site. Table 3-5 summarizes approximate temporary construction disturbance, permanent losses, and habitat creation by project and type of aquatic habitat.

Table 3-5. Construction-Period Impacts on Jurisdictional Wetlands and Waters, by Project

Project	Acres Impacted		Acres Restored/Created
	Temporary Impact	Permanent Impact	
NEWS project	Seasonal wetland: 0 Emergent wetland: 0 Ditch: 0.028	Seasonal wetland: 1.909* Emergent wetland: 0 Ditch: 0.002	Seasonal wetland (created): ~8 Emergent wetland (created): 2.2 Ditch: 0 *(Acreage does not include forebay, which would be routinely disturbed for sediment removal)*
Wetland project	Seasonal wetland: 5.169 Emergent wetland: 0.072 Ditch: 0	Seasonal wetland: 0.047 Emergent wetland: 0 Ditch: 0	Seasonal wetland (created): 0.14 Ephemeral wetland (restored): 3.8 Emergent wetland (created): 6.04 Emergent wetland (enhanced): 1.406 Native perennial bunchgrass habitat (created): 1+ Riparian (created): acreage depends on final design; at least 50 trees of suitable native species to be planted

Project	Acres Impacted		Acres Restored/Created
	Temporary Impact	Permanent Impact	
Newman Nature Park	Seasonal wetland: 0 Emergent wetland: 0 Ditch: 0	Seasonal wetland: 0.098 Emergent wetland: 0 Ditch: 0	—
MDTW project	Seasonal wetland: 0 Emergent wetland: 0 Ditch: ~0.038	Seasonal wetland: 0.899 Emergent wetland: 0 Ditch: 0.492	Seasonal wetland (created): ~15.8 *(Acreage does not include forebay, which would be routinely disturbed for sediment removal)*
Water service extension	Minor temporary disturbance of ditch for installation of extension to NEWS project No disturbance or loss of jurisdictional habitat under Newman Nature Park Option 1 (Figure 2-9) Potential for minor temporary impact to emergent wetland under Newman Nature Park Option 2 Potential for minor temporary impact to seasonal wetland under Newman Nature Park Option 2, if Option 2 is implemented after wetland project is complete		N/A

Sources: Poisson pers. comm., Vollmar Natural Lands Consulting 2020, Rodal Morales pers. comm.

The NEWS, wetland, and MDTW projects would all have the potential for Significant impacts related to disturbance of wetlands and other jurisdictional waters. However, all three of these projects are expected to require resource agency permit authorization, including Corps permitting under Clean Water Act Section 404, RWQCB water quality certification under Clean Water Act Section 401, and potentially also entry into California Streambed Alteration Agreements with DFW.

Because the projects would create more habitat than they would displace, it may be possible to qualify them for self-mitigating status, assuming an agreement can be reached to protect the habitat created in perpetuity under a conservation easement. If this is approved by the resource agencies (Corps, DFW, and RWQCB), provision of additional habitat as compensatory mitigation would not be required. If, however, the agencies determine that any of the projects would not result in sufficient extent or quality of new or enhanced habitat to compensate for disturbance and losses, permit terms and conditions will require the City to provide additional habitat as compensation. This could take the form of habitat set-asides, additional habitat restoration or enhancement, or purchase of mitigation credits from a mitigation bank in the region. The City would not be able to proceed with each project until the resource agencies with jurisdiction are satisfied that adequate compensation for disturbance and loss of jurisdictional habitat is being provided. With this protection in place, impacts on jurisdictional habitat would be addressed consistent with regulatory requirements. Impacts on jurisdictional habitat are therefore considered Less than Significant, and no additional mitigation is required under CEQA.

Extension of water service to the NEWS project is expected to require permits from the Corps (Clean Water Act Section 404), RWQCB (Clean Water Act Section 401), and DFW (Streambed Alteration Agreement) because of the need to cross the Miller Ditch. Water service extension to the NEWS project is expected to be included with the rest of the NEWS project in the the same permit application package and would be subject to the same conditions. Impacts on jurisdictional habitat associated with extension of water service to the NEWS project are therefore also considered Less than Significant, for the same reasons discussed above. No mitigation is required.

Option 1 for extension of water service to the Newman Nature Park would not require resource agency permitting, since it would be almost entirely within existing paved roadways and is not expected to affect jurisdictional wetlands or waters where it enters the 78-acre parcel (see Figure 2-9). However, if Option 2 is

selected for extension of water service to the Nature Park, it would also require resource agency permits due to potential impacts on jurisdictional habitat along the east side of the 78-acre parcel. Because water service extension would almost certainly be coordinated with NEWS project and/or Newman Nature Park construction, it would probably be included in the permit application for those projects and would be factored into the permit conditions and compensatory habitat mitigation requirements stipulated for those projects. If it proceeds as a separate undertaking, separate permitting would be required. In either case, as discussed above, the City would not be able to proceed with the installation until the resource agencies with jurisdiction are satisfied that disturbance and loss of jurisdictional habitat would be appropriately compensated for, either through the provision of compensatory habitat or through payment to a mitigation bank. With this protection in place, impacts on jurisdictional habitat due to water service extension would be addressed consistent with regulatory requirements and are considered Less than Significant. No mitigation is required.

Indirect Impacts at NCCA Site. In addition to the potential for direct disturbance and loss of jurisdictional wetlands and other waters, there would be potential for indirect construction-period impacts on jurisdictional habitat due to construction runoff delivering sediment and pollutants. However, as identified in prior checklist items, the City has committed to an AMM with extensive provisions to protect wetland habitat and water quality during construction (AMM-4, Table 2-15); this would be required for all four NCCA projects and for water service extension. Because of the acreage involved, all of four NCCA projects would also be required to develop and implement project-specific SWPPPs to obtain authorization under the Construction General Permit. Additionally, as identified in *Direct Impacts* above, the NEWS project, wetland project, MDTW project, and Option 2 water service extension are all expected to require resource agency (Corps, DFW, and/or RWQCB) permit authorization. The Newman Nature Park would likely also also require permit authorization.

If the resource agencies view additional protection for jurisdictional wetlands and waters as necessary for any of the permits, permit terms and conditions will include further requirements for water quality protection, which the City will be responsible for implementing. With AMM-4 in place, project-specific SWPPPs developed and implemented, and any additional resource agency permit terms and conditions incorporated, indirect construction-period impacts on jurisdictional wetlands and waters would be addressed consistent with regulatory requirements and are considered Less than Significant. No mitigation is required.

Impacts at Inoculum and Propagule Donor Sites. As discussed in *Potential for Adverse Effects on Sensitive Natural Communities* above, the wetland project would use inoculum to foster growth of suitable vegetation within the ephemeral wetlands planned for enhancement on the 24-acre parcel, and propagules such as cuttings and stakes may be used for plant propagation in other habitats enhanced or created by the wetland project. Both inoculum and propagules would be collected from suitable local donor sites in the western San Joaquin Valley region, some of which may qualify as state- and/or federally protected wetlands.

Improperly designed or carried out, inoculum and propagule collection could result in adverse effects on the donor sites. However, as discussed above, planning for inoculum and propagule collection is incorporating measures to protect donor habitats, and the wetland project design (including plans and specifications for inoculum and propagule collection) will need to be reviewed and approved by DFW under the terms of the grant that is funding the wetland project. Additionally, if inoculum or propagule collection would occur within jurisdictional habitat, these habitats will be included in the permit applications submitted to the appropriate resource agencies (potentially including DFW, the Corps, and the RWQCB) as part of the project disturbance footprint. Inoculum and propagule collection would then be subject to permit conditions to limit and offset adverse effects of collection, potentially including compensatory habitat mitigation for the short-term ("temporal") effects of disturbance due to collection. With DFW oversight and additional protection through the conditions of regulatory permits, impacts—if any—of inoculum and propagule collection on state- and/or federally

jurisdictional habitat would be reduced consistent with regulatory standards and are considered Less than Significant. No mitigation is required.

Long Term

The potential for both direct and indirect impacts as a result of ground-disturbing O&M activities would be similar to, although more areally restricted than, impacts during the construction period; at worst, impacts could be Significant. However, the City will continue to require adherence to AMM-4 for wetland habitat and water quality protection for all O&M activities. Moreover, any O&M work within jurisdictional limits would also require resource agency authorization, as described for the construction period, and would be subject to the same regulatory requirements to compensate for disturbance or loss of jurisdictional habitat. This may be addressed through separate future permitting for these types of O&M activities, or may be included in the original permit packages authorizing the projects, depending on resource agency guidance and preferences. With these protections in place, long-term impacts on jurisdictional habitat as a result of O&M would be Less than Significant. No mitigation is required.

Additionally, over the long term, as summarized in Table 3-5 and described above, the NEWS, wetland, and MDTW projects would increase the extent and quality of jurisdictional habitat on the NCCA site. As a result, these three projects are expected to result in a long-term Benefit to wetlands and other jurisdictional waters.

Potential to Interfere with Wildlife Movement or Nursery Sites

The NCCA site is surrounded by actively cultivated agricultural lands, with developed areas present immediately adjacent to the northwest. It has not been identified as hosting a wildlife nursery site and is not considered a wildlife movement corridor (Vollmar Natural Lands Consulting 2021a). A number of protected bird species may breed on or adjacent to the site, however (see Table 2-3), and as discussed above, the City has adopted an AMM to protect nesting birds, their nests, eggs, and young (AMM-10, Table 2-15). This measure will apply during the construction period and also during O&M for the lifespan of the NCCA projects. With AMM-10 in place, impacts on protected bird nesting activities would be Less than Significant. No mitigation is required.

In addition, although it is largely disconnected from other suitable habitat nearby, the NCCA site offers habitat appropriate for San Joaquin kit fox and the species' prey base is known to be present; the species is not thought to den or breed on the site but may use it for passage and hunting. American badger may also pass through the site casually. Construction for each of the projects would be temporary and fairly short-term, as detailed in Section 2, and because the species is mobile and highly alert, San Joaquin kit fox is expected to be able to avoid active work areas and hunt in adjacent areas where small mammal prey is also abundant. The same would be true for American badger. During construction and O&M, passage through the site would also remain available outside active work areas, particularly during nighttime hours when the kit fox is most active. Impacts on San Joaquin kit fox and American badger mobility are therefore also expected to be Less than Significant. No mitigation is required.

Potential to Conflict with Local Policies/Ordinances Protecting Biological Resources

The NCCA projects would be subject to both City and County policies and ordinances protecting biological resources. City policies and ordinances apply because the NCCA projects would be City undertakings; County policies and ordinances are relevant because the site is outside City limits, in the unincorporated County.

City Policies and Ordinances. The City's General Plan (City of Newman 2007) explicitly recognizes the importance of protecting the Newman area's natural resources, including conservation of habitat and special-status species. General Plan Goal NR-3 requires the City to "[p]rotect sensitive native vegetation and wildlife

communities and habitat." Policies under Goal NR-3 provide more specific direction. City goals and policies are itemized, and NCCA project consistency is evaluated, in Table 3-6.

Table 3-6. Consistency with City General Plan Policies Protecting Biological Resources

Policy	NCCA Project Consistency
Policy NR-3.1: New development shall meet all federal, [s]tate and regional regulations for habitat and species protection	**Consistent.** The City has been in dialogue with resource agency staff about the NCCA projects since fall 2019, with the goal of sharing information and obtaining agency input and guidance. Outreach has included a pre-application meeting with Corps and RWQCB staff, informal phone and email discussions of the potential for the NEWS project to achieve self-mitigating status, and a presentation to the Corps Sacramento District's Interagency Task Force with subsequent discussion. The City will continue the dialogue and will submit permit applications as required by applicable regulations as each project is ready
Policy NR-3.2: The City shall require site-specific surveys to identify significant wildlife habitat and vegetation resources for development projects located in or near sensitive habitat areas	**Consistent.** Biological surveys of the NCCA parcels were conducted at a reconnaissance level in early 2019 and in more detail in fall 2019 – summer 2020, including protocol-level surveys for large branchiopods conducted in winter 2019 – 2020 and protocol-level peak blooming period surveys for special-status plants completed in summer 2020 (Kevin Merk Associates 2019, Vollmar Natural Lands Consulting 2021a). A preliminary delineation of jurisdictional habitat on the NCCA parcels was submitted to the Corps for verification in late spring 2020. It has been revised in response to Corps comments (Vollmar Natural Lands Consulting 2021b) and will be resubmitted in early 2021
Policy NR-3.3: The City shall support and participate in local and regional attempts to restore and maintain viable habitat for endangered plant and animal species, and wetlands…	**Consistent.** As described in Section 1 of this Initial Study, the City's overarching aims for the NCCA include improving habitat resources on the NCCA parcels; project-specific goals for the NEWS, wetland, and MDTW projects also include a focus on habitat values. The Newman Nature Park would also indirectly support maintenance of viable habitat in the Newman area by raising public awareness of the area's natural resources and systems
Policy NR-3.4: The City shall require mitigation of potential impacts on special-status plant and animal species based on a policy of no-net-loss of habitat value…	**Consistent.** For each of the NCCA projects, the City will be applying for the appropriate permit authorizations from the Corps, RWQCB, and/or DFW, as discussed in previous checklist items. If the projects do not qualify for self-mitigating status, permit terms and conditions will stipulate compensatory mitigation meeting applicable regulatory standards, which emphasize no net loss of habitat value. The City will be responsible for meeting the mitigation requirement(s) established by permitting for each of the NCCA projects
Policy NR-3.5: The City should use native plants for landscaping of public projects including parks and community facilities	**Consistent.** Plantings associated with the NEWS, wetland, and MDTW projects would emphasize the use of native species (see Tables 2-5 and 2-6 for NEWS and wetland project planting palettes; the MDTW project planting palette has not been developed in detail at this time). All plantings associated with the Newman Nature Park—including those in the parking area landscaping, as well as those in demonstration gardens, the rainwater harvesting/reuse, and the greywater demonstration gardens—would also be California native species appropriate to the area and site
Policy NR-3.6: The City shall encourage new development to use native vegetation, in landscape plans, where appropriate, instead of invasive, non-native plant species	**Consistent.** *See previous Policy*

Policy	NCCA Project Consistency
Policy NR-3.7: Parks, drainage detention areas and other open space uses shall incorporate, where feasible, areas of native vegetation and wildlife habitat	**Consistent.** The NEWS, wetland, and MDTW projects would construct and restore wetlands analogous to historic habitats on the NCCA site and in the region. The Newman Nature Park would also emphasize the use of native vegetation, including native-plant landscaping and native plant demonstration gardens
Policy NR-3.8: New development shall ensure that suitable habitat for Valley Elderberry Longhorn Beetle is adequately avoided, any elderberry shrubs are identified on project sites, and adequate mitigation is provided where development is proposed within 100 feet of elderberry shrubs	**Not applicable/Consistent.** The NCCA parcels do not currently support native California elderberry (*Sambucus* spp.) shrubs, and no habitat for VELB is present at the NCCA site (Vollmar Natural Lands Consulting 2021a). *Sambucus nigra* is included in the NEWS and wetland project plant palettes (see Tables 2-5 and 2-6), so the site may become more hospitable to VELB over time, but the City's adopted AMMs include a requirement for periodic re-survey and addition of new AMMs if a need is identified (AMM-1, Table2-14). This would provide for long-term avoidance and protection of VELB and its habitat at the NCCA if warranted in the future
Policy NR-3.9: New development shall ensure that active nests for special-status bird species shall be avoided during construction through pre-construction surveys, and if active nests are encountered, through restrictions on construction activities until any young have fledged. This shall include both ground nesting burrowing owl and tree nesting special-status birds	**Consistent.** As discussed in previous items, all of the NCCA projects would incorporate an AMM to protect nesting birds at the site (AMM-10, Table 2-15). This AMM would be in force during the construction period for each of the NCCA projects, and would also apply to all O&M activities that involve ground disturbance or vegetation removal or trimming, throughout the lifespan of the NCCA projects. The NCCA projects would also incorporate an AMM specific to protection of nesting Burrowing Owls (AMM-11, Table 2-15) during construction as well as O&M activities that would generate substantial sustained disturbance or involve ground disturbance
Policy NR-3.10: New developments shall preserve, protect and incorporate established native trees into the site design…	**Not applicable.** No trees of native species are currently present on the NCCA site
Policy NR-3.11: New development shall ensure that any jurisdictional waters are avoided to the maximum extent practicable, any required authorization is obtained from jurisdictional agencies, and adequate mitigation is provided for unavoidable impacts	**Consistent.** As discussed in previous items, the NCCA projects are being designed to avoid gratuitous impacts on jurisdictional waters, and (see Policy NR-3.1 above) the City has been in dialogue with jurisdictional agency staff about the projects since fall 2019 and will submit the appropriate permit applications as each of the NCCA projects becomes ready

As itemized in Table 3-6, all of the NCCA projects are deemed consistent with all applicable City policies protecting biological resources. There would be No Impact related to a conflict with such policies, and no mitigation is required.

The City's also has a tree ordinance (City Code Chapter 11.04), but it applies only to street trees, which are defined as "trees planted or growing within the public rights-of-way, public access easements, streets, parking strips, alleys, roads and ways" within City limits. As such, it does not apply to the NCCA. There would be No Impact related to conflict with the City's tree ordinance, and no mitigation is required.

County Policies and Ordinances. Like the City, the County explicitly recognizes the value of natural resources and protects them through goals and policies in its General Plan (County of Merced 2013). County General Plan Goal NR-1 requires the County to "[p]reserve and protect, through coordination with the public and private sectors, the biological resources of [Merced] County." Numerous policies under Goal NR-3 provide more specific direction; relevant policies are itemized, and NCCA project consistency is evaluated, in Table 3-7. The County does not have ordinances protecting trees or biological resources.

Table 3-7. Consistency with County General Plan Policies Protecting Biological Resources

Policy	NCCA Project Consistency
Policy NR-1.2: Protected Natural Lands Identify and support methods to increase the acreage of protected natural lands and special habitats, including[,] but not limited to, wetlands, grasslands, vernal pools, and wildlife movement and migration corridors, potentially through the use of conservation easements	**Consistent.** As discussed above and in previous checklist items, the NCCA projects would increase the extent and quality of wetland (including ephemeral wetland/vernal pool) and native grassland habitat on the NCCA parcels. The projects would not hinder wildlife movement or migration and may provide a slight Benefit to waterfowl migration due to the increased extent of wetland habitat on the parcels. Additionally, the City is currently exploring the potential for the NEWS project to qualify for self-mitigating status, which would require establishment of a conservation easement over any portions of the NEWS project "counted" toward mitigation credit, and intends to do the same with the MDTW project
Policy NR-1.8: Use of Native Plant Species for Landscaping Encourage the use of native plant species in landscaping, and, where the County has discretion, require the use of native plant species for landscaping	**Consistent.** As discussed above for City General Plan Policy NR-3.5, plantings at the NEWS, wetland, and MDTW projects would emphasize the use of native species, and the Newman Nature Park may include native plant demonstration gardens intended to encourage use of native plants in residential and commercial landscaping in the Newman area. Any additional landscaping at the Newman Nature Park would also rely on native rather than introduced species, as required by City Policy NR-3.5
Policy NR-1.11: On-Going Habitat Protection and Monitoring Cooperate with local, [s]tate, and [f]ederal agencies to ensure that adequate on-going protection and monitoring occurs adjacent to rare and endangered species habitats or within identified significant wetlands	**Consistent.** As discussed under several City Policies in Table 3-6, the City has been in ongoing dialogue with resource agency staff about the NCCA projects, will continue to engage with the agencies, and will be responsible for implementing the terms and conditions of resource agency permits needed to authorize the NCCA projects. These are expected to include a requirement for monitoring and corrective action to ensure proper establishment of restored and created habitat at the NCCA Additionally, as itemized in Table 2-15, the City has committed to implementing a suite of AMMs to protect habitat values at the NCCA both during construction and over the long term, for the lifespan of the NCCA projects. The AMMs include a requirement for routine re-survey, re-evaluation, and modifications to the AMM suite to ensure that it remains adequately protective as conditions at the NCCA evolve over time (AMM-1, Table 2-15)

As itemized in Table 3-7, all of the NCCA projects are deemed consistent with relevant County policies protecting biological resources. There would be No Impact related to a conflict with such policies, and no mitigation is required.

Potential to Conflict with an Adopted Conservation Plan

The NCCA site is not within an area coverd by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, there would be no potential for conflict with such a plan as a result of implementing the NCCA projects. There would be No Impact, and no mitigation is required.

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V. CULTURAL RESOURCES *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Cause a substantial adverse change in the significance of a historical resource pursuant to *CEQA Guidelines* Section 15064.5?	☐	■ (Santa Fe Grade, integrity)	■ (Newman Wasteway; Santa Fe Grade, context) (potential Benefit to Santa Fe Grade context)	■ (Newman Wasteway, integrity)
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5?	☐	■	☐	☐
(c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

Discussion of Checklist Responses

Background

CEQA protects historical resources in general, and also extends specific guidance for the treatment of artifacts, objects, and sites that qualify as unique archaeological resources.

As defined under CEQA, *historical resources* encompass the span of the state's prehistoric and historic heritage. They include sites, buildings, structures, areas, objects, and documents that are historically or archaeologically significant, or significant in the "architectural, engineering, scientific, economic, educational, social, political, or cultural annals of California," and meet one or more of the following criteria (*CEQA Guidelines* 15064.5[a][3]).

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

(2) Is associated with the lives of persons important in our past

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values

(4) Has yielded, or may be likely to yield, information important in prehistory or history

Resources included on the California Register of Historical Resources (CRHR), or on a local register, typically meet these requirements and are considered historical resources for CEQA purposes (*CEQA Guidelines* 15064.5[a][1–2]. Additionally, lead agencies may determine that a resource that does not qualify for CRHR or local register listing is nonetheless significant and may treat it as a historical resource meriting protection under CEQA (*CEQA Guidelines* 15064.5[a][4]).

Unique archaeological resources are resources with particularly important informational or heritage value. They are defined in the CEQA statute as including artifacts, objects, and sites that meet any of the following criteria (California Public Resources Code 21083.2[g]).

- Contains information needed to answer important scientific research questions and in which there is a demonstrable public interest
- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

The CEQA statute and *CEQA Guidelines* require lead agencies to evaluate the potential for projects they undertake, permit, or fund to affect historical resources, including both non-unique and unique archaeological resources (California Public Resources Code 21083.2, *CEQA Guidelines* 15064.5). Project outcomes that would materially affect the significance of a historical resource are considered significant impacts under CEQA. Such outcomes include physical demolition, destruction, relocation, and alteration of the resource or its immediate surroundings (its context) (*CEQA Guidelines* 15064.5[b][2]). CEQA also identifies means to evaluate and mitigate impacts on historical resources (California Public Resources Code 21083.2).

Historical Resources Evaluation for NCCA Projects

The historical resources evaluation conducted for the NCCA projects is described in detail in the Historic Property Survey Report/Finding of Effect presented as Appendix D to this Initial Study (Basin Research

Associates 2020). Because of the anticipated need for Corps permit authorization for at least two of the NCCA projects (NEWS project and MDTW project; see Table 1-2), this evaluation was conducted consistent with Section 106 of the National Historic Preservation Act and Corps requirements as well as the requirements of CEQA and the state's *CEQA Guidelines*.

The historical resources evaluation included the following activities.

- A search of records on file with the California Historical Resources Information System's Central California Information Center (CHRIS/CCIC), located at California State University, Stanislaus, for information on prior studies and known historical resources within the 78-acre and 24-acre parcels and a 0.25-mile-side surrounding buffer (CHRIS/CCIC File No. 11485IN, dated August 26, 2020)
- Review of relevant materials on file inhouse
- Outreach to the state's Native American Heritage Commission (NAHC) for information in their Sacred Lands File
- Outreach to local Native American individuals and groups identified by the NAHC as potentially able to provide additional information, including the Amah Mutsun Tribal Band, North Valley Yokuts Tribe, and Southern Sierra Miwok Nation
- Archaeological field inventory (pedestrian survey) of both parcels, conducted September 30 – October 1, 2020 by RPA (Registered Professional Archaeologist) staff meeting the Secretary of the Interior's qualification standards

Following is a brief summary of the results of the historical resources evaluation; complete information is provided in Appendix D.

- No prehistoric, combined prehistoric/historic, or historic era archaeological sites have been recorded or reported on or within 0.25 mile of either of the NCCA parcels, and the field inventory of the parcels did not identify evidence for the presence of prehistoric, combined prehistoric/historic, or historic era archaeological sites or isolate[6] finds
- No known prehistoric, ethnographic, or contemporary Native American resources, including sacred places and traditional use areas, have been identified in, adjacent to, or near either of the parcels
- No historic era or architecturally significant sites, structures, landmarks, or points of interest were identified within the NCCA parcels, either by the records search or during the field inventory
- No national or State of California historical landmarks or points of interest are located in or adjacent to either parcel

Based on the lack of recorded sites, the negative results of the field inventory, the NCCA site's location within a historic floodplain/tributary complex, and the degree of disturbance due to agricultural activities, the NCCA parcels are evaluated as having low archaeological sensitivity (Basin Research Associates 2020).

[6] Several finds in association with one another are required to identify a site. An *isolate* is a single, isolated find not associated with other artifacts.

Two previously recorded historical resources are present in the NCCA vicinity: a segment of the Santa Fe Grade immediately adjacent to the east boundary of the 24-acre parcel, and the Newman Wasteway, located south of the NCCA site (Basin Research Associates 2020).

The Santa Fe Grade was originally constructed in the last decade of the 19th century with the intention that it would enable a 100-mile-long extension of the Santa Fe Railroad across seasonal wetlands along the western edge of the San Joaquin Valley. The opening of the competing Southern Pacific Railroad line farther west in the Valley forced its abandonment, and in the late 19th century – early 20th century it was converted to a roadway facilitating access to ranch lands owned by the Miller and Lux cattle company, which had its headquarters in Los Banos. The segment of the Grade at the boundary of the 24-acre parcel remains a one-lane unpaved road (Basin Research Associates 2020, University of California Davis Library 2020). The Santa Fe Grade was evaluated in 2017 and found eligible for listing in the National Register of Historic Places and the California Register of Historic Resources (Basin Research Associates 2020). The determination has not yet been reviewed, but the Grade is presumed to qualify as a historical resource for CEQA purposes in the analysis that follows.

The Newman Wasteway was constructed circa 1950 as part of the federal Central Valley Project, and was designed to convey excess flows from the Delta-Mendota Canal for discharge to the San Joaquin River. The Central Valley Project has been found eligible for NRHP listing based on its association with the history of irrigation and agricultural development in California, with the Newman Wasteway identified as a contributing element (Basin Research Associates 2020). The Newman Wasteway is therefore also treated as a historical resource for CEQA purposes in the analysis below.

Based on review of historic topographic maps, the portion of the Miller Ditch that runs adjacent to NCCA site appears to have been constructed in the early 1950s. Because of its age, it was evaluated for factors that would qualify it as a historical resource under CEQA, and it does not appear to qualify for NRHP or CRHR listing, or as a historical resource for CEQA purposes, for the following reasons (Basin Research Associates 2020).

- There is no evidence that the Miller Ditch is associated with any important events in Merced and/or Stanislaus County history or with the development of irrigated farming in the Newman area or western San Joaquin Valley. By the time it was constructed, the agricultural ditch system, and irrigated farming in general, was already well established in the region
- No evidence was found to associate the Miller Ditch with important persons or notable engineers in area, regional, or state history, or in the history of California water development
- The Miller Ditch does not exhibit important engineering or design values; it is a standard, earthen “v” or trapezoidal irrigation feature typical of a large number of similar ditches in the general area, and is part of the larger water conveyance and drainage system of the CCID but is not a distinguishable entity of the system

The Miller Ditch is therefore considered a standard agricultural water service structure that is not likely to provide information important in history (Basin Research Associates 2020), and is not treated as a historical resource for purposes of the analysis below.

Potential for Adverse Change in Significance of Historical Resources

As discussed above, two listed historical resources are present in the immediate project vicinity: the Newman Wasteway and the Santa Fe Grade.

Newman Wasteway

None of the NCCA projects would have a direct physical impact on the Newman Wasteway, which is located to the south of the NCCA site. The NEWS project would improve the quality of water discharged from the NCCA site to the Miller Ditch and from the Ditch to the Wasteway, but would not modify the use or operation of the Wasteway, which would continue to receive return water from the Miller Ditch per the current (and long-term) operational regime. Treated water from the MDTW project would primarily be diverted to the central swale to support marsh and riparian habitat enhanced and created by the wetland project, although an alternate diversion enabling return flow to the Miller Ditch would also be provided. However, Miller Ditch water is currently used for irrigation on the 78-acre parcel; use of treated Miller Ditch water for a similar purpose on the parcel would not materially alter the operation of the system tributary to the Newman Wasteway. There would thus be No Impact on the integrity of the Newman Wasteway, and no mitigation is required.

All of the NCCA projects would modify physical conditions on the NCCA parcels, as summarized below and described in detail in Section 2.

- NEWS project: addition of constructed wetlands for stormwater and dry weather runoff treatment on the 78-acre parcel
- Wetland project: increase in extent and quality of wetlands on both parcels
- MDTW project: addition of constructed wetlands for treatment of Miller Ditch water on 78-acre parcel
- Newman Nature Park: addition of community facilities, demonstration gardens, parking area, and trails to 78-acre parcel

All of these changes could be construed as modifications to the context of the Newman Wasteway. However, as discussed in more detail in the *Aesthetics* section of this checklist, the "green" character of the NCCA site with all projects implemented would remain generally consistent with cultivated parcels and scattered structures in the area around the site. The new facilities and improvements at the NCCA would not directly alter the surrounding area's prevailing agricultural character, nor would the NCCA projects indirectly foster a reduction in the local or regional importance of agriculture. They would therefore not detract from or impinge on the Newman Wasteway's setting in a dominantly agricultural area. Additionally, the 78-acre parcel, where visual changes would be greatest, is about 1,800 feet (just over 0.3 mile) from the Wasteway at its closest point; changes on the 78-acre parcel thus would not affect the immediate context of the Wasteway. As a result, impacts, if any, on the context of the Newman Wasteway are considered Less than Significant. No mitigation is required.

Santa Fe Grade

The Santa Fe Grade runs adjacent to and just outside the east boundary of the 24-acre parcel, in close proximity to the areas where the wetland project would restore and enhance marsh habitat in the central swale, and ephemeral wetland habitat in the southeast portion of the parcel. Since the grade is outside the boundaries of City property, there should be no encroachment whatsoever on the Grade. However, if work in these areas were to extend to the Grade, there would be a potential for Significant impacts on the integrity of this feature. To address this, the City will implement the following mitigation measure. With Mitigation Measure CUL-1 in place, impacts would be avoided and are considered Less than Significant.

Mitigation Measure CUL-1. Protection of Old Santa Fe Grade

The footprint of the wetland project will be developed to ensure that all physical impacts on the historic Santa Fe Grade are avoided. The project construction documents will define the extent of the Santa Fe Grade in the vicinity of the wetland project and will show the footprint of the Grade as a "No

Disturbance" exclusion area where earthwork and equipment staging will be prohibited. The City's construction management staff will be responsible for enforcing this measure during construction. Similar avoidance will be required during O&M activities, and will be enforced by Public Works staff overseeing O&M at the NCCA site.

As discussed above for the Newman Wasteway, the NCCA projects would modify physical conditions on both the 78-acre and 24-acre parcels. Enhancement of wetland conditions on the 24-acre parcel would not adversely affect the context of the the Santa Fe Grade. On the contrary, this could represent a Benefit to context, since the Grade was originally constructed to enable rail transport through wetlands historically present in the western San Joaquin Valley. Changes on the 78-acre parcel, as discussed above, would not materially alter the surrounding area's agricultural character, and are thus considered Less than Significant effects on the context of the Santa Fe Grade. No additional mitigation is required.

Potential for Adverse Change in Significance of Archaeological Resources

No known archaeological resources are located on or within close proximity to the NCCA parcels, and the site is considered to have low sensitivity for archaeological resources, based on records search results, site setting and history of use, and the results of the field survey conducted in early fall 2020 (Basin Research Associates 2020; see Appendix D). Nonetheless, as in any area with a long history of human habitation, there may be some potential for unanticipated discovery of resources buried in the subsurface, either during construction earthwork, or during ground-disturbing O&M activities. This could include prehistoric Native American resources and/or historic-period resources, potentially including resources associated with construction of the Santa Fe Grade. At worst, impacts could rise to a level considered Significant under CEQA. To address this, the City will implement the following mitigation measures. With Mitigation Measures CUL-2, CUL-3 and CUL-4 in place, impacts would be reduced to a Less than Significant level.

Mitigation Measure CUL-2. Retention of On-Call Archaeologist

Prior to construction of each of the NCCA projects, the City will retain a qualified professional archaeologist (City's Archaeologist) who meets Secretary of the Interior standards and has experience in San Joaquin Valley archaeology on an on-call basis for the duration of all ground-disturbing activities. The City's Archaeologist will be responsible for reviewing, identifying, and evaluating cultural resources (if any) exposed during construction, for determining whether they qualify as *historic resource(s)* and/or *unique archaeological resource(s)* under CEQA, and, if needed, recommending and implementing appropriate follow-up treatment.

Mitigation Measure CUL-3. Worker Awareness Training for Cultural Resources

Prior to groundbreaking for each of the NCCA projects, the City's Archaeologist (defined in Mitigation Measure Cul-2) will develop and present in-person, hands-on worker awareness training for historical resources. Training will include information on the possibility of encountering resources during construction, the types of resources that could be seen and how to recognize them, and proper procedures in the event resources are encountered. All field management and supervisory personnel and construction workers involved with ground-disturbing activities will be required to take this training prior to beginning work on the project. Upon completion of the training, workers will be required to sign a form stating that they attended the training, understand, and will comply with the information presented. The same type of worker awareness training will be required for all City and contract staff engaged in O&M activities that would entail ground disturbance in areas not already disturbed by construction. It will be provided by the City's Archaeologist, or another on-call specialist meeting the

same qualifications. The City's Public Works Department will be responsible for ensuring that training is provided for both construction and O&M staff.

Mitigation Measure CUL-4. Evaluation and Treatment of Unanticipated Archaeological Discoveries

If known or suspected cultural resources are discovered during construction or O&M, work in the immediate area of the find will cease and the contractor or O&M staff will be required to notify the City before the end of the work day. The find will be protected in place until the City's Archaeologist (or another specialist meeting the same qualifications) and a trained and qualified Native American monitor who can prove genealogical relationship to at least one of the tribes of the western San Joaquin Valley region have evaluated it and identified appropriate follow-up measures, if any. If the City's Archaeologist determines that the resource qualifies as a *historical resource* and/or *unique archaeological resource* under CEQA, they will notify the City and other appropriate parties and recommend follow-up measures to reduce impacts, in accordance with Section 15064.5 of the *CEQA Guidelines*. Depending on the nature of the find, follow-up measures may include avoidance, preservation in place, recordation, monitoring during ongoing work, additional archaeological testing, and data recovery, among other options. The City's Archaeologist may recommend completion of a formal Archaeological Monitoring Plan (AMP) and/or Archaeological Treatment Plan (ATP), potentially including data recovery, if significant archaeological deposits are exposed during ground-disturbing activities. The City will be responsible for proper implementation of the AMP and ATP. If an AMP or ATP is implemented for a project that requires federal permit authorization (for example, Clean Water Act Section 404 permitting), the City will consult with the federal lead agency and, if appropriate, other regulatory agencies, in developing and implementing the AMP and ATP.

If archaeological evaluation, monitoring, or treatment is required, the City's Archaeologist will prepare and file a Monitoring Closure Report with the City, documenting the nature of the find(s), evaluation methods, and outcomes.

Potential for Disturbance of Human Remains

Because the NCCA site is not sensitive for archaeological resources, discovery of human remains is considered unlikely. However, as with other types of resources, it is not impossible, both during construction and during O&M activities that involve disturbance of areas not already disturbed for construction. Disturbance of human remains could constitute a Significant impact under CEQA. To address potential impacts on human remains the City will implement the following mitigation measure. With Mitigation Measure CUL-5 in place, impacts on human remains would be reduced to a Less than Significant level.

Mitigation Measure CUL-5. Procedures for Discovery of Human Remains

The treatment of human remains and funerary objects discovered during ground-disturbing construction and O&M activity will comply with all applicable state laws. If known or potential human remains are encountered during activities at the NCCA site, work within 50 feet of the discovery and in any nearby areas reasonably suspected to overlie adjacent remains will cease, the find will be protected in place, and the contractor/O&M staff will be required to notify the City before the end of the work day. The City will promptly notify the Merced County Coroner, who will be responsible for determining whether the remains are Native American. If the Coroner determines that the remains are Native American and are not subject to Coroner authority, the Coroner will notify the Native American Heritage Commission, which is responsible for identifying and notifying descendant(s) of the deceased so they can make recommendations regarding the treatment of the remains. The City will be responsible for facilitating the

disposition of remains recommended by the Most Likely Descendant(s). If no satisfactory agreement can be reached as to the disposition of the remains pursuant to state law, the City will respectfully reinter the human remains and items associated with the burial on City property in a location not subject to further subsurface disturbance. A final report detailing the find, follow-up activities, and disposition of remains will be prepared by the City's Archaeologist or other qualified staff, and will be submitted to the City Manager promptly following disposition of the remains. The report will be subject to review and approval by the City Manager.

References Cited in this Section

Basin Research Associates. 2020. Historic Property Survey Report/Finding of Effect: City of Newman Community Conservation Area, 78- and 24-Acre Parcels, Merced County, California. San Leandro, CA. Prepared for Redtail Consulting, Fremont, CA. (Appendix D to this Initial Study.)

University of California Davis Library. 2020. Special Collections: Miller & Lux Maps. Available: https://www.library.ucdavis.edu/news/50-features-special-collections-miller-lux-maps/#:~:text=Henry%20Miller%20and%20Charles%20Lux,late%201800s%20and%20early%201900s. Accessed: November 2020.

VI. ENERGY *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Result in potentially significant environmental impact(s) due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☐	■
(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

Discussion of Checklist Responses

Potential to Result in Wasteful, Inefficient, or Unnecessary Energy Consumption

Construction of the NCCA projects would entail direct consumption of energy in the form of vehicle, heavy equipment, and hand equipment fuels. It would also entail indirect consumption of the energy associated with production and market delivery of materials and substances used in construction, such as the concrete used for the pads in the proximal portions of the NEWS and MDTW project forebays, the materials required to construct the community facilities at in the Newman Nature Park, and bedding material, pipe, and other supplies required for water service extension. There would also be indirect energy consumption associated with inoculum harvesting, propagule collection, and production of any container stock and seed stock used in landscape, revegetation, and restoration plantings at the site.

Ongoing O&M for each of the four NCCA projects would also consume energy, both directly and indirectly. Direct energy consumption would include vehicle and hand equipment fuels at all projects, and the energy

required to pump, treat, and deliver water for the handwashing sinks, classroom area sink, and hydration station at the Newman Nature Park and irrigation in the NEWS gateway area. Indirect energy consumption would include the energy needed to produce and deliver paints and other materials and substances needed for routine upkeep of the NCCA facilities over the long term, as well as the energy required to harvest propagules or cultivate and obtain any seed or container stock needed for periodic replanting.

The City's General Plan (City of Newman 2007) recognizes the importance of conserving energy resources and avoiding wasteful use of energy. In the General Plan Natural Resources Element, Goal NR-5 requires the City to "[m]inimize the consumption of energy, water, and non-renewable resources" and Policy NR-5.1 further stipulates that "… new civic buildings shall … exceed the state standards for energy efficiency (Title 24) by at least 15 percent." The Recreation and Cultural Resources Element includes Policy RCR-1.11, requiring the City to "design and maintain park and recreation facilities to minimize water, energy and chemical … use." It is the City's intent to ensure that design, construction, and O&M for all of the NCCA projects is consistent with these requirements. For instance, lighting at the Newman Nature Park facilities would be solar-powered to reduce energy consumption. The Newman Nature Park would also include rainwater capture and greywater reuse demonstration gardens, helping raise community awareness of options to reduce energy consumption in area homes and businesses. Thus, although project design, construction, and O&M would consume energy resources both directly and indirectly, No Impact related to wasteful, inefficient, or unnecessary consumption of energy is anticipated. No mitigation is required.

Potential to Conflict with or Obstruct Energy-Related Plans

Neither the City nor the County has adopted an energy conservation plan at this time, although the County is in the process of developing a Climate Action Plan that will include programs to reduce energy usage (County of Merced 2018). With no adopted energy plan in place at the local level, there would be no potential to conflict with such a plan. Moreover, as discussed above, City policy requires civic facilities to exceed current state standards for energy efficiency, which is consistent with the County's intent to put energy use reduction programs in place. There would be No Impact related to conflict with local energy conservation plans, and no mitigation is required.

By requiring exceedance of state energy efficiency standards, the City is also in compliance with state energy conservation planning. There would be No Impact related to conflict with state energy conservation planning, and no mitigation is required.

References Cited in this Section

City of Newman. 2007. Newman 2030 General Plan. Available: http://www.cityofnewman.com/docman/community-development-department/36-general-plan-final-version/file.html. Downloaded: November 2019.

County of Merced. 2018. Merced County Climate Action Plan. Available: https://mercedcap.rinconconsultants.com/. Accessed: September 2020.

VII. GEOLOGY & SOILS *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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 issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
(ii) Strong seismic ground shaking?	☐	☐	■	☐
(iii) Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
(iv) Landslides?	☐	☐	☐	■
(b) Result in substantial soil erosion or the loss of topsoil?	☐	■ (topsoil loss)	■ (soil erosion)	☐
(c) 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, or collapse?	☐	☐	■	☐
(d) Be located on expansive soil, as defined in the applicable building code, creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
(e) 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 waste water?	☐	☐	☐	■
(f) Directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature?	☐	■ (paleontological resources)	☐	■ (geologic features)

Discussion of Checklist Responses

The evaluation and mitigation of geologic hazards are regulated at state and local levels. The principal state regulations governing assessment and mitigation of risks related to geologic hazards are California's Alquist-Priolo Earthquake Fault Zoning Act and Seismic Hazards Mapping Act, which establish statewide processes to

identify hazard areas, and assign local jurisdictions the responsibility of evaluating and mitigating hazards within designated hazard areas.

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Sec. 2621 *et seq*.) prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It defines criteria for identifying active faults, gives legal weight to terms such as "active," and establishes a process for local jurisdiction review of building proposals within Earthquake Fault Zones.

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act (California Public Resources Code Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act focuses on corollary or "secondary" hazards, including liquefaction[7] and seismically induced landslides. Under the Seismic Hazards Mapping Act, the state is charged with identifying and mapping areas at risk of secondary seismic hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Permit review is the primary mechanism for local regulation of development; local jurisdictions are prohibited from issuing development permits for sites within designated Seismic Hazard Zones until appropriate site-specific geologic and geotechnical investigations have been conducted and measures to reduce potential damage have been incorporated into the development plans.

The California Geological Survey publishes regulatory maps (available at http://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/) showing the location and extent of the state's Earthquake Fault Zones and Seismic Hazard Zones. Local jurisdictions must enforce the requirements of the Alquist-Priolo Act and Seismic Hazards Mapping Act within the hazard zones delineated on the state's regulatory maps, and may also choose to zone additional faults as active or identify additional areas at risk from secondary seismic hazards. The NCCA site, like most of the Central Valley, is outside the area currently covered by state-issued regulatory maps (California Geological Survey 2019), and at this time neither the Counties of Merced and Stanislaus nor the City have issued local zoning maps, although all three have planning policies in place to address seismic hazards (City of Newman 2007, County of Merced 2013, County of Stanislaus 2016).

Building codes—which are relevant to geologic hazards and seismic safety because they establish standards for earthwork/grading, foundation design, and seismic safety—are adopted at the local jurisdiction level. As identified in Section 2 of this Initial Study, the City's adopted building code is the 2019 version of the California Building Standards Code (CBSC) (California Code of Regulations, Title 24), inclusive of Appendix J (*Grading*).

Potential for Exposure to Surface Fault Rupture

The NCCA site is not within or in close proximity to any Earthquake Fault Zone defined by the State of California; the closest state-zoned fault is the Ortigalita fault, located some 14.5 miles to the southwest (State Geologist 1986, California Geological Survey 2019). As a result, the NCCA projects are considered to be at very low risk of surface fault rupture. No Impact related to surface fault rupture is anticipated, and no mitigation is required.

Potential for Exposure to Seismic Groundshaking

Like much of California, the Newman area and western San Joaquin Valley region in general are at risk of strong seismic groundshaking, and like all projects in seismically active regions, the NCCA projects would

[7] *Liquefaction* occurs when seismic groundshaking causes saturated materials in the subsurface to lose their strength and flow, or behave as a liquid. It can lead to substantial structural damage, particularly to poorly designed structures.

expose new project features to seismic groundshaking risk.

Several new structures would be constructed at the Newman Nature Park, including a community plaza, a shade structure, and outdoor classroom areas, as well as restrooms and an O&M storage building. The NEWS project, wetland project, and MDTW projects would not construct structures except for a small (approximately 10 feet by 10 feet) pump station building that may be added in the future to enable drawdown of the NEWS project micropool for maintenance. The primary concern with regard to seismic groundshaking is the potential for structural damage and resulting injury to members of the public and/or City staff who may be present.

All elements of the NCCA projects and the new water service extension would be designed and constructed in accordance with applicable sections of the City's adopted building code (the 2019 CBSC). Among other provisions in the CBSC, CBSC Chapter 16 lays out minimum design requirements to ensure that the structural components of buildings are adequate to resist anticipated loading, including seismic loading due to ground acceleration in earthquakes. Buildings and other structures are assigned to risk categories that reflect their intended use and occupancy, and design criteria reflect the risk category, site soil properties, and anticipated ground acceleration values based on studies by the U.S. Geological Survey, the Building Seismic Safety Council (which is funded by the Federal Emergency Management Agency), and the American Society of Civil Engineers. Additionally, the City will require site-specific geotechnical investigations for the NEWS, Newman Nature Park, and MDTW projects. One key purpose of these studies will be to provide recommendations for design and construction appropriate to seismic risks at the site, in consideration of site soil and other characteristics.[8]

Although the potential for impacts cannot be entirely avoided, adherence to current City/CBSC design criteria and the recommendations of site-specific geotechnical investigations would ensure that risks of structural damage due to groundshaking, and corollary public safety hazards, are minimized consistent with good engineering practices and the current prevailing standard of care. Residual impacts, if any, are accordingly considered Less than Significant. No mitigation is required.

Potential for Exposure to Seismic-Related Ground Failure

This discussion focuses on liquefaction as the type of seismic ground failure most relevant to the NCCA site. Landslide hazards, including seismically induced landslides, are discussed in the next item.

As identified in the introduction to this checklist section, the State of California has not issued regulatory maps delineating Liquefaction Zones for the vicinity of the NCCA site (California Geological Survey 2019). However, geotechnical studies for recent projects in the general project vicinity have not identified liquefaction or other types of seismically induced ground failure as a concern in the area (e.g., Kleinfelder 2007, Salem Engineering Group 2017). Moreover, as identified above, the City will require preparation of site-specific geotechnical investigations for the NEWS, Newman Nature Park, and MDTW projects, which will include recommendations to address site soil conditions consistent with requirements of the City's adopted building code. With this requirement in place, potential impacts associated with seismically induced ground failure would be minimized consistent with regulatory requirements and current prevailing standards of engineering practice. Residual impacts, if any, are considered Less than Significant, and no mitigation is required.

The new water service extension to serve the NEWS project and Newman Nature Park would also be constructed in accordance with the City's adopted building code, the City's Improvement Standards, and current

[8] Measures identified in geotechnical and other engineering reports to address site hazards and ensure that the design of new construction is appropriate for site conditions are commonly referred to as *recommendations* but in practice are actually binding requirements.

prevailing standards of engineering practice. Potential impacts associated with seismically induced ground failure would be minimized consistent with regulatory requirements and current prevailing standards of engineering practice, and residual impacts, if any, are considered Less than Significant. No mitigation is required.

Potential for Exposure to Landslide Hazards

As identified above, the State of California has not issued regulatory maps delineating Seismically Induced Landslide Zones for the vicinity of the NCCA site (California Geological Survey 2019). However, the NCCA site is located on nearly flat topography at a substantial distance from the rangefronts bounding the San Joaquin Valley. As a result, it is not considered to be at risk from seismically induced landslides or from landslides in general. No Impact related to landslides is anticipated, and no mitigation is required.

Potential for Soil Erosion or Loss of Topsoil

As described in Section 2, construction of all of the NCCA projects would entail ground disturbance. The NEWS and MDTW projects would require fairly extensive earthwork to create the forebays, wetland treatment cells, and the NEWS micropool and provide for O&M access roads/trails. The wetland project would entail recontouring to enhance emergent marsh habitat, create seasonal wetland swales, and optimize conditions in the ephemeral wetland area, consistent with historic conditions. The Newman Nature Park would require grading to accommodate the new community plaza, outdoor classroom and picnic areas, demonstration gardens, and parking area as well as additional trails. Extension of water service would require excavation for pipeline trenches.

Once construction of each project is complete, ongoing O&M activities may intermittently also require ground disturbance. This would be particularly true of the NEWS and MDTW projects, where culverts (NEWS project) and spreaders (MDTW project) enabling passive flow between wetland cells would be periodically evaluated for proper function and could need to be removed and reset to adjust their elevation for more efficient flow. Minor ground disturbance could also be required for maintenance of garden and classroom areas at the Newman Nature Park. Operational ground disturbance is not expected to be necessary at the wetland project, where the goal is to establish areas of functionally self-sustaining wetland, riparian, and grassland habitat.

Soil Erosion

The ground disturbance associated with grading and recontouring for construction of all of the NCCA projects would have the potential to result in accelerated soil erosion. However, all of the NCCA projects would disturb areas greater than 1 acre, and would thus be required by Section 402 of the federal Clean Water Act to obtain authorization under the SWRCB's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit). This requires preparation and implementation of a site- and project-specific Storm Water Pollution Prevention Plan (SWPPP) that details measures to control erosion and site runoff. Under the current Construction General Permit, SWPPPs must be prepared and implemented by personnel meeting specific qualifications.[9] With the SWPPP in place, soil erosion would be reduced consistent

[9] Since 2009, California has required that SWPPPs be prepared, amended, and certified by a Qualified SWPPP Developer (QSD), and implemented either by a QSD or a by Qualified SWPPP Practitioner (QSP). QSPs may not prepare, amend, or certify SWPPPs. Certification as a QSD or QSP requires the applicant to (1) document possession of appropriate "underlying certification" (such as California licensure as a Professional Engineer, Professional Geologist, Certified Engineering Geologist, or Landscape Architect) providing a basis of skills and knowledge to perform the QSD or QSP role, (2) take a training course offered by a qualified California Construction General Permit Trainer of Record, and (3) take and pass the appropriate examination. QSDs must pass both the QSD and QSP exams while QSPs are required to take only the QSP exam.

with regulatory requirements. It is expected that regulatory permits authorizing the projects would require erosion control to remain in place as needed during the vegetation establishment period following construction, with monitoring—and, if needed, corrective action to repair or replace dysfunctional components—by City and/or consultant staff. The NCCA projects' construction- and vegetation establishment-period impacts related to soil erosion are therefore expected to be Less than Significant, and no mitigation is required.

As discussed in previous checklist sections, water service extension would most likely be coordinated with NEWS project and/or Newman Nature Park construction. In this case, it would be covered under the same SWPPP and regulatory permit package as the larger project, and would be subject to the same requirements. If it proceeds as a separate undertaking, which is considered unlikely, it would still be subject to the requirements of the City's adopted AMM for water quality and habitat protection (AMM-4, Table 2-15). With AMM-4 in place, soil erosion impacts of water service installation are expected to be Less than Significant. No mitigation is required.

Ground-disturbing O&M activities would also have the potential to result in accelerated soil erosion. However, as discussed in Section 2, under the NCCA Master Plan (City of Newman 2021), the City has committed to an AMM for water quality protection (AMM 4, Table 2-15), which includes erosion and runoff control measures such as straw wattles, filter rolls, filter fences, and silt fences, and a requirement that any areas of disturbed vegetation will be reseeded immediately following the completion of work. AMM-4 would remain in force for ground-disturbing O&M activities for the lifespan of the NCCA projects. With AMM-4 in place, soil erosion impacts related to ground-disturbing O&M activities are expected to be Less than Significant. No mitigation is required.

Topsoil Loss

Although the NCCA parcels—in particular, the 78-acre parcel—have been subject to agricultural grading and some degree of cultivation over the years, they do not appear to have undergone deep ripping, and their current vegetated condition shows that although they almost certainly do not retain an undisturbed topsoil layer, sufficient topsoil is present to support successful vegetation growth. Earthwork—including recontouring for the wetland project as well as the deeper cuts and more extensive fill placement required for NEWS and MDTW project construction and possibly also for structural foundations at the Newman Nature Park—would require topsoil removal since the organic content in topsoil precludes its use in engineered fill. Topsoil removal would also be required for water service extension to the NEWS project if Option 2 is selected for water service extension to the Nature Park, and for the portion of Option 1 within the 78-acre parcel. There would thus be potential for topsoil loss during construction if precautions are not taken. Similar, but more areally limited topsoil loss could also occur during ground-disturbing O&M activities, and could also be Significant. To address this, the City will implement Mitigation Measure GEO-1. With this measure incorporated, construction and operational impacts related to topsoil loss would be reduced to a Less than Significant level.

Mitigation Measure GEO-1. Topsoil Protection

To minimize impacts on topsoil resources, construction documents for all NCCA projects will require the following measures for work in vegetated areas.

- The area of disturbance will be limited to the minimum needed to accomplish the necessary grading/recontouring
- Revegetation will reuse onsite topsoil to the extent feasible. In areas where topsoil is present, topsoil will be removed and sidecast separate from other excavation spoils, and will be assessed for reuse in habitat restoration/creation by a qualified biologist or ecologist with local

native plant expertise. If the topsoil is determined to be suitable for onsite reuse in habitat restoration/creation, it will be maintained in a separate stockpile and will be replaced during revegetation. If site topsoil is determined to be unsuitable—for example, due to the presence of excessive invasive species seed bank—clean imported topsoil will be used. If possible, import topsoil will be obtained from a local source or sources within the project watershed, with soil properties generally consistent with those of the NCCA site. Import topsoil will also be assessed and approved by the qualified biologist/ecologist prior to use on the site

If operational or maintenance activities require topsoil disturbance or removal, the same measures will apply.

Potential for Location on Unstable Substrate Materials

Issues related to liquefaction and slope instability (landslides) are discussed in previous items, above. Expansive soils are discussed in the following item. This discussion focuses on the potential for unstable excavation cuts.

As discussed in several items above, earthwork—ranging from fairly extensive excavation and fill placement for the NEWS and MDTW projects to more limited recontouring for the wetland project and trenching for water service extension—would be necessary to construct the NCCA projects. Any excavation carries some risk of instability, but risks would be reduced consistent with good engineering practices and the current prevailing standard of care by adherence to the City's adopted building code (the 2019 CBSC) and recommendations of the site-specific geotechnical investigations required for the NEWS project, Newman Nature Park, and MDTW project. The more limited excavation potentially needed for future maintenance such as adjustment of culvert elevations at the NEWS and MDTW projects would also be required to conform with the City's building code and any relevant recommendations of the original geotechnical investigations. The potential for project construction and O&M to create unstable conditions is therefore considered Less than Significant, and no mitigation is required.

Potential for Location on Expansive Soils

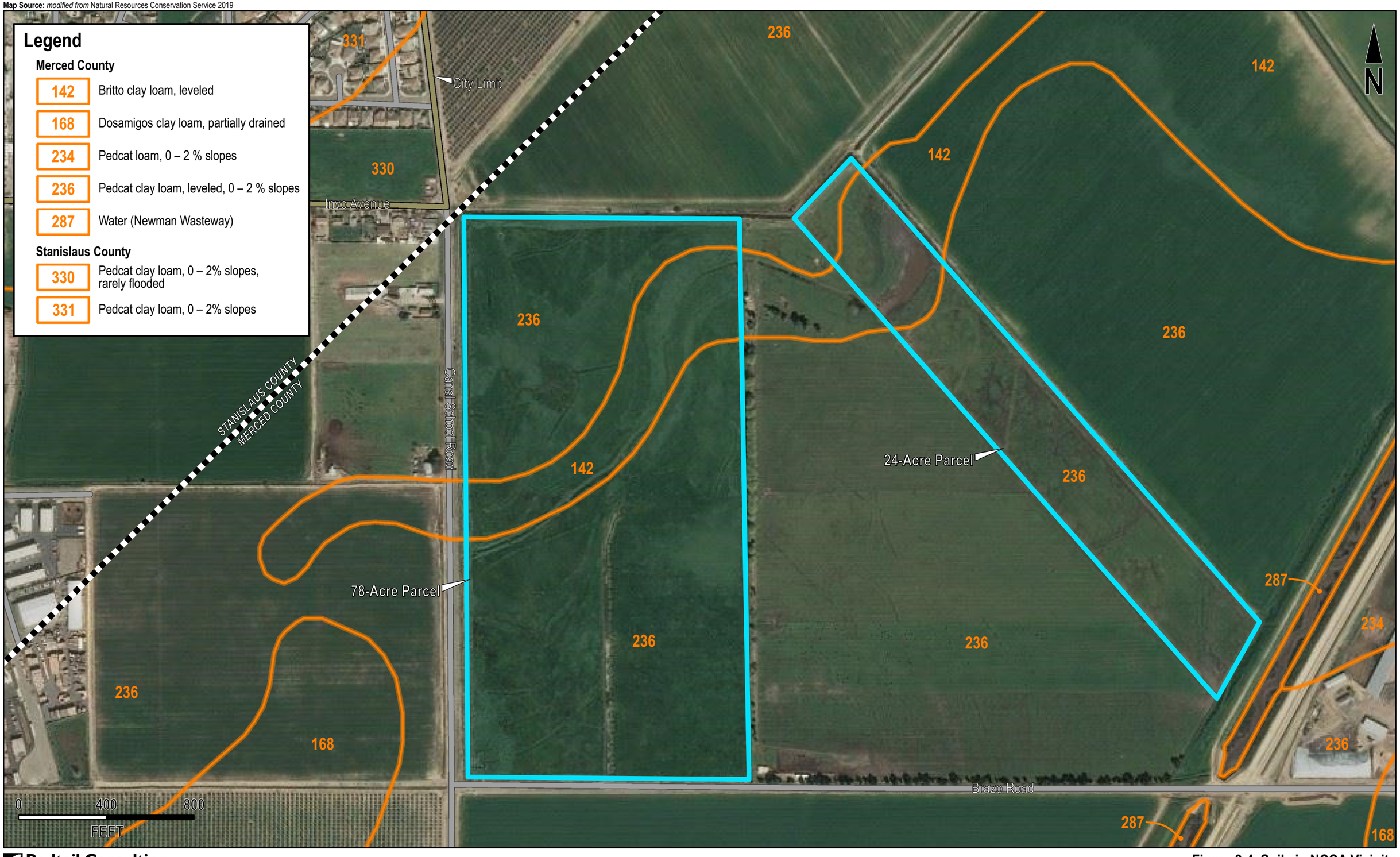
The NCCA site and surrounding vicinity are underlain by soils assigned to the Pedcat, Britto, and Dosamigos series (Figure 3-4). These are saline, clay-rich, loamy soils of alluvial fans, fan aprons, and basin floors, formed in alluvium derived from sedimentary rock. Drainage is poor, such that soils may remain seasonally saturated, and pedogenic calcium carbonate and/or gypsum are present in varying percentages (Natural Resources Conservation Service 2019).

Table 3-8 provides an overview of key characteristics by soil series, including shrink-swell (expansion) potential. As shown on Figure 3-4, the NCCA site is largely underlain by Pedcat clay loam (leveled), with the exception of the central swale, which is underlain by Britto clay loam (leveled).

Table 3-8. Soils in NCCA Vicinity

Soil	Landform	Typical Profile*	Shrink-Swell Potential
Merced County			
Britto clay loam, leveled	Rims on basin floors	0 – 5: clay loam 5 – 22: clay loam 22 – 62: sandy clay loam *Up to 5% $CaCO_3$**, 10% $CaSO_4 \cdot 2H_2O$****	Moderate – high

Map Source: *modified from* Natural Resources Conservation Service 2019



Redtail Consulting
Environment & Community

Figure 3-4. Soils in NCCA Vicinity
Newman Community Conservation Area Master Plan
City of Newman

Soil	Landform	Typical Profile*	Shrink-Swell Potential
Dosamigos clay loam, partially drained	Alluvial fans	0 – 5: clay loam 5 – 29: clay loam 29 – 62: clay loam *Up to 35% $CaCO_3$, 10% $CaSO_4 \cdot 2H_2O$*	Moderate – high
Pedcat loam, 0 – 2% slopes	Fan aprons	0 – 5: loam 5 – 23: clay 23 – 29: clay 29 – 60: stratified sandy clay loam to clay *Up to 3% $CaCO_3$*	Upper 5 inches: low Depths >5 inches: high
Pedcat clay loam, leveled, 0 – 2 % slopes	Fan aprons	0 – 5: clay loam 5 – 23: clay 23 – 29: clay 29 – 60: stratified sandy clay loam to clay	Upper 5 inches: moderate Depths >5 inches: high
Stanislaus County			
Pedcat clay loam, 0 – 2% slopes	Alluvial fans	0 – 7: clay loam 7 – 25: clay 25 – 51: clay loam 51 – 60: stratified sandy clay loam to clay *Up to 15% $CaCO_3$*	Moderate – high
Pedcat clay loam, 0 – 2% slopes, rarely flooded	Alluvial fans	0 – 7: clay loam 7 – 25: clay 25 – 51: clay loam 51 – 60: stratified sandy clay loam to clay *Up to 15% $CaCO_3$*	Moderate – high

* Depths in inches below ground surface
** Calcium carbonate
*** Gypsum

Source: Natural Resources Conservation Service 2002, 2019; Soil Conservation Service 1990

As shown in Table 3-8, the principal soils of the NCCA site, the Pedcat clay loam (leveled) and the Britto clay loam (leveled), have been identified as moderately to highly expansive (Soil Conservation Service 1990, Natural Resources Conservation Service 2002). Shrink-swell behavior of expansive soils has the potential to damage slabs and foundations and lead to more extensive structural damage in the features they support. There would thus be some risk to the concrete areas in the proximal forebay of the NEWS project and MDTW project and to the Newman Nature Park facilities. However, the City's adopted building code (the 2019 CBSC) includes specific provisions for construction in areas potentially situated on expansive soils, and the site-specific geotechnical investigations the City will require for the NEWS, Newman Nature Park, and MDTW project facilities may require additional measures (recommendations)[10] to prevent damage due to shrink-swell behavior. With adherence to the City's building code and recommendations of the site-specific geotechnical investigations, impacts related to expansive soils would be minimized consistent with regulatory requirements and current prevailing engineering standards. Adherence to the City's building code and prevailing engineering standards would similarly minimize impacts for the water service extension. Residual impacts, if any, are considered Less than Significant. No mitigation is required.

[10] As identified above, although the measures identified in geotechnical and other engineering reports are commonly referred to as *recommendations*, they are actually binding requirements.

Potential for Impacts Related to Septic Tanks/Alternative Wastewater Disposal Systems

The NCCA projects would not employ septic facilities. The restrooms at the Newman Nature Park community area would be equipped with composting toilets, which do not generate wastewater. There would be No Impact related to septic tanks, and no mitigation is required.

Sinks in the Nature Park handwashing area as well as the sink in the outdoor classroom area are planned to drain to vegetated swale/planter areas designed for water treatment, similar to vegetated swales routinely incorporated into large development projects to treat stormwater runoff, and designed consistent with current best practices. Treated water would then infiltrate into the shallow subsurface. With drainage to a vegetated water treatment swale, wastewater from the restroom and classroom area sinks is not expected to result in adverse effects on groundwater quality. There would be No Impact related to alternative wastewater disposal systems, and no mitigation is required.

Potential for Destruction of Paleontological Resources or Geological Features

Paleontological Resources

Paleontological (fossil) resources include preserved remains of past plants and animals as well as animal burrows, traces, tracks, and trackways. They are protected under federal and state regulations, including CEQA, because of their heritage value and their potential to provide scientifically important information.

Fossil materials may be buried in sediment or rock units below the ground surface, such that their presence or absence cannot be determined with certainty in advance of project groundbreaking. As a result, evaluating the potential for impacts on paleontological resources is essentially a risk analysis that addresses the following questions:

- What is the likelihood that scientifically important (significant) paleontological resources[11] are present in the project area? and
- If present, would such resources be disturbed, damaged, or destroyed as a result of project activities?

The likelihood that significant fossil resources are present is evaluated based on the documented track record of the geologic units in the project area with regard to fossil finds. Units that have produced important fossil finds in the past are likely to contain additional materials and are considered sensitive for paleontological resources. The potential for loss of paleontological resources is directly related to the extent of project-related ground disturbance, and particularly ground disturbance involving previously undisturbed substrate materials.

The most detailed published geologic mapping available shows the NCCA site as underlain by sedimentary deposits assigned to the upper informal member of the late Pleistocene through Holocene San Luis Ranch alluvium (Lettis 1982). In the vicinity of NCCA site, these are generally fine-grained deposits accumulated on the middle and lower portions of an alluvial fan complex recording uplift and erosion of the Coast Ranges to the west, and are the parent materials on which the site's Pedcat and Britto soils, discussed above, were developed. Regionally, the San Luis Ranch alluvium overlies a slightly older (mid- to late Pleistocene) sedimentary unit referred to as the Los Banos alluvium; the Los Banos alluvium in turn overlies the Tulare

[11] The Society of Vertebrate Paleontology (SVP) defines *significant paleontological resources* as including "fossils and fossiliferous deposits… consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information." The SVP limits the definition of *paleontological resources* to materials more than about 5,000 years old (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010). The SVP's approach to paleontological resources evaluation, impact analysis, and mitigation was specifically developed to assist lead agencies in complying with CEQA protections for paleontological resources and is adopted here.

Formation of late Pliocene and Pleistocene age (Lettis 1982), which contains the area's major producing potable water aquifers (California Department of Water Resources 2015, City of Newman 2016, San Joaquin River Exchange Contractors GSP Group 2019).

The University of California Museum of Paleontology's (UCMP's) online collections database shows no holdings from the San Luis Ranch alluvium (University of California Museum of Paleontology 2020), but the upper member of the unit has been reported as yielding horse *(Equus* sp.) bone fragments from at least one locality (Lettis 1982). Although recorded finds from the San Luis Ranch alluvium are sparse, this unit is considered highly sensitive for paleontological resources because it has produced vertebrate remains, based on Society of Vertebrate Paleontology protocols (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010), which are recognized as an industry standard for analysis of paleontological resources impacts under CEQA.

The UCMP database similarly lacks records from the Los Banos alluvium (University of California Museum of Paleontology 2020), but this unit has also been reported as yielding vertebrate remains, including *Equus* sp. bones and teeth and bison (*Bison* sp.) bone fragments (Lettis 1982). As such, it is also considered highly sensitive for paleontological resources.

The Tulare Formation has produced plant fossils, including fir (*Abies* sp.), manzanita (*Arctostaphylos* sp.), black walnut (*Juglans hindsii*), pine (*Pinus* sp.), knotweed (*Polygonum* sp.), and giant sequoia (*Sequoiadendron* sp.), as well as unidentified insect remains (University of California Museum of Paleontology 2020). It has also yielded vertebrates, including bison (*Bison* sp.), elephant (*Elephas* sp.), horse (*Equus* sp.), camel (*Camelops* sp.), and Columbian mammoth (*Mammuthus columbi*) (University of California Museum of Paleontology 2020). Based on its track record of producing vertebrate remains as well as diverse plant fossils, the Tulare Formation is considered highly sensitive for paleontological resources.

Construction Period Impacts. Grading and excavation for construction of each of the NCCA projects and excavation for water service extension would have some potential to encounter significant fossil resources. The potential for damage or destruction of resources would increase with the areal extent of earthwork required, and also with the depth of cuts, due to the increased potential to involve strata of the Tulare Formation, present at depth; the potential for Significant impacts is therefore expected to be higher for the NEWS project and MDTW project, but all of the NCCA projects would have some potential for Significant impacts on paleontological resources. To address this, the City will implement Mitigation Measures GEO-2, GEO-3, and GEO-4 below. With these measures incorporated, impacts on paleontological resources during construction of all four projects and extension of water service would be reduced consistent with the current standard of care; residual impacts, if any are considered Less than Significant.

Mitigation Measure GEO-2. Final Design Evaluation and PRMP Development

For each of the NCCA projects, the City will retain qualified staff to review the 90% or 100% design submittal and supporting geotechnical report(s). As used here, *qualified staff* refers to an individual meeting the *qualified professional paleontologist* criteria defined by the Society of Vertebrate Paleontology (SVP) (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010).

The purpose of the design review will be to determine the potential for ground disturbance to involve paleontologically sensitive geologic units (San Luis Ranch alluvium, Los Banos alluvium, and/or Tulare Formation), based on final design, anticipated depth of disturbance, and construction techniques. As such, the design review may include field reconnaissance, if warranted in the opinion of qualified staff.

If there is reasonably foreseeable potential for any of these units to be affected by project-related ground disturbance, the City will require qualified staff (as defined above) to develop a Paleontological Resources Mitigation Plan (PRMP). The PRMP will be consistent with the SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP Impact Mitigation Guidelines Revision Committee 2010) and *Conditions of Receivership for Paleontologic Salvage Collections* (SVP Conformable Impact Mitigation Guidelines Committee 1996). As such, it will provide for at least the following.

- Implementation by qualified personnel, including a supervising paleontologist who meets the requirements for a *qualified professional paleontologist* as defined by the SVP and monitor(s) who satisfy the SVP's requirements for *paleontological resource monitors* (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010)
- Pre-construction survey with salvage or protection in place, in any areas where there would be surface disturbance of the geologic units identified as highly sensitive for paleontological resources (San Luis Ranch alluvium, Los Banos alluvium, Tulare Formation) ("highly sensitive units")
- Pre-construction and construction-period coordination procedures and communications protocols
- Monitoring of ground-disturbing activities known to involve, or potentially involving, the highly sensitive units. In all areas subject to monitoring, monitoring will initially be conducted full-time for grading and excavation, but the PRMP may provide for monitoring frequency in any given location to be reduced once 50% of the ground-disturbing activity has been completed, based on the professional judgment of the supervising paleontologist
- Provisions for a "stop work, evaluate, and treat appropriately" response in the event of a paleontological discovery, with appropriate treatment identified by the supervising paleontologist (see Mitigation Measure GEO-3) based on the nature of the find and prevailing standards for paleontological resources protection
- Sampling and data recovery procedures consistent with SVP protocols (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010, Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee 1996)
- A repository agreement providing for appropriate curation of any recovered materials, consistent with SVP requirements (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee 1996)
- Procedures for the preparation, identification, and analysis of fossil specimens and data recovered, consistent with SVP Requirements (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee 1996) and any additional requirements of the designated repository institution
- Reporting procedures consistent with SVP requirements (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010)

Mitigation Measure GEO-3. PRMP Implementation

Prior to groundbreaking for any of the NCCA projects that are determined to warrant a PRMP (see Mitigation Measure GEO-2), the City will retain a supervising paleontologist meeting SVP standards for a *qualified professional paleontologist* (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010) to implement the requirements of the PRMP. This person may, but will not necessarily, be the same individual who prepared the PRMP. The City will be responsible for ensuring proper implementation of the PRMP.

Mitigation Measure GEO-4. Worker Awareness Training for Paleontological Resources

To support effective PRMP implementation and address the potential for unanticipated discoveries where a PRMP is not required, the City will retain qualified staff to present in-person, hands-on worker awareness training for paleontological resources to ensure that construction staff can recognize fossils in the field. Training will be delivered prior to groundbreaking for each of the NCCA projects. As used here, *qualified staff* refers to an individual who satisfies one or both of the following criteria.

- A qualified professional paleontologist as defined by the SVP (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010) who is experienced in delivering training to nonspecialists
- A California-licensed professional geologist (PG) who has expertise in San Joaquin Valley stratigraphy and paleontology and is experienced in delivering training to nonspecialists

Training will be concise and substantive. It will include information on the possibility of encountering fossils during construction, the types of fossils that may be seen and how to recognize them, and proper procedures in the event fossils are encountered. All field management and supervisory personnel and construction workers involved with ground-disturbing activities will be required to take this training prior to beginning work on the project. Upon completion of the training, workers will be required to sign a form stating that they attended the training, understand, and will comply with the information presented.

Long Term Impacts. Because of the extent of grading and recontouring required to construct each of the NCCA projects, most ground-disturbing O&M activities would affect only previously disturbed substrate materials. With Mitigation Measures GEO-2, GEO-3, and GEO-4 in place during construction, it is very unlikely that significant paleontological resources would be affected by ground-disturbing O&M work in areas that were previously disturbed by construction. If, however, ground disturbance during O&M would affect areas that have not been disturbed by construction, Significant impacts on paleontological resources would be possible; as described for construction, the potential for impacts would increase with greater extent and depth of disturbance. Minor, shallow ground disturbance might avoid impacts, but the potential for impacts cannot be entirely ruled out. To address this, the City will implement Mitigation Measure GEO-5. With Mitigation Measure GEO-5 incorporated, impacts on paleontological resources as a result of ground-disturbing O&M activities would be Less than Significant. No additional mitigation is required.

Mitigation Measure GEO-5. Paleontological Consultation for Ground-Disturbing O&M Activities

Prior to ground-disturbing O&M activities in areas not previously disturbed by construction, the City will retain a qualified professional paleontologist as defined by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010) to review the proposed O&M activities. The purpose of the review will be to determine the level of risk to paleontological resources as a result of the intended ground disturbance and provide advice regarding

appropriate risk reduction measures. If the paleontologist considers it warranted, Mitigation Measures GEO-2, GEO-3, and GEO-4 will be implemented. Alternately, the professional paleontologist may identify a reduced approach consistent with the SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP Impact Mitigation Guidelines Revision Committee 2010) and *Conditions of Receivership for Paleontologic Salvage Collections* (SVP Conformable Impact Mitigation Guidelines Committee 1996). The City will be responsible for ensuring that the paleontologist's recommendations are properly implemented.

Geological Features

The NCCA site is located on the agricultural floor of the San Joaquin Valley, and is surrounded by actively cultivated lands with the urbanized City immediately to the northwest. No unique geological features are present at or in close proximity to the NCCA site. There would be No Impact on unique geological features, and no mitigation is required.

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VIII. GREENHOUSE GAS EMISSIONS *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Discussion of Checklist Responses

Background

Based on extensive technical studies, the Intergovernmental Panel on Climate Change (IPCC) has concluded that

> [w]arming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millenia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased….It is *extremely likely* [95–100% probability] that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together (Intergovernmental Panel on Climate Change 2013).

Heat-trapping gases are referred to as greenhouse gases (GHGs), also called well-mixed long-lived GHGs. *Well-mixed* refers to the fact that atmospheric concentrations of these pollutants are temporally distributed around the globe—GHG concentrations are not as spatially variant as those of traditional air pollutants. *Long-lived* refers to the fact that the pollutant concentrations remain in the atmosphere for decades—and therefore short-term reductions in emissions do not immediately lead to reductions in atmospheric concentrations.

Water vapor is the most significant heat-trapping gas, but its concentrations fluctuate depending on temperature, and water vapor does not accumulate in the atmosphere like the well-mixed long-lived GHGs. The GHG with the largest heat-trapping impacts is carbon dioxide (CO_2), followed by methane (CH_4) and nitrous oxide (N_2O). Certain fluorinated compounds are also tracked, although these would not be used or produced by any of the NCCA projects and thus are not directly relevant here.

Not all GHGs have an equivalent impact on climate. A variety of metrics have been tabulated to weight the impacts of the various GHGs relative to CO_2—including global warming potential (GWP) and global temperature potential (GTP)—for time horizons ranging from 20 years to 500 years, and the values vary widely. For example, depending on the metric and time horizon, methane is anywhere between 4 and 86 times as important as CO_2 (Myhre et al. 2013). The IPCC has identified that "all choices of metric contain implicit value-related judgements such as type of effect considered and weighting effects over time" (Myhre et al. 2013). However, the prevailing policy has been to use GWPs for the 100-year time horizon. Specifically, to account for the combined impact of GHGs, emissions of each GHG are expressed in terms of *CO_2 equivalents* (CO_2e) by multiplying by the appropriate GWP, and then summed. By definition, CO_2 has a GWP of 1. The 100-year GWPs for the other gases have changed slightly over time; for example, at the time of the 1990 Kyoto Protocol, the GWPs were 21 for CH_4 and 310 for N_2O, but currently California's GHG emission inventory (California Air Resources Board 2019) uses GWPs identified in the IPCC's 4th Assessment Report, which are 25 for CH_4 and 298 for N_2O (Forster et al. 2007).

In California, GHG emissions decreased from 2000 to 2018 (California Air Resources Board 2020). However, while climate change will affect some localities differently than others, the environmental impact in any location is primarily a function of global rather than local GHG levels, and global GHG concentrations have been consistently increasing for several decades (Hartmann et al. 2013).

Potential to Generate Greenhouse Gas Emissions

The 78-acre parcel has been fallow since the 1990s and in recent years has been used primarily for cattle grazing. The NCCA projects would reduce GHG emissions directly through wetland creation and restoration,

native grassland restoration, and tree planting, as follows.

- NEWS project: development of an approximately 21-acre constructed wetland system and planting of some 100 trees and shrubs
- Wetland project: reestablishment, rehabilitation, or enhancement of at least 10 acres of wetland habitat, planting and establishment of at least 50 trees of native species suitable to the site, and restoration of at least 1 acre of native perennial grassland habitat
- MDTW Project: creation of a minimum of 10 acres of perennial or near-perennial freshwater surface-flow wetland; actual wetland creation is expected to be about 15.8 acres based on the current project concept shown in Figure 2-8

Electrical service would not be extended to the NCCA site; where provided, lighting would be solar-powered, and the classrooms/learning areas at the Newman Nature Park would be outdoor-only. Additionally, public use of the NCCA projects would be limited to non-vehicular activities. As a result, the only direct source of GHG emissions associated with these projects would be construction and O&M activities, and the only indirect GHG source would be trips by workers and visitors who drive to the site.

As detailed in Appendix C to this Initial Study, CAPCOA's CalEEMod® software (CalEEMod Version 2016.3.2) was used to quantify the short-term, temporary GHG emissions associated with construction (1,529 metric tonnes [MT] CO_2e) and CARB's EMFAC calculator was used to quantify the annual GHG emissions associated with O&M and visitors (1,475 MT CO_2e/year). The GHG benefit due to the land use change associated with the wetland project is estimated to be approximately 154 MT CO_2e over 50 years (Pinnell pers. comm.).

The SJV APCD has not identified a quantative significance threshold for GHGs. SJV APCD's *Climate Change Action Plan – Resources* webpage (https://www.valleyair.org/Programs/CCAP/CCAP_idx.htm) provides links to the Bay Area Air Quality Management District, the Sacramento Metropolitan Air District, and the South Coast Air Quality Management District. However, these districts have also struggled with quantifying project-level significance thresholds for GHG emissions.

In addressing this challenge, the Bay Area Air Quality Management District (BAAQMD) elected not to recommend a threshold for construction GHG emissions because "there is not sufficient evidence to determine a level at which construction emissions are significant" (Bay Area Air Quality Management District 2009), and calculated an operational emissions threshold of 1,100 MT CO_2e/year based on

(1) an estimate of the emissions reductions that the Bay Area was targeting to achieve by 2020

(2) an estimate of what percentage of housing, commercial, and industrial projects (parks and wetlands restoration projects were not included in the evaluation) would exceed that threshold, and

(3) an estimate of the extent of mitigation applied by projects triggering that threshold (that is, showing that the product of *(2)* and *(3)* above was sufficient to achieve *(1)* (Bay Area Air Quality Management District 2009)

The Sacramento Metropolitan Air Quality Management District opted to use the Bay Area Air Quality Management District's operational emissions threshold and chose to also apply the threshold to construction "in order to maintain a consistent threshold for GHG emissions," but acknowledged that "there are limited options to mitigate GHG emissions onsite," aside from BMPs already employed to reduce criteria air pollutant emissions, such as minimizing idling times, and therefore allowed the construction emissions to be amortized over the life

of the project (Sacramento Metropolitan Air Quality Management District 2014). The South Coast Air Quality Management District (SCAQMD) identifies an operational emissions threshold of 10,000 MT CO_2e/year for stationary sources of air pollution such as industrial equipment, but gives lead agencies discretion for land use projects (South Coast Air Quality Management District 2019).

The primary method that SJV APCD has used to evaluate the significance of project GHG emissions involves a comparison to a Business-as-Usual (BAU) baseline, identifying that projects that reduce GHGs by 29% would be consistent with California's 2020 GHG goal. However, these policies were focused largely on the design of residential and commercial developments, not wetlands or parks projects, and they have not been updated for 2030 – 2040 GHG goals.

- The GHG impacts of the NCCA projects were evaluated based on the principles previously identified by the various agencies. For additional perspective, average emissions from a single semi-tractor trailer truck are approximately 100 MT CO_2e/year (Tamura Environmental 2021; see Appendix C). NCCA GHG emissions (1,528 MT CO_2e total for construction and 1,475 MT CO_2e /year for ongoing operations) are relatively low numbers considered in this context. With regard to construction GHG emissions, both the BAAQMD and SCAQMD concluded that no GHG significance threshold is appropriate. However, all of the NCCA projects would be in service for multiple decades, and dividing total construction GHG emissions by even 10 years gives a value well below the Sacramento Air Quality Management District's significance threshold for amortized construction emissions

- With regard to operational emissions, per analyses conducted by the BAAQMD (Bay Area Air Quality Management District 2009), wetlands restoration projects and parks (in aggregate)—unlike housing and commercial development—are not considered a significant contributor to regional GHG emissions increases, nor are there impactful GHG mitigations that can be undertaken for these types of projects

- With regard to reduction of operational GHG emissions per the SJV APCD's approach, the NCCA projects have been developed to incorporate the GHG reduction strategies identified as feasible to reduce emissions, including use of solar lighting, limited parking availability tailored to anticipated usership, and bicycle racks and end-of-trip facilities to support non-motorized access to the site. Additional GHG reductions would be associated with implementation of Mitigation Measures TR-1 and TR-2, which would limit travel to the site once a threshold is reached, as discussed in detail in the *Transportation* section of this checklist. Provision of electric vehicle charging stations, which is commonly incorporated into projects to reduce GHG emissions, is infeasible at the NCCA, since there would be no electrical power supply to any of the projects

Accordingly, the NCCA projects' individual and collective construction-period and operational GHG emissions are evaluated as Less than Significant, and no mitigation is required.

Potential to Conflict with an Applicable GHG Plan, Policy, or Regulation

GHG reduction plans, policies, and regulations apply at the federal, state, and local levels.

Internationally, on January 20, 2021, President Biden accepted the 2015 Paris Agreement,[12] which identifies a central aim to "strengthen global response to the threat of climate change", including "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase even further to 1.5°C above pre-industrial levels" (United Nations 2015). This is a high-level agreement that operates on a national and industry-wide scale and was not intended to lay out specifics at

[12] See https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/.

the level of individual projects. There is thus no potential for any of the NCCA projects to conflict with the Paris Agreement. There would be No Impact related to conflict with plans or policies at the federal level, and no mitigation is required.

In California, in 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, identifying a GHG emissions reduction target of 80% below 1990 levels by 2050. Subsequently, Governor Jerry Brown issued Executive Order B-30-15, establishing an interim statewide GHG emissions reduction target of 40% below 1990 levels by 2030 in order to meet the 2050 goal, and Senate Bill 32 (SB 32) went beyond identifying it as a target, by "requir[ing] [CARB] to ensure that statewide greenhouse gas emissions are reduced by 40% below the 1990 level by 2030" (by adding Section 38566 to California's Health and Safety Code). The CARB Scoping Plan for achieving the 2030 GHG target (California Air Resources Board 2017) identifies "[r]ehabilitating and strengthening wetlands … and incorporating natural landscapes into urban environments" as "part of the state's climate solution." The NEWS, wetland, and MDTW projects are all consistent with this thinking, and the DFW grant program (Wetlands Restoration for Greenhouse Gas Reduction) that is funding the wetlands restoration project is part of the California Climate Investments program. The Newman Nature Park—which would emphasize native plant landscaping, community environmental and sustainability education, and non-motorized recreation—is also considered consistent. There would thus be No Impact related to conflict with plans or policies at the state level, and no mitigation is required.

At the regional level, as mentioned above, the SJV APCD has developed CEQA guidance for determining the significance of GHG emissions from stationary sources (such as industrial equipment) and for residential, commercial, and industrial development projects (San Joaquin Valley Air Pollution Control District 2009). For these source types, significance is evaluated based on the extent of GHG reduction measures incorporated in

the project. The SJV APCD guidance does not identify an evaluation paradigm for undertakings such as the NCCA projects. However, the Guidance does contain a provision stating that

> [p]rojects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency.

The City does not have a GHG reduction plan in place and does not explicity regulate GHG emissions through policies or ordinances. The Highway 33 Specific Plan update that is currently in progress with grant support from Caltrans is expected to reduce GHG emissions through a variety of improvements, but the NCCA site is outside the Specific Plan Area—which is limited to the immediate SR 33 corridor—and thus will not fall under the updated Specific Plan requirements.

The County is in the process of developing a Climate Action Plan but has not yet adopted the new Plan (see https://mercedcap.rinconconsultants.com/), and does not regulate GHG emissions by ordinance. However, the County General Plan includes goals and policies relevant to GHG emissions reduction. Goal AQ-1 requires the County to "[r]educe air pollutants and greenhouse gas emissions and anticipate adaptation due to future consequences of global and local climate change." Most of the policies under Goal AQ-1 require the County to take action to encourage or promote adoption of measures that would indirectly reduce GHG emissions—as such, they apply to the County rather than to individual projects approved within the County. Examples include encouraging new residential, commercial, and industrial development to reduce air quality impacts associated with energy consumption (Policy AQ-1.1), encouraging the use of high-mileage fleet vehicles and alternative

fuel vehicles (Policy AQ-1.2), encouraging the use of carbon-efficient farming methods and renewable energy technologies (Policy AQ-1.3), coordinating with other agencies on comprehensive approaches to climate change planning (Policy AQ-1.9), and increasing public awareness of climate change and encouraging residents and businesses to engage in activities to reduce GHG emissions (Policy AQ-1.10) (County of Merced 2013).

However, County General Plan Policy AQ-1.7 requires the County to take measures to reduce the heat island effect (local increases in temperature due to increased absorption and retention of heat in developed areas). Examples of such measures provided in the Policy include preservation of agricultural lands, wildlife habitat, wetlands, watersheds, groundwater recharge areas, and other open space areas that provide carbon sequestration benefits (County of Merced 2013). The NEWS, wetland, and MDTW projects, which would increase the extent of wetlands and improve habitat conditions on the NCCA parcels and would preserve restored and created habitat over multiple decades, are explicitly consistent with this directive. The Newman Nature Park, by increasing public awareness of issues related to watershed health and local natural resources, is also considered indirectly supportive. Additionally, implementation of Mitigation Measures TR-1 (NCCA Usage Monitoring) and TR-2 (Reservations System and Usage Management), described in detail in the *Transportation* section of this checklist, would help to manage increased vehicle travel associated with visitors accessing the NCCA from outside the immediate Newman area and are thus consistent with the spirit and intent of County General Plan Goal AQ-4 ("[r]educe traffic congestion and vehicle trips through more efficient infrastructure and support for trip reduction programs"). The NCCA projects are thus individually and collectively considered consistent with applicable County General Plan goals.

Since the City has no applicable plans, policies, or regulations for GHG emissions reduction, and the NCCA projects are consistent with applicable County policies there would be No Impact related to conflict with plans, policies, or regulations at the regional or local level. No mitigation is required.

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IX. HAZARDS & HAZARDOUS MATERIALS *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	■ (NEWS and MDTW projects, forebay sediment removal)	■ (construction, routine O&M)	☐
(b) 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?	☐	☐	■	☐
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
(d) 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 it create a significant hazard to the public or the environment?	☐	■ (unanticipated hazardous materials discoveries)	☐	■ (location on listed site)
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	■

Discussion of Checklist Responses

Potential to Create Hazards Related to Transport, Use, or Disposal of Hazardous Materials

Construction of all four NCCA projects would involve the use of substances that qualify as hazardous materials as defined by the State of California (e.g., Health and Safety Code Section 25117), such as vehicle and equipment fuels and lubricants. Extension of water service would also require the use of fuels and lubricants and potentially also the paving and striping media required to restore roadway surfacing following pipeline installation. All such substances would be handled and disposed in strict accordance with good construction practices and applicable federal and state regulations,per standard City practices. As identified in *Geology & Soils* above, the four NCCA projects—because of the extent of ground disturbance involved—are also expected to require SWPPPs, which will lay out measures to prevent and respond to spills. In addition, as discussed in Section 2, the City has committed to implementing an AMM (AMM 4, Table 2-15) to protect water quality and habitat at the NCCA site (AMM-4, Table 2-15), which includes precautions to avoid and respond to spills. With adherence to regulatory requirements, good construction practices, and the added precautions in project SWPPPs and the City's adopted AMM, impacts related to hazardous materials use and handling during construction are expected to be Less than Significant. No mitigation is required.

Similar to construction, routine O&M activities for each of the NCCA projects would likely also require intermittent use of substances qualifying as hazardous, including fuels, lubricants, paints, and possibly also pesticides and/or herbicides approved for use in proximity to wetlands. However, the same precautions would apply; the City requires all staff and contractors to adhere to best practices, applicable regulations, and label warnings, and the adopted AMM for water quality and habitat protection will remain in force for O&M activities throughout the lifespan of the NCCA projects. O&M activities would also be shorter in duration and substantially more restricted in extent than initial project construction. In consideration of these factors, impacts related to hazardous materials use and handling during O&M are also expected to be Less than Significant. No mitigation is required.

In addition to routine, ongoing O&M activities, sediment accumulated in the forebays of the NEWS and MDTW projects would require periodic removal. At the NEWS project, this would occur when sediment accumulation reaches 50% of forebay capacity as indicated by permanent sediment accumulation markers installed during construction, which is projected to occur every 5 – 10 years on average. Sediment removal needs at the MDTW project would likely be similar. Because stormwater entering the NEWS project forebay would contain a substantial proportion of urban runoff, accumulated sediment could include heavy metals and other substances that in sufficient concentrations would render the sediment hazardous and preclude on- or offsite reuse as well as disposal at a Class III (municipal solid waste) landfill. Improper handling or disposal of sediment with elevated contaminant concentrations could result in adverse effects on effects on the environment and human health, potentially rising to the level of a Significant impact. To address this, the City will implement the following mitigation measure. With Mitigation Measure HAZ-1 incorporated, impacts related to handling of potentially hazardous sediment would be Less than Significant. No additional mitigation is required.

> **Mitigation Measure HAZ-1. Testing and Appropriate Disposal of Forebay Sediment**
>
> Prior to removal of sediment from the NEWS project and MDTW project forebays, the City will sample the sediment and test it for hazardous constituents. Sampling and testing will follow current applicable best practices consistent with the federal Environmental Protection Agency's Test Methods for Evaluating Solid Waste (SW-846), or current alternate approved under California law. If the sediment is found to qualify as hazardous per State of California standards, it will be handled and treated as a hazardous material, in compliance with all applicable federal, state, and local requirements. Reuse of sediment that qualifies as hazardous will not be permitted; it will be transported by an appropriately

qualified and licensed hauler and will be disposed appropriately at either a Class II ("designated" wastes that are non-hazardous but may pose a risk to the environment) or Class I (hazardous wastes) landfill, depending on the nature and level of contamination.

Once sediment from each project's forebay has been tested in at least 3 normal water years, 3 wet years, and 3 dry years, testing may be discontinued if sediment has consistently been shown not to qualify as hazardous per State of California standards.

Potential to Create Hazards Related to Hazardous Materials Releases

As discussed in the previous item, construction of the NCCA projects and water service extension, and O&M for the NCCA projects, would require the use of some hazardous substances—such as fuels, lubricants, paints, and paving and striping media, and possibly also pesticides and herbicides—but all such substances would be handled according to best practices, applicable federal and state regulations, label warnings, and the precautions required by project SWPPPs and the City's adopted AMM for water quality and habitat protection (AMM-4, Table 2-15). With these precautions in place, impacts, if any, related to hazardous materials spills or releases during construction and O&M at the NCCA site are expected to be Less than Significant. No mitigation is required.

Potential for Handling or Emission of Hazardous Substances or Waste within 0.25 Mile of a School

No public or private elementary, middle, or high schools are located within 0.25 mile of the NCCA site, and no daycare or preschool facilities have been identified within 0.25 mile of the site. There would be No Impact during NCCA project construction or O&M related to handling or emissions of hazardous materials, substances, or waste within 0.25 mile of an existing school, and no mitigation is required.

Potential to Create Hazards Related to Location on a Listed Hazardous Materials Site

Neither of the NCCA parcels or the adjacent roadway segments is listed for hazardous materials contamination (Department of Toxic Substances Control 2020a, State Water Resources Control Board 2020). There would be No Impact associated with location on a site listed for hazardous materials contamination, and no mitigation is required.

The closest listed site is the former Lucas-Dunkley property (APNs 054-05-09 and 054-050-010), which encompasses a total of about 300 acres southeast of the intersection of Hills Ferry Road and Canal School Road, and was previously crossed by Chevron's Old Valley Pipeline right-of-way. The Old Valley Pipeline conveyed heavy petroleum (crude oil) from oil fields in the Bakersfield area to refineries in Richmond (Contra Costa County) from the early 1900s through the late 1930s. Soils at the site have been identified as contaminated by petroleum hydrocarbons, and the site is currently under a Voluntary Cleanup Agreement with the state Department of Toxic Substances Control (DTSC). However, a human health risk assessment conducted in 2008 concluded that the site is suitable for unrestricted use (Department of Toxic Substances Control 2020b). No Impact is anticipated with regard to the NCCA's location in proximity to this site, and no mitigation is required.

Because of the NCCA site's location in an area with a long history of agricultural use, there may be some potential for unanticipated discoveries of hazardous substances—such as pesticides, herbicides, fuels, and lubricants—during construction and also during ground-disturbing O&M activities. In the event of such a discovery, impacts could be Significant if appropriate precautions are not taken. To address this, the City will implement the following mitigation measure. With Mitigation Measure HAZ-2 incorporated, impacts related to

unanticipated discoveries of hazardous materials or substances would be Less than Significant. No additional mitigation is required.

Mitigation Measure HAZ-2. Hazardous Materials Response

In the event known or suspected hazardous materials are encountered during construction or O&M, work in the vicinity of the find will be suspended until qualified staff (i.e., staff meeting the Environmental Professional qualifications in ASTM E1527-13) retained by the City can assess the nature of the find and stipulate appropriate follow-up and protective measures. Work may proceed elsewhere on the site, assuming the discovery appears to be localized. If qualified staff consider it warranted, the City will conduct a Phase II hazardous materials investigation or appropriate equivalent procedure to determine the nature and extent of contamination, evaluate potential risks, and, if appropriate, stipulate additional precautions and/or response measures. Work in areas of known and potential contamination will not resume until the measures stipulated by qualified staff are implemented. If waste disposal is necessary, materials will be handled and disposed of by a licensed waste-disposal contractor and transported by a licensed hauler to an appropriately licensed and permitted disposal or recycling facility, in accordance with local, state, and federal requirements. Project contract documents for all NCCA projects will stipulate contractor responsibilities in accommodating and assisting with the implementation of these commitments, and these requirements will remain in force for all O&M activities at the NCCA.

Additionally, as detailed in the *Hydrology & Water Quality* section of Table 3-23 (see *Mandatory Findings of Significance* below), preliminary soil and sediment testing conducted at the NCCA site indicates that localized areas with slightly elevated mercury concentrations may be present. As noted in Table 3-23, the presence of mercury in California soils reflects several sources. Mercury was a key component in Gold Rush–era ore refining operations; extensive mining of naturally occurring mercury ores resulted in deposition and downstream transport of mercury-bearing tailings and wastes in some California waterways. Mercury has continued to be mined for industrial applications, although its use has decreased in recent decades due to concerns about toxicity. Naturally occurring mercury ore deposits may also contribute directly to elevated mercury concentrations in soils and sediments. Additionally, mercury occurs as a byproduct of fossil fuel combustion and accumulates at the surface due to atmospheric deposition (e.g., Central Valley Regional Water Quality Control Board 2015). In this context, the SWRCB recognizes a naturally *mercury-enriched region*, where California's principal deposits of mercury ores occur—including the Coast Ranges west of the City—and *trace mercury areas* where ambient mercury levels are not naturally elevated by geologic conditions. In trace mercury areas, typical background levels of mercury in soils and sediments range from 0.05 to 0.1 milligram per kilogram (mg/kg); in the mercury-enriched region, naturally occuring mercury levels typically exceed 0.1 mg/kg and can be as high as 0.3 mg/kg (State Water Resources Control Board 2017).

In early 2021, the UC Merced team collected and analyzed samples of soil and Miller Ditch sediment from the NCCA site. Total mercury content in soils ranged from 60.5 micrograms per kilogram[13] (µg/kg) to 115.0 µg/kg (0.061 mg/kg – 0.115 mg/kg) (dry weight) and total mercury in sediments ranged from 77.0 µg/kg to 126.6 µg/kg (0.077 – 0.127 mg/kg) (dry weight) (Beutel pers. comm.) (see *Mercury* in *Hydrology & Water Quality* section of Table 3-23 below). This is consistent with the NCCA site's setting just east of the state's naturally

[13] Note that a microgram is 1/1,000 of a milligram (1 µg = 0.001 mg).

mercury-enriched region. To put these numbers in further perspective, they can be compared with the San Francisco Bay RWQCB's Environmental Screening Levels and with DTSC's Screening Levels.[14]

The San Francisco Bay RWQCB's Tier 1 Environmental Screening Level (a conservative value intended to be protective at sites with unrestricted land and water use, shallow soil contamination, shallow groundwater, and permeable soils) for mercury in soil is 13 mg/kg (just over 100 times the highest concentration measured in the NCCA samples) (San Francisco Bay Regional Water Quality Control Board 2019a). DTSC's screening level for mercury in soils at residential uses is 1 mg/kg (roughly 10 times the highest concentration measured in the NCCA samples) (Department of Toxic Substances Control 2020c). As a result, Significant impacts related to the presence of mercury in site soils are not anticipated.

Nonetheless, out of an abundance of caution, the City will implement Mitigation Measure C-1, detailed in Table 3-23 under *Mandatory Findings of Significance* below. Mitigation Measure C-1 requires soil testing at each of the NCCA projects prior to construction; soils that exceed the 0.1 mg/kg total mercury threshold (the typical maximum naturally occurring soil mercury level in trace mercury areas) may be offhauled for appropriate disposal per applicable state and federal protocols, or they may be retained in separate, appropriately contained stockpiles and used in lower fill lifts where they are capped and will not be surface-exposed once construction is completed. Following construction, surface soils are to be tested again to verify that finished grades are below the 0.1 mg/kg threshold for total mercury content. With Mitigation Measure C-1 in place, mercury levels in surface-exposed soils would be controlled to a level consistent with naturally occurring trace mercury levels, and impacts related to mercury exposure would be Less than Significant. No additional mitigation is required.

Potential for Hazards Related to Public and Public-Use Airports

Airports in the region around the NCCA site include Castle Airport, Gustine Municipal Airport, Los Banos Municipal Airport, Merced Regional Airport, and Turlock Municipal Airport in Merced County and Crows Landing Airport, Modesto City-County Airport, and Oakdale Municipal Airport in Stanislaus County. Both the County of Merced and the County of Stanislaus have Airport Land Use Compability Plans in place (County of Merced 2012, County of Stanislaus 2016). Airport land use plans serve to coordinate local jurisdiction land use planning and airport operations to protect public welfare, including both the safety of aircraft operations and the safety of persons on the ground. Airport land use plans typically define a larger area (sometimes referred to as the Airport Environs or Airport Influence Area) within which land use planning takes airport operations into account, and, closer to the runway(s), a safety zone where stricter density and use limitations are applied to minimize the number of persons potentially exposed to risks associated with aircraft accidents.

The NCCA site is not within the Airport Influence Area delineated for any of the airports in the region (County of Merced 2012, County of Stanislaus 2016), nor is it within 2 miles of any public or public-use airport—the closest airports are Gustine Municipal Airport, about 3.5 miles to the southeast and Crows Landing Airport about 9 miles to the northwest. No Impact is anticipated related to safety hazards associated with public or public-use airports, either during the construction period or over the long term. No mitigation is required.

[14] The San Francisco Bay RWQCB's Environmental Screening Levels are "conservative screening levels…intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites" (San Francisco Bay Regional Water Quality Control Board 2020) by "enabl[ing] users to distinguish which sites pose a significant threat" (San Francisco Bay Regional Water Quality Control Board 2019b). DTSC's Screening Levels are intended for use in assessment of human health risks at hazardous waste sites and permitted hazardous waste handling facilities (Department of Toxic Substances Control 2020c). As such, neither set of thresholds represents levels at which remediation or other action is necessarily warranted, but both provide guidance as to levels of contamination that may pose a risk to human health and further evaluation is advisable.

Potential to Interfere with an Emergency Response or Evacuation Plan

As discussed in Section 2, the City's *Improvement Standards and Standard Details*, which apply to all City projects and will be in force for both construction and O&M at the NCCA, including water service extension, provide for traffic control and safety while work is in progress. In general, roadway closures are prohibited, public rights-of-way must be maintained in a convenient, accessible condition, and safe access to private property must be provided. Where barricades, pylons, or other similar measures are needed to ensure traffic safety, they must be configured in a manner than enables emergency vehicle passage. As a result, with adherence to the *Improvement Standards and Standard Details,* neither construction nor O&M at the NCCA site, or for water service extension, is expected to interfere with emergency response or emergency evacuations. There would be No Impact related to such interference, and no mitigation is required.

Potential for Exposure to Wildland Fire Hazards

The National Wildfire Coordinating Group (*n.d.*) defines wildlands as areas "in which development is essentially nonexistent, except for roads, railroads, powerlines, and similar transportation facilities" and where structures, if any, are widely scattered. Although the NEWS, wetland, and MDTW projects would create and restore habitat, the NCCA site is expected to continue to be surrounded by agricultural lands at the edge of the developed City; as such, although the site would offer improved habitat function and value over the long term, it does not qualify as a wildland per se, and implementing the NCCA projects would not change this. There would be No Impact related to increased exposure of persons or structures to wildland fire hazards, and no mitigation is required. More information on wildland fire issues is provided in the *Wildfire* section below.

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X. HYDROLOGY & WATER QUALITY *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality?	☐	☐	■ (future WDRs and other water quality degradation, NEWS project and MDTW project; salinity increases, NEWS and MDTW projects)	■ (existing WDRs, all projects; future WDRs, wetland project and Newman Nature Park) (overall long-term water quality Benefit under all projects)
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management in the basin?	☐	☐	■ (groundwater recharge, long-term, all projects) (minor Benefit to groundwater recharge, NEWS and wetland projects)	■ (construction and long term, all projects; groundwater use, long term, NEWS, wetland and Newman Nature Park projects)

X. HYDROLOGY & WATER QUALITY *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(c) 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 that would:				
(i) result in substantial erosion or siltation on- or offsite?	☐	☐	■ (Construction period, all projects; onsite operational siltation, NEWS, wetland, and MDTW projects)	■ (Offsite operational siltation, NEWS, wetland, and MDTW projects; long term overall, water service extension) (Net Benefit to offsite sediment delivery)
(ii) substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	☐	☐	☐	■
(iii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	■ (Benefit to stormwater drainage, NEWS, wetland, and Newman Nature Park projects)
(iv) impede or redirect flood flows?	☐	☐	■ (NEWS project, Newman Nature Park)	■ (wetland project, MDTW project) (potential Benefit, wetland project)
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	■ (long-term Benefit)

Discussion of Checklist Responses

Section 303 of the federal Clean Water Act (CWA) requires the states to

- develop water quality standards to protect public health and welfare and enhance water quality
- identify water bodies that fail to meet the applicable standard for one or more pollutants, and

- develop programs to limit pollutant input and assist in recovering the quality of waters that do not meet applicable standards.

Water quality standards must reflect the designated uses of each water body, which may include public water supply, fish and wildlife propagation, recreation, agriculture, industry, navigation, and other purposes.

Water bodies that fail to meet water quality standards for one or more pollutants are referred to as *impaired*, and the list of impaired waters published by each state is often called the Section 303[d] list, from the governing section of the Clean Water Act (CWA). For each impaired water body and pollutant, the states are charged with developing a total maximum daily load (TMDL) program. A TMDL represents the maximum amount of a given pollutant that a water body can accept while still meeting water quality standards; the purpose of a TMDL program is to identify the sources of the pollutant and ways to reduce inputs of that substance. Because TMDL development can be costly and time-consuming, CWA Section 303 requires the states to prioritize the waters on their 303[d] lists so the highest-priority recovery needs can be addressed first.

In California, the EPA delegates CWA Section 303 implementation authority to the SWRCB, which in turn delegates substantial responsibility for water quality control to the nine RWQCBs. This includes:

(1) developing and adopting water quality control plans ("basin plans") for each region's major surface water bodies and groundwater basins. This includes formally identifying ("designating") the beneficial uses[15] of the region's principal waters and the water quality objectives (WQOs) needed to protect them. WQOs represent the level of water quality needed to ensure that a water body continues to meet its designated beneficial uses

(2) implementing programs to achieve the identified WQOs, including action recommendations, implementation schedules, and follow-up measures to determine whether compliance is achieved. This includes but is not limited to implementation and oversight of TMDL programs

(3) regulating discharges of waste that may affect waters of the state, setting standards to maintain the condition of waters that receive waste discharges, and encouraging and assisting in waste disposal programs

The City and the NCCA site are within the Central Valley Region (Region 5), overseen by the Central Valley RWQCB. Other than the San Joaquin River itself and its important tributary Orestimba Creek, the largest surface water bodies in the vicinity of the NCCA site are constructed features: the federal Delta-Mendota Canal and the Newman Wasteway, which was originally intended to transmit emergency releases from the Canal to the San Joaquin River but now also delivers stormwater and agricultural tailwater from the City and surrounding lands. Receiving waters downstream of the NCCA site include the Newman Wasteway, San Joaquin River, and Sacramento – San Joaquin Delta, including the Old River, a principal Delta distributary.

No beneficial uses are designated for the Newman Wasteway in the Basin Plan (Central Valley Regional Water Quality Control Board 2018), although it carries a designation for municipal and domestic supply under the SWRCB's Sources of Drinking Water Policy (Walters pers. comm.). Additionally, discharge from the Newman Wasteway has the potential to affect beneficial uses in downstream receiving waters, particularly those closest

[15] *Beneficial uses* refers to the "resources, services, and qualities" California's surface waters and groundwater provide to the people of the state (San Francisco Bay Regional Water Quality Control Board 2020). A specific range of beneficial uses is laid out in Section 13050[f] of the California Water Code. As a result, a water body's designated beneficial uses do not necessarily represent all of its potential or "reasonable" uses; for instance, wastewater discharge may be a reasonable use but is not recognized as a beneficial use subject to official designation. Protection and enhancement of beneficial uses is a cornerstone of California water quality planning (Central Valley Regional Water Quality Control Board 2018a).

to the outfall, where dilution effects are the least. These are shown in Table 3-9; additional downstream waters, including Suisun and San Francisco Bays, also have designated beneficial uses that are not discussed in detail here.

Table 3-9. Designated Beneficial Uses for Downstream Surface Waters

Water Body	Reach		Beneficial Uses
San Joaquin River	Sack Dam to Merced River*	**Existing:**	agricultural supply (irrigation, stock watering), industrial process supply, water contact recreation, canoeing and rafting, other noncontact recreation, warm freshwater habitat, warm and cold freshwater migration, warm freshwater spawning, wildlife habitat
		Potential:	municipal and domestic supply, cold freshwater spawning
	Merced River to Vernalis	**Existing:**	agricultural supply (irrigation, stock watering), industrial process supply, water contact recreation, canoeing and rafting, other noncontact recreation, warm freshwater habitat, warm and cold freshwater migration, warmwater spawning, wildlife habitat
		Potential:	municipal and domestic supply
Sacramento – San Joaquin Delta	N/A	**Existing:**	municipal and domestic supply, agricultural supply (irrigation, stock watering), industrial service supply, industrial process supply, hydropower generation, water contact recreation, other noncontact recreation, warm and cold freshwater habitat, warm and cold freshwater migration, warmwater spawning, wildlife habitat, navigation
		Potential:	N/A

***** Sack Dam is located in northern Fresno County; the Newman Wasteway discharges to the San Joaquin River about 0.7 mile upstream of the Merced River confluence.

Source: Central Valley Regional Water Quality Control Board 2018

In addition to the beneficial uses shown for surface waters in Table 3-9, all of Region 5's groundwaters are considered suitable (or potentially suitable) for municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply, unless they have been specifically designated otherwise by the RWQCB (Central Valley Regional Water Quality Control Board 2018).

Table 3-10 shows CWA Section 303[d]-listed water quality impairments threatening designated beneficial uses in receiving waters immediately downstream of the NCCA site and identifies the impairments for which TMDL programs are in place. Additional impairments have been listed farther downstream in the Sacramento – San Joaquin Delta, Suisun Bay, and San Francisco Bay (State Water Resources Control Board 2016) but are not discussed in detail here since the effects of input from the NCCA site (via the Newman Wasteway) would be substantially diluted by inflow from numerous additional downstream sources before reaching these more distal waters.

Table 3-10. Identified Water Quality Impairments Downstream of NCCA Site

Water Body	Reach	Pollutant	TMDLs in Place
Newman Wasteway	*N/A*	Chlorpyrifos, DDE, dissolved oxygen, fecal indicator bacteria, salinity, simazine	None
San Joaquin River	Mud Slough to Merced River*	Boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, indicator bacteria, mercury, selenium, toxicity	Chlorpyrifos, diazinon, selenium

Water Body	Reach	Pollutant	TMDLs in Place
	Merced River to Tuolumne River	Alpha-BHC, chlorpyrifos, DDE, DDT, electrical conductivity, Group A pesticides, mercury, specific conductivity, total dissolved solids, toxicity, water temperature	Chlorpyrifos
	Tuolumne River to Stanislaus River	Chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, mercury, toxicity, water temperature	Chlorpyrifos, diazinon
	Stanislaus River to Delta Boundary	Chlorpyrifos, DDE, DDT, diuron, Group A pesticides, mercury, toxaphene, toxicity, water temperature	Chlorpyrifos
Old River	San Joaquin River to Delta-Mendota Canal	Chlorpyrifos, electrical conductivity, low dissolved oxygen, total dissolved solids	Chlorpyrifos

***** The Newman Wasteway discharges to the San Joaquin River between Mud Slough and the Merced River confluence.

Key to Abbreviations:

Alpha-BHC = alpha-benzenehexachloride
Alpha-HCH = alpha-hexachlorocyclohexane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane

Source: State Water Resources Control Board 2016

Groundwater in the Delta-Mendota Subbasin, where the City and NCCA are located, shows elevated levels of nitrate, arsenic, hexavalent chromium, selenium, total dissolved solids (TDS), sulfate, chloride, and boron, which are addressed by treatment for municipal potable use. Groundwater from the Subbasin's lower aquifer also locally exhibits elevated iron, manganese, and hydrogen sulfide concentrations, and high pH and sodium adsorption ratios that can pose challenges for irrigation use (Kenneth D. Schmidt & Associates 2019).

Potential to Degrade Water Quality

Violation of Water Quality Standards

Construction Period. Construction of all four of the NCCA projects would involve substantial ground disturbance, with the potential to result in accelerated erosion and delivery of elevated sediment loading in runoff to downstream waters. Water service extension would also involve ground disturbance for trenching. If vehicle fuels or lubricants, paints, solvents, adhesives, paving media, or other substances used in construction are spilled, there would also be potential for delivery of other pollutants to offsite waters. To address this, the City has committed to an AMM for water quality protection (AMM-4,Table 2-15), which lays out requirements to control runoff, minimize the potential for spills and leaks of fuels, lubricants, and other substances, and provides for spill containment and response, among other measures.

In addition, as discussed in the *Geology & Soils* and *Hazards and Hazardous Materials* sections of this checklist, because all four of the NCCA projects would disturb an area greater than 1 acre, they would all be required to obtain authorization under the SWRCB's Construction General Permit. The Construction General Permit requires preparation and implementation of a SWPPP that identifies the best management practices (BMPs) or measures that will be implemented to control erosion, prevent spills, and contain site runoff and the monitoring measures that will be implemented to ensure that BMPs are operating effectively.

Since 2009, the Construction General Permit has used a risk-based permitting approach, with key aspects of the permit requirements based on the project's potential to generate sediment runoff and the risk additional sediment loading poses to receiving waters. Higher-risk sites are required to prepare Rain Event Action Plans (REAPs) that lay out procedures to be implemented for the protection of exposed areas in the event

precipitation is forecast as likely. This is expected to be necessary for the NCCA site. Additionally, as of 2009, the Construction General Permit specifies daily quantitative limits (numerical effluent limits or NELs) on pH and sediment content in construction site runoff, and identifies numerical action level (NAL) thresholds at which the project owner or contractor must take action to control and reduce pH and turbidity in site runoff. Since 2009, the state has required that SWPPPs be prepared and implemented by personnel meeting specific qualifications (see footnote 11 on page 3-55).

For the NCCA projects, AMM-4 and the project-specific SWPPPs are expected to effectively control offsite delivery of sediment and other pollutants during construction. AMM-4 would control offsite runoff effectively for water service extension if it is pursued as a separate phase of work.[16] With AMM-4 and project-specific SWPPPs in place, No Impact related to violation of water quality standards during construction is anticipated, and no mitigation is required.

Operations & Maintenance. Similar to construction, some O&M activities would have the potential to result in accelerated erosion, offsite siltation, and delivery of other pollutants such as fuels, lubricants, paints, and solvents offsite. However, the City will continue to require AMM-4 for all ground-disturbing O&M activities and all O&M activities involving the use of other potential pollutant substances for the lifespan of the NCCA projects. In addition, for all O&M activities, fuels, lubricants, paints, and other substances would be handled in accordance with best practices and applicable label restrictions. With AMM-4 and these additional precautions in place, No Impact related to violation of water quality standards during O&M activities is anticipated, and no mitigation is required.

Violation of Waste Discharge Requirements

Discharges of runoff from construction sites are regulated under the SWRCB's Construction General Permit, described in more detail in the *Geology & Soils* section and discussed briefly above. The Construction General Permit applies to projects disturbing 1 or more acres. All NCCA-related projects would comply with the SWRCB's requirements relative to construction General Permit coverage and compliance, as discussed in the *Geology & Soils* and *Hazards & Hazardous Materials* sections and in the previous checklist item. The following discussion focuses on potential for long-term violation of other types of WDRs relevant to the NCCA projects. Discharges from municipal separate storm sewer systems (MS4s) (i.e., storm drain systems that are separate from the municipality's sanitary sewer system, consistent with current design practices) are regulated by the SWRCB's statewide Municipal Stormwater Program, administered by the RWQCBs. As a municipality with a population of less than 100,000 the City falls under the Municipal Stormwater Program's statewide General Permit for the Discharge of Storm Water from Small MS4s. At present, City stormwater is discharged without treatment into the Miller Ditch from the pump station at the northwest corner of Canal School Road and Inyo Avenue. Discharges have consistently been in compliance with the Waste Discharge Requirements (WDRs) stipulated in the General Permit.

The quality of agricultural tailwater and runoff is controlled under the RWQCB's Irrigated Lands Regulatory Program (ILRP), which applies to all Central Valley growers, including those who do not directly discharge to waters of the state.The ILRP requires commercial irrigated lands to obtain regulatory coverage and comply with WDRs issued by the RWQCB. Currently, in addition to permits issued to individual growers, there are eight sub-regional "third-party" groups with separate WDRs specific to their location and types of operations. Growers in

[16] As noted elsewhere in this Initial Study, water service extension may be coordinated with NEWS and/or Newman Nature Park construction. If so, it would be considered as part of the "project" covered in the applicable SWPPP and would be subject to the same SWPPP requirements. If not, it would still be subject to the requirements of AMM-4 (Table 2-15), which was based on typical BMPs required in SWPPPs.

the Newman area who have not obtained individual coverage fall under the Western San Joaquin River WDRs (RWQCB Order R5-2014-0002-08, Central Valley Regional Water Quality Control Board 2014).

No WDRs specific to the NCCA parcels are currently in place. As a result, No Impact is anticipated with regard to violation of existing WDRs, and no mitigation is required.

The paragraphs that follow discuss impacts related to potential future WDRs by project.

NEWS Project. With the NEWS project in place, dryweather flow and City stormwater from events up to and including the 85th percentile, 24-hour storm would be diverted from the Miller Ditch onto the NCCA site for treatment in the NEWS constructed wetlands. Once treated, flows would be discharged back to the Miller Ditch. Based on input from RWQCB staff at the Corps Sacramento District's virtual Interagency Task Force meeting in July 2020, the City anticipates that new WDRs would need to be put in place to authorize discharge from the NEWS project to the Miller Ditch. Pollutant limitations in the new WDRs will be set at levels deemed protective of designated beneficial uses of waters downstream of the site, per regulatory requirements and standard RWQCB practices, and—if the project is funded under the SWRCB Proposition 1 stormwater grant for which the City has applied—the City will be required to monitor NEWS discharges for compliance with the WDRs.[17] If discharges are found to be out of compliance, corrective action will be required, and would be enforced by the SWRCB under the terms of the grant. With this regulatory oversight in place, the potential for impacts related to violation of future WDRs applicable to the NEWS project is expected to be Less than Significant, and no mitigation is required.

Wetland Project, Newman Nature Park. The wetland project and Newman Nature Park would not entail offsite discharges and are not expected to be subject to WDRs. Additionally, the wetland project is not expected to have a surface hydrologic connection to the NEWS project. As a result, neither the wetland project nor the Newman Nature Park would have potential to result in violation of future WDRs. There would be No Impact related to such violation, and no mitigation is required.

MDTW Project. The MDTW project is currently envisioned as discharging primarily to the central swale, where it would contribute flow to support the establishment of an expanded marsh area and quasi-riparian corridor. The central swale has no surface hydrologic connection to the Miller Ditch and downstream receiving waters and this outfall is not expected to require WDRs. However, as discussed in Section 2, the MDTW would also be equipped with an alternate outfall to the Miller Ditch to provide operational flexibility. Similar to the NEWS project, new WDRs are expected to be required for the Miller Ditch discharge, and the discharge would be subject to oversight by the RWQCB, which has the authority to enforce corrective action in the event of a violation. As described for the NEWS project above, impacts would be Less than Significant with regulatory oversight in place, and no mitigation is required. Finally, there is some potential that outflow from the MDTW could be at least intermittently diverted to the NEWS project. In this case, MDTW outflow would influence the quality of the waters discharged and could affect compliance with WDRs. However, the NEWS project would recive only treated water from the MDTW project. Consequently, diverting outflow from the MDTW to the NEWS project is not expected to have a negative effect on the NEWS project's ability to remain in compliance with future WDRs. No Impact related to violation of WDRs is anticipated, and no mitigation is required.

[17] Grant funding is considered critical to NEWS project implementation. If the project is not funded in the current granting cycle, the City anticipates applying for future grant funding that would likely have similar requirements for monitoring (and, if needed, corrective action) to ensure compliance with applicable WDRs.

Other Substantial Degradation of Water Quality

The following paragraphs discuss the water quality impacts of project construction and routine O&M activities, and impacts related to long-term effects of wetland processes at the NCCA on water quality. Analysis is separated for clarity. Discussion below focuses on topics specific to the NCCA; the NCCA projects' potential contribution to identified (303[d]-listed) impairments in downstream waters is discussed in *Cumulative Impacts* under *Mandatory Findings of Significance* at the end of the Section, since impairment rising to the level of 303[d] listing is the result of multiple inputs over time and is thus is an inherently cumulative issue.

Construction and O&M Impacts. The potential for water quality degradation as a result of construction and routine O&M activities is discussed in relation to *Violation of Water Quality Standards* above. As itemized above, all of the NCCA projects would be required to develop and implement project-specific SWPPPs to control the quality of site runoff during construction. The City has also committed to an AMM to protect water quality (AMM-4, Table 2-15), which will be in effect during construction and also during O&M for the lifespan of the NCCA projects and water service extension. With SWPPPs in place where required, and AMM-4 implemented for all NCCA undertakings, the potential for construction and O&M at the NCCA site to result in substantial degradation of water quality would be effectively controlled for all four NCCA projects and for water service extension. There would be No Impact related to substantial degradation of water quality, and no mitigation is required.

Long-Term Benefits and Impacts. The NEWS project, wetland project, and MDTW are all expected to result in direct long-term Benefits to water quality on- and offsite, and the Newman Nature Park also has the potential for long-term indirect Benefits to water quality. The NEWS, wetland, and MDTW projects also have the potential for long-term impacts on water quality as a result of natural wetland processes, including evapotranspiration-related increases in outflow salinity. Benefits and impacts are detailed for each project in the paragraphs below. Once installed the new water service extension would be entirely underground except for minor appurtenances such as valve boxes and meters, and is not expected to affect water quality either directly or indirectly, so it is not discussed further in this section.

NEWS Project. The NEWS project is proposed to treat dry-weather and stormwater runoff that is currently discharged without treatment to the Miller Ditch, Newman Wasteway, and downstream waters. As part of the preliminary design process, pollutant loads in inflow to the NEWS project, and pollutant volume reduction in the treatment wetlands, were modeled using PCSWMM 7.2, which is based on the EPA's Stormwater Management Model (EPA SWMM) and is widely used throughout the United States to estimate pollutant reduction in stormwater projects, including constructed stormwater treatment wetlands.

Dry weather base flow at the City stormwater pump station at Canal School Road and Inyo Avenue was estimated at 0.9 cubic feet per second (1.8 acre-feet/year) based on as-built record drawings for the pump station. Rainfall data, another key input, were obtained from the National Oceanic and Atmospheric Administration's rain station in the City of Modesto, about 20 miles north of the City and NCAA site, which is the closest rain station with the longest period of record. Evapotranspiration rates by month were obtained from DWR's California Irrigation Management Information System (CIMIS) Reference Evapotranspiration Zones data for Evapotranspiration Zone 14, where the NCCA site is located (RICK Engineering 2020).

Data were not available to quantify loading and reduction of all potential pollutants, so modeling concentrated on common urban and agricultural pollutants that could be reliably quantified: fecal indicator bacteria, metals (copper, lead, and zinc), nutrients (nitrites and nitrates, total phosphorus), and fine sediment (total suspended solids). Event mean concentrations for these pollutants for the various land uses in the watershed that delivers runoff to the City stormwater pump station were obtained from the National Stormwater Quality Database;

pollutant reduction values were developed using influent/effluent data from the International Stormwater BMP Database. These values were used to construct the PCSWMM continuous simulation model for the NEWS project facilities. Long-term continuous simulation results from PCSWMM were then analyzed to aggregate pollutant inflow and outflow for individual water years, in order to estimate average annual pollutant reduction (RICK Engineering 2020).

Modeling details are presented in the NEWS Project *Basis of Design Memorandum and Final Stormwater Quality Benefit Analysis* (Appendix E to this Initial Study) (RICK Engineering 2020). Tables 3-11 and 3-12 summarize modeled pollutant load reduction at the NEWS project for the 85th percentile storm event and averaged over an operational year, respectively. As shown in Table 3-11, the NEWS project is expected to remove 100% of the wet weather pollutant loading contributed by urban land uses in the City, in events up to and including the 85th percentile, 24-hour storm (RICK Engineering 2020). Average annual removal would also be 100% for the urban contribution of all pollutants modeled except for lead (90% annually). Modeling shows that the NEWS project would also remove a substantial percentage of most pollutants from agricultural land uses in the area around the City, both in storm events up to the 85th percentile, 24-hour storm and annually.

Table 3-11. NEWS Project Anticipated Pollutant Load Reduction, 85th Percentile Storm Event

Pollutant	Forebay	Wetlands	Micropool	Total	Removal by Contributing Land Use	
					Urban	Agricultural
Fecal indicator bacteria	12%	43%	17%	**72%**	100%	59%
Metals						
Copper (Cu)	45%	24%	9%	**78%**	100%	56%
Lead (Pb)	14%	46%	18%	**78%**	100%	3%
Zinc (Zn)	48%	27%	11%	**86%**	100%	51%
Nutrients						
Nitrites + nitrates	61%	22%	9%	**92%**	100%	90%
Total phosphorus	64%	18%	17%	**90%**	100%	85%
Sediment (TSS)	68%	19%	7%	**94%**	100%	92%

Source: RICK Engineering 2020

Table 3-12. NEWS Project Anticipated Pollutant Load Reduction, Annual Average

Pollutant	Forebay	Wetlands & Micropool	Removal by Contributing Land Use	
			Urban	Agricultural
Fecal indicator bacteria	7%	58%	100%	42%
Metals				
Copper (Cu)	38%	55%	100%	39%
Lead (Pb)	3%	71%	90%	< 1%
Zinc (Zn)	41%	68%	100%	23%
Nutrients				
Nitrites + nitrates	56%	75%	100%	82
Total phosphorus	59%	67%	100%	74
Sediment (TSS)	64%	79%	100%	82

Source: RICK Engineering 2020

Treated water from the NEWS project would be discharged to the Miller Ditch, which empties into the Newman Wasteway for ultimate delivery to the San Joaquin River between Mud Slough and the Merced River.[18] Reduction in levels of fecal indicator bacteria, metals, and nitrates in treated NEWS project effluent would represent an improvement in the quality of City stormwater and dry weather runoff delivered to downstream receiving waters and would support achievement of RWQCB WQOs. Reduced sediment levels would similarly support RWQCB water quality objectives for sediment and suspended material. All of these outcomes would represent direct long-term Benefits to water quality onsite and in downstream receiving waters as a result of implementing the NEWS project.

In addition to offsite discharge of treated water, modeling indicates that some 45 acre-feet per year would infiltrate into shallow groundwater via the NEWS project's unlined wetland treatment basins (RICK Engineering 2020); as discussed in Section 2, the micropool would be lined to prevent infiltration since separation between the bottom of the micropool and the shallow groundwater water table is not adequate to meet RWQCB standards. Since infiltration would occur during the treatment process, infiltrated water would not be fully treated, but its quality would still be improved by residence in the forebay and wetland ponds as well as natural filtration occuring in the substrate. NEWS project infiltration thus has the potential to improve conditions of elevated nitrate content in shallow groundwater, which is a pervasive regional problem in the western San Joaquin Valley. This is also considered a direct long-term Benefit to water quality due to the NEWS project.

Residence in the NEWS project wetland cells would likely result in a slight increase in overall water salinity, due to the reduction in volume resulting from natural evaporation and plant transpiration. Salinity increase due to evaporation is estimated at 2% (Cortez pers. comm.). Transpiration would likely account for approximately another 8%, for a total salinity increase on the order of 10%, assuming values are similar to initial model results for the MDTW project, which assumed a 20-acre project, similar to NEWS (Rodal Morales and Beutel 2020a).

Table 3-13 shows salinity data from preliminary water quality monitoring conducted by the UC Merced team near the outfall from the City stormwater pump station (vicinity of the proposed NEWS project diversion). Figure 3-5 shows the UC Merced sampling locations. Samples were collected at three relevant locations: from the Miller Ditch just upstream of the pump station outfall, from the City stormwater pump station outfall itself, and from the Miller Ditch downstream of the pump station outfall. The dataset is preliminary but gives some indication of likely input salinities in water treated by the NEWS project.

Table 3-13. NEWS Project Inflow Salinity

Date	Conditions*	Sampling Location		
		Miller Ditch U/S of PS Outfall (MD1B)	PS Input to Miller Ditch (MD2A)	Miller Ditch D/S of PS Outfall (MD2B)
09/12/2019	High flow/dry	—	—	319
09/27/2019	High flow/dry	—	—	267
10/25/2019	Low flow/dry	—	1,323	—
03/13/2020	Low flow/dry	762	—	860
03/16/2020	Low flow/wet	657	—	—
04/06/2020	Low flow/wet	783	178	—

[18] The City is also considering future diversion of a portion of treated NEWS effluent for use in reducing effluent salinity at the City's WWTP. Such a diversion would take place downstream of the NEWS outfall to the Miller Ditch. Consequently, water quality in the Miller Ditch and downstream water bodies would still receive some long-term benefit from NEWS treatment. This issue is not discussed further, since future diversions are not presently considered reasonably foreseeable. If the City moves forward with diversion of treated NEWS outflow to the WWTP at some point in the future, this would constitute a new, separate project subject to additional CEQA analysis.

Date	Conditions*	Sampling Location		
		Miller Ditch U/S of PS Outfall (MD1B)	PS Input to Miller Ditch (MD2A)	Miller Ditch D/S of PS Outfall (MD2B)
05/29/2020	Low flow/wet	856	—	1,648
06/29/2020	Low flow/dry**	547	—	1,270
07/31/2020	High flow/dry	492	—	474
09/04/2020	High flow/dry	586	—	588
10/16/2020	Low flow/dry**	808	1,580	1,633
11/23/2020	Low flow/wet	623	—	761
01/14/2021	Low flow/wet	1,338	—	1,388
1/29/21	High flow/wet	113.5	150.9	111
	Average:	***688 μS/cm***	***808 μS/cm***	***847 μS/cm***
			Annual average, all locations:	***781 μS/cm***

* Refers to flow level in Miller Ditch and ambient weather conditions.

** Flows largely diverted to adjacent pasturage during these two events.

Key to Abbreviations:

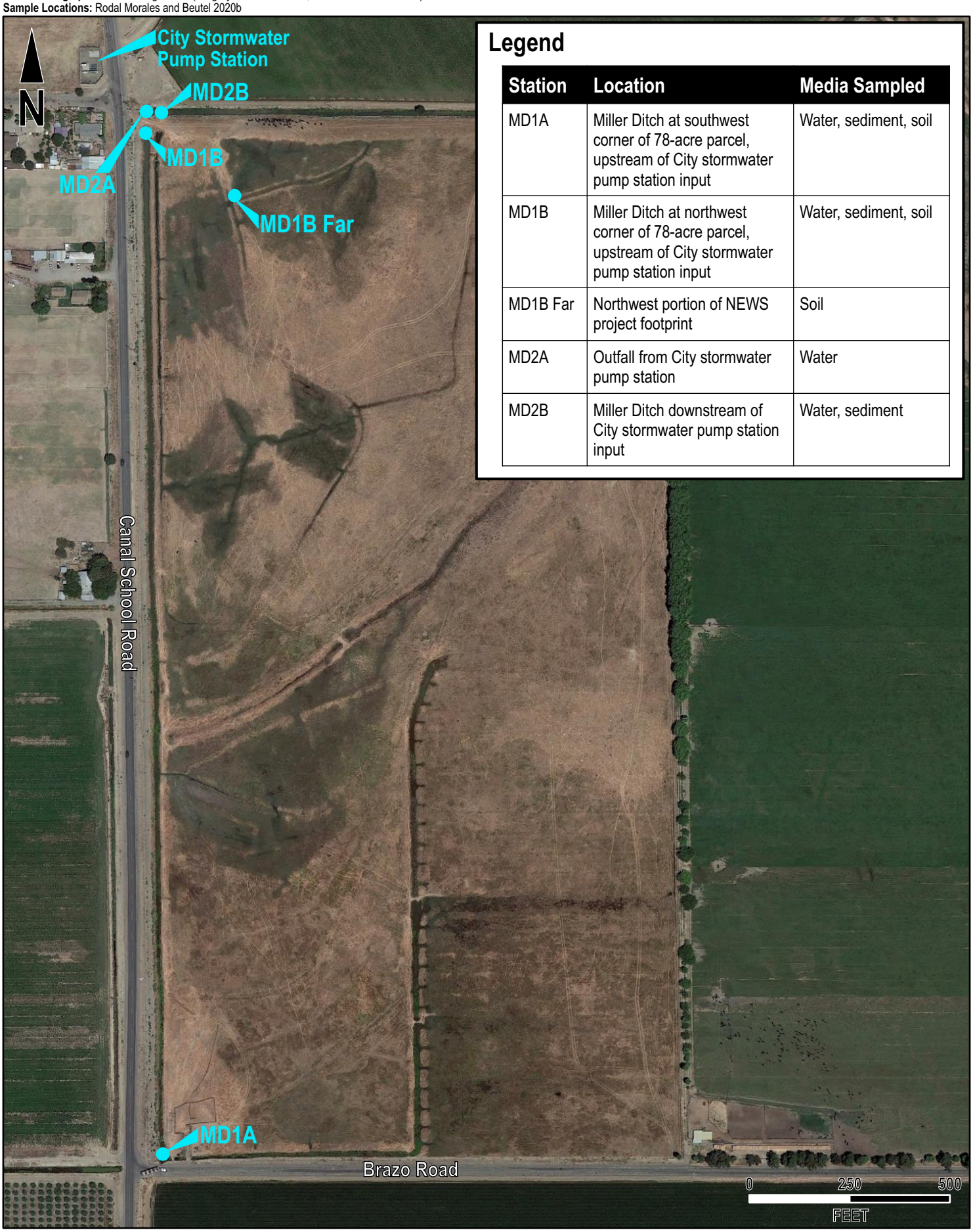
μS/cm = microSiemens per centimeter (a measure of electrical conductivity)
PS = City stormwater pump station at Canal School Road and Inyo Avenue
— = no data available
U/S = upstream
D/S = downstream
PS = City stormwater pump station at Canal School Road and Inyo Avenue

Source: Rodal Morales and Beutel 2020b, Rodal Morales pers. comm.

As Table 3-13 shows, salinity in Miller Ditch waters tends to be lower under high-flow conditions during the dry months, when flows are more influenced by input from the CCID canal (diverted for irrigation use in the late spring and summer) and less so by high-salinity groundwater. Salinity in the Miller Ditch increases at the end of the irrigation season, when CCID diversions are suspended and the influence of saline shallow groundwater becomes more important (Rodal Morales and Beutel 2020b). Peak salinities in discharge from the City's stormwater pump station (October 2019, October 2020) are attributed to a combination of low-flow conditions and dry weather, when stormwater runoff is absent and pump station throughput is dominated by agricultural runoff and shallow groundwater. Salinities in the pump station discharge are expected to be much lower in wet weather conditions when urban runoff is more volumetrically important (Beutel and Rodal Morales pers. comm.). This is supported by the much lower values reported for wet-weather sampling events at the pump station outfall (April 2020 and late January 2021).

With a maximum input salinity to the NEWS project between 1,323 microSiemens/cm (μS/cm) (maximum salinity reported in the City pump station outflow) and 1,648 μS/cm (maximum salinity measured in Miller Ditch downstream of the pump station discharge), and assuming a salinity increase of 10% within the NEWS project wetlands, maximum outflow salinities in water returned to the Miller Ditch could be on the order of 1,455 – 1,813 μS/cm. This probably represents an intermittent worst case; as discussed above, salinities appear to peak in low-flow dry months when irrigation diversions to the Miller Ditch are minimized and rainfall provides little or no dilution, and are lower during other parts of the year (Rodal Morales and Beutel 2020b). On annual average, output salinities are expected to be on the order of 859 μS/cm (10% increase from annual average input salinity of 781 μS/cm).

Aerial Photograph Source: GoogleEarth (imagery date 07/18/2019, downloaded 01/21/2021)
Sample Locations: Rodal Morales and Beutel 2020b



Legend

Station	Location	Media Sampled
MD1A	Miller Ditch at southwest corner of 78-acre parcel, upstream of City stormwater pump station input	Water, sediment, soil
MD1B	Miller Ditch at northwest corner of 78-acre parcel, upstream of City stormwater pump station input	Water, sediment, soil
MD1B Far	Northwest portion of NEWS project footprint	Soil
MD2A	Outfall from City stormwater pump station	Water
MD2B	Miller Ditch downstream of City stormwater pump station input	Water, sediment

Redtail Consulting
Environment & Community

Figure 3-5. UC Merced Sampling Locations
Newman Community Conservation Area Master Plan
City of Newman

The Basin Plan for the Central Valley Region (Central Valley Regional Water Quality Control Board 2018) did not originally establish specific numerical WQOs for salinity in the Newman Wasteway, in the San Joaquin River downstream of the Mud Slough confluence, or in area groundwaters, although WQOs have been set for Sacramento – San Joaquin Delta waters farther downstream (e.g., State Water Resources Control Board 2006, 2018), and for "special cases" outside the Delta, including portions of the upstream San Joaquin River and the Sacramento River, as well as various tributaries (Central Valley Regional Water Quality Control Board 2018).

Anticipated output salinities were therefore compared to the SWRCB's standards for salinity in drinking water—900 μS/cm recommended, with an upper limit of 1,600 μS/cm—which should be reasonably protective of most beneficial uses.[19] These thresholds are parallel with recently adopted amendments to the Basin Plan, which included WQOs for salinity in all waters designated for use as domestic or municipal supply ("MUN" designation) based on the drinking water Maximum Contaminant Levels permissible under California state law (California Code of Regulations, Title 22): 900 μS/cm (recommended) and 1,600 μS/cm (upper limit), with compliance to be based on annual average of sample results (Central Valley Regional Water Quality Control Board 2020). These thresholds are considered applicable to the Newman Wasteway, which carries the MUN designation.

Although maximum output salinities (potentially as high as 1,813 μS/cm for short periods during the warm dry months) are above the upper limit drinking water standard, the annual average output salinity projected from Table 3-13 (859 μS/cm) is below the recommended 900 μS/cm salinity level for drinking water and substantially below the upper limit salinity standard of 1,600 μS/cm. Consistent with limits established in the recently adopted Basin Plan amendments for MUN-designated waters, this is considered a Less than Significant impact, and no mitigation is required.

Wetland Project. The wetland project would not include water treatment facilities per se, but it would increase the extent and improve the quality and function of wetlands on the NCCA parcels, expanding the natural filtration function of wetland habitat at the site. Although the wetland project as currently planned would not discharge offsite, it is expected to improve the quality of water infiltrating into shallow groundwater by comparison with current conditions. Effects would likely be magnified by more stringent management of grazing at the site, which is expected to reduce fecal input to infiltrating waters. These outcomes are considered direct long-term Benefits to water quality as a result of the wetland project.

MDTW Project. The MDTW would treat currently untreated irrigation supply and agricultural tailwater from the Miller Ditch. Pollutant removal modeling recently conducted for the MDTW (Rodal Morales and Beutel 2020a, Rodal Morales and Beutel 2021, Appendix F to this Initial Study) used the P-k-C* method of Kadlec and Wallace (2009), which is a mass balance model for water and pollutant removal that assumes areal first-order removal and non-ideal flow. Modeling assumed a 15.8-acre facility and focused on key agricultural pollutants (nitrate and total phosphorus) and salinity derived from soils and/or groundwater. Miller Ditch flow and water quality input values were derived from preliminary monitoring conducted at the NCCA site in 2019 – 2020 (Rodal Morales and Beutel 2020b, Rodal Morales et al. 2020; see Appendix F).

Results of pollutant removal modeling are summarized in Table 3-14 and detailed in the UC Merced team's recent Hydrology Mass Balance and Pollutant Removal Modeling memorandum and a subsequent update

[19] The current Basin Plan for the Central Valley Region (Central Valley Regional Water Quality Control Board 2018) references the 2006 Basin Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary system (State Water Resources Control Board 2006) relative to salinity limits for Delta waters. SWRCB drinking water standards were used as a basis to evaluate project impacts here because they provide a straightforward means to assess and contextualize impacts on immediate downstream waters by comparison with existing conditions; this is discussed further under *Cumulative Impacts* in *Mandatory Findings of Significance* below (see Table 3-23).

(Rodal Morales and Beutel 2020a, 2021; Appendix F to this Initial Study). Substantial decreases in nitrate and total phosphorus concentrations are anticipated, while salinity would increase slightly due to reduction in water volume as a result of evaporation and plant transpiration.

Table 3-14. MDTW Project Anticipated Pollutant Load Reduction

Pollutant	Inflow Concentration	Outflow Concentration	% Change
Nitrate	2.03 mg/l*	0.75 mg/l	63% decrease
Total phosphorus	0.31 mg/l	0.15 mg/l	52% decrease
Salinity	711 mS/cm*	800 mS/cm	13% increase

* mg/l = milligrams per liter
** µS/cm = microSiemens per centimeter (a measure of electrical conductivity)

Source: Rodal Morales and Beutel 2021

Treated water from the MDTW would primarily be discharged to the central swale to support the expanded marsh and quasi-riparian corridor created by the wetland project, although an alternate outfall to the Miller Ditch would be provided to enable operational flexibility. Retaining some or all MDTW effluent onsite in the central swale would allow infiltration into shallow groundwater, helping to reduce nitrate levels, which have historically been high due to agricultural input; note that infiltration is not anticipated via the MDTW's wetland cells, since they would be lined to promote retention and increase treatment effectiveness. To the extent that MDTW effluent returns to the Miller Ditch (and ultimately the Newman Wasteway and San Joaquin River), reduction in nitrate and total phosporus levels would also accrue to these downstream waters, although some infiltration would also occur via unlined channel inverts. All of these outcomes represent direct long-term Benefits to water quality as a result of the MDTW project.

The increase in salinity in treated MDTW effluent would also affect shallow groundwater and/or downstream waters, depending on where the effluent is discharged. In consideration of the SWRCB's standards for salinity in drinking water and recently adopted Basin Plan limits for salinity in MUN-designated waters—900 µS/cm recommended, with an upper limit of 1,600 µS/cm—this is considered a Less than Significant impact: the increase would be small (~13%) and treated effluent would still be well below both the recommended and upper-limit standards for potable water use and the corresponding Basin Plan limits. No mitigation is required.

Newman Nature Park. The Newman Nature Park would not provide for water quality treatment per se, but it would include various public education components related to watershed health, water quality issues, "natural" water quality treatment via wetland processes, and water conservation options, including native plant gardening, rainwise gardening, and rainwater capture and reuse. As such, although it would not directly benefit water quality, the Nature Park would increase public awareness of water quality issues and provide tools that can be used at area homes and businesses. This is considered an indirect long-term Benefit to area water quality.

Potential to Impede Sustainable Groundwater Management

Construction Period. Construction of each of the NCCA projects and the water service extension would involve some use of water. This would include water used to control fugitive dust during excavation, grading, trenching, and recontouring as well as small-scale short-term use at the NEWS project and MDTW project in the concrete mix used to create the hardscape pads in the forebays. Water is expected to come from the City's municipal supply, which relies exclusively on groundwater. However, construction use for each of the NCCA projects would be limited, temporary, and short-term, similar to the demand for other land development projects of commensurate extent, and the demand projections used in the City's water supply planning factor in typical

construction use in addition to domestic, municipal, agricultural, and industrial consumption. In this context, construction-related use of City groundwater supply for the NCCA projects is not expected to impede sustainable groundwater management. There would be No Impact, and no mitigation is required.

Post-Construction Vegetation Establishment Period. Establishment of plantings at the NEWS, wetland, and MDTW projects could require at least intermittent watering during the first few years following construction of each project, particularly if the establishment period for any of the projects falls during particularly dry and/or hot years. As discussed in Section 2, the existing well onsite is planned for destruction per County requirements, and would not be used for irrigation. Irrigation during the vegetation establishment period is expected to rely on either Miller Ditch water or City municipal groundwater supply. Hand watering may be used, or water-efficient temporary irrigation may be provided. Like construction use, post-construction irrigation consumption would be limited, temporary, and short-term, and is expected to be well within the City's supply capacity if City water is used. No Impact related to impedance of sustainable groundwater management is anticipated, and no mitigation is required.

Operations & Maintenance. Two factors are relevant in considering long-term potential to deplete groundwater supply or impede sustainable groundwater management: groundwater consumption and the potential to impede groundwater recharge. They are addressed separately in the paragraphs that follow.

Groundwater Consumption. Some O&M activities would require intermittent, short-term use of City groundwater supply, such as cleaning the trash capture device at the NEWS project and restroom cleaning and occasional wash-down of common spaces in the Newman Nature Park community facilities area. This is expected to be well within City supply capacity; City water supply planning takes municipal O&M use into account. O&M use of City groundwater supply is therefore not expected to substantially decrease groundwater supplies or otherwise impede sustainable groundwater management. There would be No Impact, and no mitigation is required.

Once plantings become established, no irrigation would be provided for the wetland or MDTW projects. At the NEWS project, water-efficient drip or rotor/rotator overhead spray irrigation using City groundwater supply would be provided during the vegetation establishment period immediately following planting, along Canal School Road, on the basin slopes, and in the gateway planting areas. Long-term irrigation would be provided only for the gateway area but is not expected to be necessary in other portions of the NEWS project footprint. Irrigation at the NEWS project is not expected to exceed maximum applied water allowances dictated by California's Model Water Efficient Landscape Ordinance[20] (MWELO).

Demonstration gardens and landscaping at the Newman Nature Park would also be equipped with water-conserving irrigation meeting MWELO standards. The irrigation system for the demonstration gardens would likely use a variety of delivery methods depending on the application, size of the area receiving irrigation, and the plants or plant communities being irrigated. Some areas would use a drip delivery system to demonstrate this method at a residential scale. Other areas may use a water-efficient spray system; this would be appropriate where a larger area needs to be covered and where drip irrigation could present a long-term maintenance concern. The irrigation system controller would include a weather sensor to override the automatic watering schedule when it rains. Landscape areas, and possibly other plantings as well, would be designed for temporary establishment irrigation, which would be removed or turned off once the drought-tolerant native

[20] The Model Water Efficient Landscape Ordinance, originally enacted in 1993 and updated in 2015 at the height of California's most recent drought, is a state regulation intended to prevent wasteful use of water for landscape irrigation. It requires cities and counties to enforce landscaping water efficiency standards for all projects that are subject to permit, plan check, or design review and have landscaped areas of 500 square feet or more (California Department of Water Resources 2020c, 2020d).

plantings are fully established. Additionally, where small areas of impervious surface are used, they would be graded to drain toward plantings to avoid water waste and further demonstrate rainwater capture techniques.

Irrigation use at municipal facilities is also factored into City water supply planning. Irrigation use at the NCCA would be limited, would meet MWELO standards, and is expected to be within City supply capacity. It is therefore not expected to substantially decrease groundwater supplies or otherwise impede sustainable groundwater management. There would be No Impact related to irrigation use, and no mitigation is required.

Impedance of Groundwater Recharge. Average net recharge to the Delta-Mendota Subbasin is estimated at 147,000 acre-feet per year (AFY). Primary sources of recharge include infiltration of irrigation water, seepage through the unlined inverts of ditches and canals, direct infiltration of rainfall, and groundwater recharge and recovery projects undertaken by local agencies, such as the Los Banos Creek Recharge and Recovery Project, Orestimba Creek Recharge and Recovery Project, BB Limited Recharge Project, and Farmers Water District Recharge Project. Recharge is currently exceeding withdrawals in the Subbasin (San Joaquin River Exchange Contractors GSP Group 2019a).

The NCCA site's current contribution to recharge is not quantified. However, the NCCA parcels are assumed to be contributing to recharge due to seasonal flood irrigation and the permeability of soils at the site. Increased extent and duration of ponding at the site by comparison with current conditions would increase recharge; addition of impermeable surfaces would impede recharge.[21]

Anticipated impacts by project are summarized below.

- The NEWS project would increase duration and extent of ponding at the NCCA site and would also add small areas of impermeable surface to the 78-acre parcel, comprising the 0.79-acre concrete pad in the forebay and the lined 2.2-acre micropool. Table 3-15 summarizes permeable wetland losses and gains in the NEWS project footprint. Wetland gains include the portion of the forebay that would not be hardscaped (calculated as 2.5 acres less the 0.79-acre footprint of the concrete pad), but do not include the lined 2.2-acre micropool.

  Table 3-15. Wetland Loss and Gain at NEWS Project[22]

Habitat Type	Loss	Gain*	Net Change
Seasonal wetland	1.909	9.71	+8.620
Ditch	0.002	0.0	-0.002
Total	***1.911***	***9.71***	***+8.618***

Note: Wetland gains do not include hardscaped portion of forebay area.

Source: Poisson pers. comm.

  As a result of increased wetland acreage and extended ponding, the NEWS project is modeled to result in approximately 45 AFY of infiltration (RICK Engineering 2020). Impacts, if any, on groundwater

[21] Extension of water service would not add new areas of impermeable surface since the new water service would either follow Canal School Road and Brazo Road to the site (in an alignment that is already paved), or would be installed along the north and east boundaries of the 78-acre parcel where it would be in a subsurface trench with permeable fill and no paving. Accordingly, water service extension is not discussed further in this item.

[22] As discussed in *Potential for Adverse Effects on Protected Wetlands* under *IV. Biological Resources*, all wetland disturbance and loss would be compensated consistent with resource agency permit conditions, consistent with regulatory requirements.

recharge are expected to be Less than Significant, and NEWS project infiltration is expected to represent a small Benefit by comparison with current conditions. No mitigation is required.

- Infiltration due to the wetland project has not been modeled but is also expected to increase. This is largely due to the expansion and improvement of perennially ponded marsh within the central swale, where a total 6.04 acres of emergent marsh habitat would be reestablished and the existing 1.406 acres would be enhanced, relying first on Miller Ditch diversions and then on MDTW outflow to provide for sustained ponding. Flood irrigation would be discontinued, and ponding duration would decrease substantially, where 3.8 acres of ephemeral wetlands are planned for enhancement on the southeast portion of the 24-acre parcel. However, the decrease in infiltration due to these changes should be offset by increased infiltration via the enhanced swale area. Impacts on groundwater recharge, if any, would be Less than Significant, with an overall minor Benefit anticipated. No mitigation is required.
- At 15.8 acres in total, the MDTW project would add about 15 acres of impermeable surface to the 78-acre parcel, representing the extent of the lined wetland cells. However, treated water from the MDTW project would primarily be diverted into the central swale, where infiltration would occur; alternate diversions to the Miller Ditch would also enable infiltration through the unlined channel invert. Consequently, the net loss to infiltration, if any, would be minor, and is considered Less than Significant. No mitigation is required.
- The Newman Nature Park would also add a small area of impermeable surface to the 78-acre parcel, due to the concrete pad at the shade structure. This is expected to be offset by capture and infiltration of runoff from all hardscaped areas at the project, including the shade structure area as well as areas surfaced by permeable hardscape media. Impacts of the Newman Nature Park on groundwater recharge, if any, are therefore considered Less than Significant. No mitigation is required.

Potential to Alter Existing Drainage Patterns

Increased Erosion or Siltation

Construction Period. As discussed above, ground disturbance during construction of each of the NCCA projects and the water service extension would have some potential to accelerate localized soil erosion and offsite delivery of sediment, but because of the extent of ground disturbance, all of the NCCA projects would be required to develop and implement project-specific SWPPPs as well as implementing the City's adopted AMM for habitat and water quality protection (AMM-4, Table 2-15). Water service extension may be included in one or more of the NCCA project SWPPPs, depending on the timing of construction, but in any case would be subject to AMM-4. With these requirements in place, all of the undertakings' potential to result in impacts related to increased erosion and siltation during construction would be Less than Significant. No mitigation is required.

Operations & Maintenance. AMM-4 would continue to be required for ground disturbance during O&M at all four NCCA projects. With AMM-4 in place, long-term potential for ground-disturbing O&M activities to result in impacts related to increased erosion and siltation is also expected to be Less than Significant. No mitigation is required.

Water service extension would not result in long-term modifications to surface water flow or drainage, since it would be entirely underground. It would have No Impact over the long term, and no mitigation is required.

By design, however, the NCCA projects would modify surface water flow and drainage at the site, as detailed in Section 2 and summarized below.

- The NEWS project would divert untreated dry weather flow and storm runoff from the Miller Ditch, distribute it through a series of wetland areas for treatment by natural wetland processes, and return it to the Miller Ditch. A key aspect of NEWS project treatment would be ponding in the forebay to enable sediment settlement. Additional settlement of the finest sediment fraction would occur in the wetland areas and micropool prior to discharge back to the Miller Ditch. By retaining water onsite and allowing sediment to settle in the forebay and treatment wetlands, the NEWS project would reduce sediment loading in the Miller Ditch; since water moving through the NEWS project would be contained within wetland areas configured for passive flow, offsite runoff would also be reduced. The NEWS project would have No Impact related to long-term increases in offsite siltation, and is expected to result in a substantial Benefit to offsite/downstream delivery of sediment load. No mitigation is required.

  The NEWS project, by design, would increase onsite siltation (sediment settling), as an aspect of the water treatment process. The location of siltation would be confined by wetland basin design, with the majority of settlement occurring in the forebay; only the finest-grained portions of the suspended sediment load would be expected to move beyond the forebay into the wetland areas. Accumulated sediment would be periodically removed from the forebay to maintain ponding and settlement capacity, as described in Section 2 of this Initial Study. In this context, increased onsite siltation at the NEWS project is considered a Less than Significant impact. No mitigation is required.

- The wetland project would not deliver flows offsite, due to project design; thus, over the long term, it would have No Impact related to increased offsite siltation. No mitigation is required.

  Minor sediment mobility may occur within the wetland project over the long term, particularly during larger storm events and wetter winters, analogous to a natural wetland system. Because this is inherent in the project design, and is specifically intended to replicate natural processes, any such mobility is considered a Less than Significant impact, particularly as flows would not be delivered to offsite receiving waters. No mitigation is required.

- The MDTW project would divert water from the Miller Ditch for treatment in vegetated wetland cells, and would primarily discharge treated water onsite, to the central swale, with an alternate discharge to the Miller Ditch. As described for the NEWS project, a key aspect of water treatment at the MDTW would be ponding in the forebay area to enable sediment settlement. Additional settlement of fine suspended load would occur in the wetland areas. As a result, similar to the NEWS project, the MDTW project would have No Impact related to long-term increases in offsite siltation, and could result in a Benefit to sediment loading in the Miller Ditch to the extent that treated flows are returned to the Ditch. Also similar to the NEWS project, the increase in sediment accumulation at the MDTW is a feature of the project's design, and is specifically intended to benefit water quality. In this context, although the MDTW project would increase onsite siltation (sediment accumulation), this impact is considered Less than Significant. No mitigation is required.

- The Newman Nature Park would incorporate features to prevent offsite runoff, such as the use of permeable surfaces graded to drain to vegetated planting areas. No Impact related to increased on-or offsite siltation is anticipated as a result of the Newman Nature Park, and no mitigation is required.

Increased Runoff Leading to Flooding

As described in the previous item, the NEWS and MDTW projects would recontour the site to contain, manage, and treat water diverted from the Miller Ditch; if anything, these projects would reduce uncontrolled offsite runoff. Additionally, because some of the diverted flow would infiltrate into the subsurface through the bottoms of unlined wetland areas (NEWS project) and the central swale (MDTW project), the flow volume returned to the

Miller Ditch would be less than that originally diverted. The NEWS and MDTW projects would thus have no potential to result in a long-term increase in offsite flood hazards. There would be No Impact, and no mitigation is required.

The wetland project would also be configured to retain flows onsite, where they would contribute to wetland development. It would not deliver flows offsite, and would therefore have no potential to increase offsite flood hazards. There would be No Impact, and no mitigation is required.

At the Newman Nature Park, the footprints of structures such as the restrooms and O&M storage building would slightly decrease total infiltration at the site and could slightly increase runoff. There would also be a small area of concrete beneath the shade structure. However, the project would rely on permeable surfaces such as DG and permeable pavers to the extent feasible, and, as discussed in the previous item, hardscape areas would be graded to drain to vegetated swales and planters, to enable infiltration. No Impact related to increase in offsite flood hazards is anticipated as a result of the Newman Nature Park, and no mitigation is required.

Extension of water service would not add new areas of impermeable surface, since it would either follow Canal School Road and Brazo Road to the site, within an alignment that is already paved, or would be installed along the north and east boundaries of the 78-acre parcel where it would be in a subsurface trench with permeable fill and no paving. Water service extension would therefore have No Impact related to increase in offsite flood hazards, and no mitigation is required.

Exceedance of Stormwater Drainage Capacity

As described in the previous items and in more detail in Section 2, neither the NCCA projects nor the planned water service extension would add impermeable hardscape to the site, except for the concrete pad in the proximal portion of the NEWS project forebay and a similar hardscaped area in the MDTW forebay, which would be necessary to facilitate periodic sediment removal, and both of which would be within bermed forebay areas that drain only to onsite wetlands. Hardscape used in the Newman Nature Park would be permeable treatments wherever this is feasible, and hardscaped areas would be graded to drain to vegetated swales/planter areas. As a result, none of the projects would increase storm runoff from the site. On the contrary, the NEWS project would reduce the amount of storm runoff delivered to the Miller Ditch by about 45 AFY due to infiltration in the wetland areas, and the wetland project would result in more efficient and beneficial management of storm runoff within the site, potentially also reducing overland runoff to the Miller Ditch. As a result, No Impact is anticipated with regard to exceedance of stormwater drainage capacity as a result of any of the projects, and there could be a Benefit to stormwater management as a result of the NEWS and wetland projects. No mitigation is required.

Additionally, by increasing public awareness of rainwise gardening techniques, the Newman Nature Park could increase rain capture and reuse in the community as a whole, potentially resulting in overall reduction of storm runoff from the City as a whole over the long term. This is not quantifiable at the present time, but is considered a potential long-term Benefit with regard to stormwater drainage capacity.

New Sources of Polluted Runoff

The NCCA projects would all minimize the use of impervious surfaces to the extent feasible. New areas of impervious surface would include the concrete apron in the NEWS project forebay, the comparatively small footprint of the NEWS project micropool (approximately 2.2 acres), which would be lined to prevent infiltration into the shallow groundwater table, and small areas of concrete or similar hardscape at the Newman Nature Park, such as the shade structure foundation and ADA parking stalls. Because the NEWS and wetland projects would be configured to create ponding onsite, these features would not increase runoff from the site. The MDTW project would also include a concrete apron in the proximal forebay area, and its wetland areas would be

lined to increase retention times. However, the primary discharge from the MDTW would flow to the central swale, which is bermed and does not drain offsite. An alternate outfall would allow diversion of MDTW discharge to the Miller Ditch, but this would be treated water rather than untreated stormwater runoff. Hardscape areas at the Newman Nature Park would be graded to drain toward adjacent planted areas to maximize rainwater capture and infiltration and avoid uncontrolled runoff.

O&M at all of the projects would have the potential to generate silt as a result of ground disturbance, and would use potential pollutants such as fuels, lubricants, paints, and solvents, but the potential for release and offsite delivery of these substances would be effectively addressed by the requirement for continued implementation of AMM-4 (see Table 2-15) throughout the lifespan of the NCCA.

With AMM-4 in place, and considering the configuration of the four NCCA projects, none of the projects is expected to result in new sources of polluted runoff entering downstream waters. There would be No Impact, and no mitigation is required.

Impedance or Redirection of Floodflows

Flood hazard mapping issued by the Federal Emergency Management Agency (2020) shows the NCCA site within Zone A, which is defined as the area subject to inundation by the 1%-annual-chance flood event, commonly referred to as the 100-year floodplain. The site is also within the dam failure inundation zone for San Luis Dam (County of Stanislaus 2015), located about 17 miles to the south-southwest.

- The NEWS project would reconfigure the northwest quadrant of the 78-acre parcel to create constructed wetland basins. The only above-grade features included in the NEWS project would be fencing to provide for public safety, and the small pump station that may be added in the future to enable drawdown of the micropool for maintenance. Fencing would be split rail–type and would not present a substantial obstacle to floodflows. The pump station would be very small (approximately 10 feet by 10 feet). While this small facility could impede or redirect floodflows on a very localized basis, the NCCA site is surrounded by nearly flat, low-lying agricultural lands with only a few, widely scattered structures. Floodflows locally diverted or impeded by the pump station would be able to disperse essentially unimpeded into adjacent areas, and are not expected to place other properties at substantially increased risk. Impacts related to impedance and redirection of floodflows are thus considered Less than Significant, and no mitigation is required.

- The wetland project would modify topography and hydrology to increase the extent and quality of wetlands but would not install new above-grade structures of any kind. If fencing is used to protect the new wetland areas from grazing damage during establishment, it is expected to be barb-wire or similar and would not substantially impede or redirect floodflows. From the perspective of floodflow management, the most substantial change as a result of the wetland project is expected to be expansion of the marsh area in the central swale, and reestablishment/expansion of the surface hydraulic connection between the central swale and the southwest portion of the 78-acre parcel, which if anything would increase the 78-acre parcel's ability to accommodate floodflows. No Impact is anticipated, and impacts could be Beneficial. No mitigation is required.

- The MDTW project would construct wetland treatment basins in the southwest quadrant of the 78-acre parcel but would not install new above-grade structures of any kind, with the possible exception of split-rail or similar fencing and informational signage, which would have very little potential to impede or redirect floodflows. No Impact related to impedance or redirection of floodflows is anticipated, and no mitigation is required.

- The Newman Nature Park would add several new structures and other above-grade features to the site, primarily in the community facilities area in the southeast quadrant of the 78-acre parcel (Figure 1-2, Figure 2-7). These would include a community plaza area, restrooms, an O&M storage area, picnic facilities, outdoor learning areas, and raised beds for some of the native plant and rainwise gardening demonstrations. The presence of new above-grade structures and facilities would have some potential to redirect floodflows and could result in minor localized impedance of flow. However, with the exception of the restroom building and O&M storage, the new structures would be open to the elements and therefore would not create substantial obstructions to floodflows. Moreover, as identified above, the NCCA site is surrounded by nearly flat, low-lying agricultural lands with only a few, widely scattered structures. As with the NEWS project pump station, floodflows locally diverted or impeded by the new structures associated with the Newman Nature Park would be able to disperse relatively unimpeded, and are not expected to place other properties at substantially increased risk. Impacts related to impedance and redirection of floodflows are thus considered Less than Significant, and no mitigation is required.

Potential for Release of Pollutants Due to Flood, Tsunami, or Seiche Inundation

Tsunami refers to a wave or series of waves caused by disturbance of the sea floor by an earthquake, a subsea landslide, or a subsea volcanic eruption. As such, tsunamis are a coastal hazard. A *seiche* is an oscillatory ("sloshing") wave in an enclosed body of water, caused by earthquake shaking or winds from a severe storm front.

The NCCA site is located in an inland valley and thus is not at risk of tsunami inundation (California Geological Survey 2019). The nearest enclosed body of water potentially subject to seiche hazard is San Luis Reservoir, located along Highway 152 about 17 miles south-southwest of the NCCA site. Because of its distance from the reservoir, the NCCA site is not considered to be at substantial risk of seiche inundation. No Impact with regard to either tsunami or seiche inundation is anticipated, and no mitigation is required.

As discussed above, the NCCA site is within the 100-year floodplain and also within the dam failure inundation zone for San Luis Dam. However, the City does not intend to store potential pollutants on the site. As a result, No Impact related to release of pollutants in the event of a flood is anticipated. No mitigation is required.

Potential to Conflict with or Obstruct a Water Quality Control or Groundwater Management Plan

Water Quality Control Plan

The RWQCB oversees water quality in the project region, pursuant to California's Porter-Cologne Water Quality Control Act and the federal Clean Water Act. As of the preparation of this Initial Study, the guiding document is the *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region, Fifth Edition* (Central Valley Regional Water Quality Control Board 2018).

Construction Impacts. As discussed above, ground disturbance during construction of each of the NCCA projects and the planned water service extension would have some potential to degrade water quality through accelerated erosion and delivery of sediment to offsite receiving waters. Accidental releases or discharges of pollutants such as vehicle and equipment fuels and lubricants are also possible during construction. However, as previous items discuss, the City has committed to an AMM with measures to protect water quality (AMM-4, Table 2-15), and all four of the NCCA projects are also expected to develop and implement project-specific SWPPPs as a condition for authorization under the SWRCB's statewide Construction General Permit. With AMM-4 and, where applicable, additional SWPPP requirements in place, the potential for adverse impacts on water quality during construction would be controlled consistent with applicable regulatory requirements and

construction best practices. There would be No Impact related to conflict with or obstruction of the Basin Plan as a result of construction, and no mitigation is required.

Long-Term Impacts. O&M at the NCCA site would also have some potential to result in delivery of sediment and/or pollutant substances to downstream waters, similar to construction but more limited due to the restricted extent of O&M activities. However, AMM-4 will remain in effect for O&M throughout the lifespan of the NCCA projects. With AMM-4 in force, the potential for adverse effects on water quality as a result of O&M would be controlled in accordance with construction best practices. There would be No Impact related to conflict with or obstruction of the Basin Plan as a result of O&M, and no mitigation is required.

Long-Term Benefits. As discussed in *Other Substantial Degradation of Water Quality* under *Potential to Degrade Water Quality* above, the NEWS project, wetland project, and MDTW project are all expected to result in long-term direct Benefits to water quality, and the Newman Nature Park has the potential for long-term indirect Benefits to water quality. All of these outcomes would be supportive of Basin Plan goals and policies and are considered Benefits to Basin Plan implementation.

Groundwater Management Plan

California's Sustainable Groundwater Management Act of 2014 requires the formation of Groundwater Sustainability Agencies (GSAs) to manage withdrawals from medium- and high-priority groundwater basins at sustainable levels (California Department of Water Resources 2020a). California's groundwater basins are prioritized for management based on the overlying population, the projected rate of population growth, the number of public and other wells that draw water from the basin, the importance of groundwater as a primary source of supply, and documented impacts on the basin such as overdraft, ground subsidence, and saline intrusion (California Water Code Section Section 10933). The City and surrounding area, including the NCCA site, overlie the Delta-Mendota Groundwater Subbasin of the San Joaquin River Groundwater Basin. The Delta-Mendota Subbasin is considered a high-priority basin, and as of 2016 was identified as a critically overdrafted basin by the state Department of Water Resources (City of Newman 2016).

If multiple GSAs are active within a basin, they must coordinate their efforts. The City serves as the GSA within City limits, and also participates in regional groundwater management planning as a member of the San Joaquin River Exchange Contractors (SJREC) Groundwater Sustainability Planning (GSP) group, along with the Cities of Gustine, Los Banos, Dos Palos, Firebaugh, and Mendota and the Counties of Merced, Madera, and Fresno. The relevant regional groundwater management plan is the *Groundwater Sustainability Plan for the San Joaquin River Exchange Contractors GSP Group* (San Joaquin River Exchange Contractors GSP Group 2019a), inclusive of Appendix Q (San Joaquin River Exchange Contractors GSP Group 2019b), which is specific to conditions in the City of Newman.

In addition to the requirements of the Sustainable Groundwater Management Act, California's Urban Water Management Planning Act requires municipal water suppliers that serve more than 3,000 AFY, or serve more than 3,000 urban connections, to prepare an Urban Water Management Plan (UWMP) every 5 years. The UWMP must assess the reliability of the supplier's water sources over a 20-year planning window, identify demand management measures and water shortage contingency plans (including existing and planned uses of recycled water), and report on progress toward meeting the statewide demand reduction target (20% reduction in per-capita urban water consumption by 2020) (California Department of Water Resources 2020b). The City's UWMP was most recently updated in 2016. Although it is a long-term goal to add surface water to its water supply, the City presently derives all of its water supply from groundwater and addition of surface water to the supply portfolio is not considered cost-feasible. Direct use of recycled water within City limits is also cost-infeasible at present (City of Newman 2016). In this context, the City's UWMP—which focuses on existing

groundwater supply and includes demand management measures as required by the Urban Water Management Planning Act—can also be considered a groundwater management plan.

As of 2015, the City had already met both its 2015 interim target and its 2020 confirmed target for water use reduction by substantial margins, as shown in the table below.

Table 3-16. City Water Use Reduction Targets and Recent Per-Capita Water Use

10-Year Baseline Water Use	2015 Interim Use Reduction Target	2020 Confirmed Use Reduction Target	2015 Per-Capita Water Use
239 gallons/person/day	215 gallons/person/day	191 gallons/person/day	**158 gallons/person/day**

Source: City of Newman 2016

Short- and Long-Term Impacts. As discussed above, although it is a long-term goal to add surface water to the supply portfolio (City of Newman 2016), the City presently derives all of its water supply from groundwater. Consequently, in the near term and reasonably foreseeable future, all use of City water supply for the NCCA projects would represent use of groundwater. That said, none of the NCCA projects would be heavily reliant on City water supply, as discussed in the following paragraphs.

- During construction, the NEWS project would use City water supply to control dust generated by grading to create the forebay, wetland areas, and micropool; in compacting fill to meet design specifications; in constructing the concrete pad in the proximal forebay area; and for other incidental uses on the work site. Construction use for the NEWS project would be temporary and short-term and water demand would be similar to the demand for other development projects of commensurate extent, or possibly lower, because comparatively less hardscape would be used than for urban development. Additionally, demand projections used in City groundwater management planning factor in not only domestic use but also typical construction, municipal, agricultural, and industrial consumption. In this context, use of groundwater for NEWS construction is within the scope of both regional and City groundwater use planning and is not considered to be in conflict with sustainable groundwater management planning. Moreover, development of a stormwater treatment facility at the NEWS site is called out as a planned future project in the City's UWMP (City of Newman 2016); NEWS project construction is therefore explicitly consistent with the UWMP. There would be No Impact with regard to conflict with or impedance of a groundwater management plan during construction, and no mitigation is required.

  Following construction, hand watering may be required to ensure establishment of plantings in the wetland areas. This would be restricted to the dry season, and would typically continue for only a few years. Water used during the establishment period could be diverted from the Miller Ditch; alternately, City water supply may be used. Miller Ditch supply is currently used for flood irrigation on the 78-acre parcel, and hand watering would be expected to use a reduced volume. If City supply is used, similar to construction usage, the demand for short-term hand watering is considered to be within the scope of the City's water use planning, which accounts for municipal O&M use. Thus under either scenario, there would be No Impact with regard to conflict with or impedance of a groundwater management plan during the establishment period, and no mitigation is required.

  Over the long term, the NEWS project would use City supply only for water-efficient, MWELO-compliant irrigation in the gateway area. Intermittent minor use of City water could also be necessary for various O&M activities such as cleaning the trash capture device. However, as identified above, the NEWS project is identified as a planned future project in the City's current UWMP (City of Newman 2016);

operation of the NEWS project is thus considered consistent with the UWMP. There would be No Impact over the long term with regard to conflict with or impedance of a groundwater management plan during the establishment period, and no mitigation is required.

- Like the NEWS project, the **wetland project** would likely make minor use of water to control dust during grading and recontouring for wetland enhancement, and would probably also continue to use small amounts of water—either Miller Ditch diversions or City supply—for hand watering during the vegetation establishment period. The demand during construction would be comparatively small, and would be restricted to the short period (estimated at approximately 1 month) when active earthwork is occuring. Hand watering would be restricted to the dry season and is not expected to continue for more than 3 – 5 years. As such, both construction and establishment period use of City ground water supply is within the scope of consumption used in City groundwater management planning and is considered consistent with such planning. There would be No Impact with regard to conflict with or impedance of a groundwater management plan during the construction and vegetation establishment periods, and no mitigation is required.

  Once the new plantings become established they would be self-sustaining under the natural rainfall regime and with first Miller Ditch and then MDTW flows supporting the expanded marsh area. As a result, following the establishment period, no further use of City groundwater supply is anticipated for the wetland project. There would thus be No Impact with regard to conflict with or impedance of a groundwater management plan over the long term, and no mitigation is required.

- Construction and establishment period use of City water for the **MDTW project** would be similar to that described above for the NEWS project, given the generally similar nature and areal extent of the two projects. Following the vegetation establishment period, the MDTW project is not expected to use water for irrigation although minor, intermittent use of City water could be required for some O&M activities, as it would at the NEWS project. As discussed for the NEWS project, all of these uses are considered consistent with both the City's UWMP (City of Newman 2016) and the regional Groundwater Sustainability Plan (San Joaquin River Exchange Contractors GSP Group 2019a, 2019b). There would be No Impact with regard to conflict with or impedance of a groundwater management plan, and no mitigation is required.

- Like the other three NCCA projects, the **Newman Nature Park** would use water for construction. As discussed above for the NEWS and MDTW projects, use of City water for Nature Park construction would be short-term and temporary, and within the scope of construction activities factored into City groundwater management planning. It is therefore considered consistent with both City's UWMP (City of Newman 2016) and the regional Groundwater Sustainability Plan (San Joaquin River Exchange Contractors GSP Group 2019a, 2019b). There would be No Impact with regard to conflict with or impedance of a groundwater management plan during construction, and no mitigation is required.

  Once the Newman Nature Park is operational, use of City water would continue for the hydration station, the hand-washing station, the classroom area sink, water efficient MWELO-compliant irrigation for the demonstration gardens, and incidental O&M uses. This type of municipal water consumption for O&M at public facilities is also taken into account in City groundwater management planning and is therefore considered consistent with both the City's UWMP (City of Newman 2016) and the regional Groundwater Sustainability Plan (San Joaquin River Exchange Contractors GSP Group 2019a, 2019b). There would be No Impact with regard to conflict with or impedance of a groundwater management plan over the long term, and no mitigation is required.

Long-Term Benefits. As discussed under *Water Quality Control Plan* above, the NEWS and MDTW projects are expected to foster groundwater infiltration and improve the quality of water infiltrated into groundwater. The wetland project would also improve the quality of infiltrated waters. This is consistent with the regional Groundwater Sustainability Plan's sustainable management criterion addressing degraded groundwater quality, and is considered a long-term Benefit for implementation of regional and local groundwater management plans.

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XI. LAND USE & PLANNING *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Physically divide an established community?	☐	☐	☐	■
(b) 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?	☐	☐	☐	■

Discussion of Checklist Responses

Potential to Physically Divide an Established Community

The NCCA site is located in an area zoned A-1 for General Agriculture by the County and is outside Newman City limits. It is also just outside the City's Sphere of Influence, which defines the extent of the area the City

envisions may be annexed and developed under the current General Plan (City of Newman 2007). As identified in previous checklist sections, it is largely surrounded by open agricultural lands. Although a few existing semi-rural residences are present immediately across Canal School Road from the 78-acre parcel, and the southern extent of the City's developed footprint is in close proximity to the northwest, there are no nearby residential uses to the south, southeast, or east. Thus, although each of the NCCA projects would add a new element to the project vicinity, none of them has the potential to physically divide an existing community. There would be No Impact, and no mitigation is required.

The new water service extension, as discussed in previous checklist section, would be underground, and as such would have no potential to result in physical division of an existing community. It would also have No Impact, and no mitigation is required.

Potential to Conflict with Land Use Plans, Policies, or Regulations Adopted to Reduce Environmental Impacts

Because the NCCA site is located in unincorporated lands within the County of Merced, the primary document guiding land use at the site is the County's current General Plan, which designates the two parcels comprising the site—along with surrounding lands—for agricultural use. Under the County General Plan, the agricultural designation is intended to provide for cultivated agricultural practices that rely on good soil quality, adequate water availability, and minimal slopes (County of Merced 2013).

The minimum allowable parcel size in areas designated by the County for agricultural use is 20 acres, residential development is stringently limited, and non-residential floor area ratios (FARs)[23] are capped at 0.1 (County of Merced 2013). This means that on the 78-acre parcel where the Newman Nature Park facilities would be located, the maximum permissible extent of new structures would be 339,768 square feet.

The Newman Nature Park would construct several structures, including a community plaza and outdoor classroom areas. The total square footage of the community facilities complex—including demonstration gardens, picnic area, and parking area as well as new structures—would be on the order of 181,000 square feet, assuming all the amenities described under Project Elements in Section 2 are constructed. The only other building or structure added to the parcel as a result of the NCCA projects would be the small (10-foot by 10-foot) pump station structure potentially added to the NEWS project in the future. The square footage of new structures added to the 78-acre parcel would thus be well below the County FAR limit, both on a project-by-project basis and collectively. No new structures or buildings of any kind are planned for the 24-acre parcel. The NCCA projects, both individually and as a program, are therefore considered considered consistent with County General Plan land use standards for agricultural parcels. There would be No Impact related to conflict with land use plans, policies, or regulations adopted to reduce environmental impacts. No mitigation is required.

References Cited in this Section

City of Newman. 2007. Newman 2030 General Plan. Available: http://www.cityofnewman.com/docman/community-development-department/36-general-plan-final-version/file.html. Downloaded: November 2019.

[23] Floor area ratio refers to the ratio between the gross square footage of a building (irrespective of number of stories) and the square footage of the parcel it is built on. For example, on an 8,000–square foot parcel with an allowable FAR of 1.00, either a building with a single 8,000–square foot story or a building with two 4,000–square foot stories would be allowable.

County of Merced. 2013. 2030 Merced County General Plan. Available: https://www.co.merced.ca.us/100/General-Plan. Downloaded: May 2020.

XII. MINERAL RESOURCES *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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?	☐	☐	☐	■
(b) 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?	☐	☐	☐	■

Discussion of Checklist Responses

Under the Surface Mining and Reclamation Act (SMARA) (California Public Resources Code Sections 2710–2719), the State of California evaluates and classifies the mineral resources of lands throughout the state. Evaluation commonly occurs on a county by county basis but may also focus on areas that are of particular interest or concern due to the known presence of resources. Lands are designated with Mineral Resource Zone (MRZ) identifiers, as follows. MRZ classification is based on available geologic information—including geologic mapping and other information on surface exposures, drilling records, and mine data—in combination with socioeconomic factors such as market conditions and urban development patterns.

- MRZ-1: areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- 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.
- MRZ-3: areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4: areas where available information is inadequate for assignment into any other MRZ.

Additional sub-classification is used in some areas to provide further nuance.

The goal of SMARA is to avoid and manage land use conflicts between urban growth and essential mineral production. It provides a comprehensive surface mining and reclamation policy intended to encourage production and conservation of mineral resources while seeking to ensure that the adverse environmental effects of mining are prevented or minimized; that mined lands are reclaimed and residual hazards to public health and safety are eliminated; and that other values such as recreation, watershed, wildlife, and aesthetic quality are considered when decisions to allow mining are made.

Within geologically diverse Merced County, MRZ zoning has been established for concrete aggregate, lode gold, clay, and diatomite/gypsite. The NCCA site is located in an area zoned MRZ-3a SG-3, reflecting the potential for the San Luis Ranch alluvium to produce economically valuable sand and gravel. The most current Merced County mineral land classification report cautions that further exploration in MRZ-3a zoned areas could result in reclassification as either MRZ-2 (significant mineral deposits present) or MRZ-1 (significant mineral deposits not present or unlikely to be present) (Clinkenbeard 1999).

Potential to Reduce Availability of Regionally Important Mineral Resources

As an area zoned MRZ-3, the vicinity of the NCCA site is not known to support mineral resources of regional or statewide importance. Moreover, as identified in the previous checklist section, the site is located in an area zoned A-1 (General Agriculture) by the County, is surrounded by extensive acreage designated for agricultural use in the County General Plan (County of Merced 2013), and is immediately adjacent to Newman City limits and the City's Sphere of Influence, which represents the City's anticipated development footprint in coming years (City of Newman 2007).

Although the County may allow extractive uses such as quarries and gravel pits in A-1 zoned areas under a Conditional Use Permit (County of Merced Unified Development Ordinance Title 2 Chapter 18.10), sand and gravel extraction would be incompatible both with surrounding agricultural uses—which are central to the economic health of the western San Joaquin Valley—and with existing and future City development. As a result, even if the MRZ-3 zoning understates the presence of aggregate resources in the NCCA vicinity, the County is unlikely to approve sand and gravel production activities at the parcels that make up the NCCA site. In this context, the NCCA projects and water service extension are therefore considered very unlikely to result in loss or reduced availability of mineral resources of value to the western San Joaquin Valley region or the state as a whole. No Impact is anticipated, and no mitigation is required.

Potential to Reduce Availability of Locally Important Mineral Resources

As discussed in the previous item, although economically viable mineral resources may be present in the NCCA vicinity, it is very unlikely—due to existing County zoning and land use designations, City land use planning, and the surrounding mosaic of land uses—that extractive activities would be permitted at this location. Approval of the NCCA projects and water service extension is therefore considered very unlikely to result in loss or reduced availability of locally important mineral resources. No Impact is anticipated, and no mitigation is required.

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XIII. NOISE *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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?	☐	■ (construction)	■ (O&M, visitor presence and activity)	☐
(b) Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	■ (construction)	■ (O&M)	■ (visitor presence and activity)
(c) For a project located in the vicinity of a private airstrip or within an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Discussion of Checklist Responses

In general, noise in the City is regulated under Section 9.13 of the City Code (available online at https://www.codepublishing.com/CA/Newman/) and the Health and Safety Element of the General Plan (City of Newman 2007).

The City Code designates Newman as a "quiet city" and establishes the City's commitment to prohibiting unnecessary, excessive, and annoying sound levels. It does not set specific levels at which noise is considered to violate the quiet city policy; instead, it recognizes that noise disturbance is contextual, and requires consideration of multiple factors in determining whether a noise violation is occurring. These include not only the intensity of the sound, but also its pitch and duration, the time of day, existing levels of background noise, and whether the sound is associated with a necessary activity such as garbage collection.

The General Plan supports the quiet city policy by identifying noise levels considered compatible with the various land uses within the City and setting standards to protect noise-sensitive land uses from ongoing noise associated with sources such as highways, railway operations, and industry. Land uses considered sensitive to noise include residences as well as schools, hospitals, care facilities, hotels and motels, libraries, museums, and meeting halls. The General Plan noise standards are intended to apply to the sources of noise that contribute to the community noise environment over the long term. They are quantitative, and are set at levels that should allow the full range of activities associated with each noise-sensitive use to proceed without disturbance (City of Newman 2007).

Consistent with the quiet city policy, the General Plan also recognizes the potential for short-term disturbance due to construction, establishes typical construction hours to reduce the potential for disturbance, and requires

the implementation of noise and disturbance reduction measures during construction, as follows (City of Newman 2007).

- Construction activities are normally limited to the hours between 7 AM and 7 PM Monday through Friday and 8 AM to 7 PM on Saturday
- Contractors are required to use available noise suppression devices and properly maintain and muffle loud construction equipment
- Staging and unnecessary idling of construction equipment is prohibited within 200 feet of noise-sensitive land uses

The City does not have Citywide quantitative limits for construction noise in place, recognizing that "acceptable" levels of construction noise are highly contextual—a one-size-fits-all limit could be too restrictive in some areas, and insufficiently protective in others. However, quantitative noise limits may be included as conditions in City permits authorizing construction.

The City does not explicitly regulate vibration.

Potential to Generate Substantially Increased Ambient Noise Levels

The closest noise-sensitive land uses to the NCCA site are residences immediately across Canal School Road and along Inyo Avenue west of Canal School Road, about 150 feet to just under 700 feet away from the closest portions of the 78-acre parcel. Numerous additional homes are present off Canal School Road northwest of the intersection with Inyo Avenue. The closest homes in this development are about 450 feet away from the northwest corner of the 78-acre parcel. If water service extension follows Canal School Road and Brazo Road (Option 1, Figure 2-9), the alignment would pass within 100 feet of the closest homes.

Construction

Construction of each of the NCCA projects and the water service extension would add noise to the community environment as a result of heavy equipment operation, hand tool use, worker vehicles, materials deliveries via heavy trucks, and general human presence and activity. Although the types of noise generated would be similar to existing noise sources associated with ongoing agricultural activities in the area, construction would represent a new noise source and could be disturbing to project neighbors, particularly at the homes closest to the site and when work is occurring in the northwest and west portions of the 78-acre parcel. Disturbance would be temporary and comparatively short-term, since work in areas closest to existing homes would represent only a fraction of the total construction window. This would be particularly true for water service extension, since construction would roll progressively along the alignment at a rate of about 100 feet per day. Nonetheless, some residents could experience Significant noise disturbance. To address potential concerns about noise disturbance, the City will implement the following mitigation measures. With Mitigation Measures NOI-1 and NOI-2 in place, the impacts of construction noise on project neighbors would be reduced to the extent feasible while still enabling efficient construction to progress and are considered Less than Significant.

Mitigation Measure NOI-1. Reduced Construction Hours in Vicinity of Residences

To reduce the potential for disturbance, no construction activity at or adjacent to the NCCA site will be permitted within 1,500 feet of residences on any weekend days or before 8 AM or after 5 PM on weekdays.

Mitigation Measure NOI-2. Noise Disturbance Coordinator

During construction of each of the NCCA projects, informational signage posted at the work site will include the name and contact information for a City staff person to serve as the designated Noise Disturbance Coordinator. This person may, but will not necessarily, be the same person designated as the Visual Disturbance Coordinator under Mitigation Measure AES-2. The Noise Disturbance Coordinator will be available during regular business hours to monitor concerns and will be responsible for responding to public complaints regarding construction noise and vibration disturbance. In the event a noise/vibration disturbance complaint is received, they will be responsible for determining the cause of the complaint and ensuring that reasonable measures are implemented to correct the problem.

O&M and Facilities Use

Over the long term, O&M and use of the NCCA projects would add noise to the community environment, due to ongoing vehicles, equipment, and worker activities and the presence of visitors using the trails and other facilities at the site.

As discussed in Section 2, routine O&M activities such as inspections, trash removal, restroom cleaning, and landscape maintenance would require only a small number of vehicles and personnel and typically would not use heavy equipment. They would also be intermittent and of short duration, and the types and levels of noise generated would be generally consistent with ambient noise in an active agricultural area. Some activities, such as removal of sediment from the NEWS and MDTW project forebays, would require heavy equipment and thus would generate higher levels of noise but would be infrequent—likely occurring only once in a period of 5 – 10 years. They would also be of short duration, and would be restricted to daytime hours during the week, which would reduce the potential for disturbance to neighboring residences. Noise associated with O&M at the NCCA site is accordingly not expected to result in substantial disturbance to project neighbors. Impacts, if any, are expected to be Less than Significant, and no mitigation is required.

Use of the NCCA would be restricted to non-motorized recreation; activities that would take place on the site, such as walking, bicycling, and nature viewing are typically fairly quiet, although the presence of visitors on NCCA trails would generate some noise, such as conversations and laughter. However, the noise associated with small groups would be consistent with noise associated with small groups of agricultural workers and likely would not represent a substantial change from current conditions, nor would it be out of place in the context of the neighboring residential uses. Additionally, large group gatherings would typically focus in the Newman Nature Park community facilties area and the outdoor learning areas, which would be located in the southeast and east portions of the 78-acre parcel, separated from the closest residences by at least 0.3 mile. In view of the nature-oriented goals of the NCCA, amplified sound—such as live music or DJ events—would not be permitted at group gatherings, and the intervening distance should prevent larger gatherings from disturbing project neighbors. Noise associated with visitor presence and activity is not expected to result in substantial disturbance and is considered consistent with the quiet city policy that governs City noise planning. Impacts are expected to be Less than Significant, and no mitigation is required.

Potential to Generate Excessive Groundborne Vibration/Groundborne Noise

Construction

In addition to noise, construction activity can also generate potentially annoying levels of vibration and at higher levels can result in damage to older or poorly constructed structures. No vibration-sensitive structures are located in proximity to the NCCA site, but excessive vibration could result in disturbance to project neighbors.

However, vibration generated by heavy construction equipment is typically below the level of perception at distances greater than about 100 feet from the active work site, and no residences are within this distance of the areas where earthwork would be required at the NCCA site itself. The potential for disturbance would be further reduced by the limits on construction hours established in Mitigation Measure NOI-1, and Mitigation Measure NOI-2 provides an avenue to resolve concerns should they arise. For the four NCCA projects, with Mitigation Measures NOI-1 and NOI-2 in place, impacts related to groundborne vibration and groundborne noise are expected to be Less than Significant. No additional mitigation is required.

Water service extension would entail construction within 100 feet of homes along Canal School Road if Option 1 (Figure 2-9) is selected. Construction in closest proximity to homes would be very short-term; the total duration within 100 feet of each existing home is anticipated to last no more than 2 – 3 days, assuming a typical construction rate of 100 linear feet per day, and small-diameter pipeline installation and small-scale repaving operations typically do not use the types of equipment most associated with high levels of vibration. Nonetheless, vibration levels could be perciptible, and could create annoyance or disturbance. To address this concern, the City will implement the following mitigation measure, which focuses on limiting or avoiding the types of construction activities and equipment most likely to result in elevated vibration levels. With Mitigation Measure NOI-3 in place, vibration impacts on project neighbors are expected to be Less than Significant. No additional mitigation is required.

Mitigation Measure NOI-3. Limits on Use of Impact and Vibratory Equipment Near Residences

No construction equipment or activities reasonably anticipated to generate vibration levels in excess of 94 vibration decibels (VdB) or a peak particle velocity of 0.2 inches per second at a distance of 25 feet from the source will be permitted within 100 feet of existing residences. Prohibited equipment will include vibratory rollers.

O&M and Facilities Use

The majority of routine O&M activities would not use heavy equipment or other sources of substantial vibration. Sediment removal from the NEWS and MDTW project forebays would require heavy equipment but would be infrequent (anticipated once every 5 – 10 years at each project), would be short-term, and would adhere to standard City workweek hours, as identified above. Moreover, neither of the forebays would be located within 100 feet of existing residences. O&M is therefore not expected to result in disturbance related to excessive groundborne vibration or noise. Impacts, if any, are considered Less than Significant, and no mitigation is required.

Use of the NCCA facilities would not entail any activities producing substantial groundborne vibration or noise. There would be No Impact due to NCCA use, and no mitigation is required.

Potential for Exposure to Excessive Airport Noise

Noise Related to Private Airstrips

The NCCA site is not located in proximity to any private airport or airstrip. There would be No Impact related to exposure of construction workers, City staff, or members of the public visiting the new NCCA facilities to excessive noise associated with private airstrips. No mitigation is required.

Noise Related to Public/Public Use Airports

As discussed above in the *Hazards & Hazardous Materials* section of this checklist, the NCCA site is not within any airport land use plan area or within 2 miles of any public or public use airport. There would be No Impact

related to exposure of construction workers, City staff, or members of the public visiting the new NCCA facilities to excessive noise related to public or public use airport operations. No mitigation is required.

Reference Cited in this Section

City of Newman. 2007. Newman 2030 General Plan. Available: http://www.cityofnewman.com/docman/community-development-department/36-general-plan-final-version/file.html. Downloaded: November 2019.

XIV. POPULATION & HOUSING *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Induce substantial unplanned 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)?	☐	☐	☐	■
(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

Discussion of Checklist Responses

Potential to Induce Unplanned Population Growth

None of the NCCA projects would construct new housing or commercial uses, nor would they in any way modify the City's existing land use planning. As a result, they would not directly result in population growth. Additionally, since they focus on water treatment and public recreation and education opportunities and would not extend roadways or services (other than the water service needed to support irrigation at the NEWS project gateway and the Newman Nature Park facilities), they would not remove obstacles to growth or otherwise indirectly induce population growth.

Extension of utility service is commonly identified as a growth-inducing factor. However, the new water service to the NCCA site would serve very limited uses:

- at the NEWS project, water-efficient irrigation in the gateway area
- at the Newman Nature Park, supply for the handwashing and hydration stations and outdoor classroom area sink as well as water-efficient irrigation for the parking area landscaping and demonstration gardens

The water service extension would be sized specifically for these uses and would be routed as directly as possible to the site (Figure 2-9). The City is not contemplating further extensions or other services from this line; any new residential or other development in the area around the NCCA would require a separate extension of water service. As a result, extension of water service to the NCCA is not considered as removing an obstacle to growth or otherwise indirectly inducing growth.

A small number of short-term, temporary jobs would be created by construction of each of the NCCA projects, and over the long term, a small number of new permanent positions may also be created by the need for O&M at each of the projects (City of Newman 2021). It is the City's policy to prioritize hiring locally where this is possible, so it is likely that most of the workforce needed to construct, operate, and maintain the NCCA projects would be drawn from the existing population in the area. The City has also reached out to the California Conservation Corps about the potential for assistance with construction of the Newman Nature Park, and some Corpsmembers could be from outside the immediate area; but California Conservation Corps staff are mobile based on the needs of the projects they support, and would not represent a long-term addition to population in the Newman area.

In view of the factors described above, the NCCA projects are not expected to result in substantial population growth, and would not result in unplanned growth. There would be No Impact, and no mitigation is required.

Potential to Displace Existing Populations or Housing

The workforce required to construct the NCCA projects and water service extension would be comparatively small (estimated at no more than 20 – 40 persons at a maximum for each project, depending on overlap between positions) (see Tables 2-8, 2-10, and 2-12). The number of new positions, if any, created to support O&M over the longer term would be much smaller. Additionally, as identified in the previous item, both construction and long-term hiring is expected to draw primarily from the locally available workforce; to the extent the California Conservation Corps is involved in Newman Nature Park construction, they could be housed in Conservation Corps dormitories and thus would not require local housing. In view of the small number of persons involved, and the likelihood that most or many of them would already be local residents, No Impact related to displacement of people is anticipated during either the construction or operational period for any of the NCCA projects. No mitigation is required.

The parcels that comprise the NCCA site are currently vacant and undeveloped, are zoned and designated for agricultural use (County of Merced 2013), and are outside the City's Sphere of Influence, which represents the extent of the area the City anticipates annexing and developing in the reasonably foreseeable future (City of Newman 2007). Implementing the NCCA projects therefore would not displace existing housing, nor would it decrease the availability of land for potential future housing development. There would be No Impact with regard to displacement of housing, and no mitigation is required.

References Cited in this Section

City of Newman. 2007. Newman 2030 General Plan. Available: http://www.cityofnewman.com/docman/community-development-department/36-general-plan-final-version/file.html. Downloaded: November 2019.

City of Newman. 2021. Newman Community Conservation Area Master Plan. (Third Administrative Draft.) (February.) Prepared for City of Newman by Redtail Consulting, Fremont, CA. Appendix A to this Initial Study.

County of Merced. 2013. 2030 Merced County General Plan. Available: https://www.co.merced.ca.us/100/General-Plan. Downloaded: May 2020.

XV. PUBLIC SERVICES *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
(i) Fire protection?	☐	☐	☐	■
(ii) Police protection?	☐	☐	☐	■
(iii) Schools?	☐	☐	☐	■
(iv) Parks?	☐	☐	☐	■ (long-term Benefit)
(v) Other public facilities?	☐	☐	☐	■

Discussion of Checklist Responses

As discussed in *Population & Housing* above, the NCCA projects would not directly induce population growth, nor would they remove obstacles to growth or otherwise indirectly foster development, such as by extending roadways. As a result, they would have No Impact related to the need to construct new public facilities or expand public services. No mitigation is required.

Moreover, by providing recreational opportunities that are not currently available in the Newman area, the NEWS project, MDTW project, and in particular the Newman Nature Park would result in a direct long-term Benefit to park resources in the City and surrounding region. By contributing to the visual and educational resources available at the NCCA site, the wetland project would also indirectly result in a Benefit to park and recreational opportunities in the City and region.

References Cited in this Section

None.

XVI. RECREATION *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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?	☐	☐	☐	■
(b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	■	☐	☐

Discussion of Checklist Responses

Potential to Increase Use of Existing Parks/Recreational Facilities

As discussed in *Population & Housing* and *Public Services* above, the NCCA projects would not construct new housing, relocate or displace populations, or indirectly foster future planned or unplanned growth. Therefore, they would not increase the use of existing parks or recreational facilities. There would be No Impact related to overuse and physical deterioration of parks or recreational facilities, and no mitigation is required.

Potential to Include or Require Construction or Expansion of Parks/Recreational Facilities

As described in Section 2 of this Initial Study, three of the four NCCA projects would include recreational facilities, as follows.

- NEWS project and MDTW project: unpaved O&M access opened for public non-motorized recreational use (walking, jogging, bicycling, nature viewing, etc.)
- Newman Nature Park: additional trails for non-motorized use, in addition to community plaza, outdoor learning areas, picnic area, shade structure, and demonstration garden areas

The purpose of this Initial Study is to analyze the impacts of constructing, operating, and maintaining the NCCA projects, including but not limited to their recreational components. As discussed in other sections of this checklist (*Aesthetics*, *Biological Resources*, *Cultural Resources*, *Geology & Soils*, *Hazards & Hazardous Materials*, *Noise*, and *Transportation*), there would be potential for Significant impacts on several resources as a result of the projects. However, the City has identified mitigation measures that will be implemented to address those impacts. With these measures incorporated, impacts would be Less than Significant, as itemized in prior sections of this checklist. No additional mitigation is required.

References Cited in this Section

None.

XVII. TRANSPORTATION *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	■
(b) Conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, Subdivision [b]?	☐	■	☐	☐
(c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	■ (overflow parking)	■ (incompatible uses)	■ (existing design geometry, new design geometry)
(d) Result in inadequate emergency access?	☐	☐	☐	■
(e) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	■

Discussion of Checklist Responses

Potential to Conflict with Circulation System Programs, Plans, Ordinances, or Policies

The circulation system plans most relevant to the NCCA are the City's Non-Motorized Transportation Plan (City of Newman 2013), the County's Regional Bicycle Transportation Plan (County of Merced 2008), and the Merced County Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy (Merced County Association of Governments 2018). General Countywide guidance is provided in the Transportation and Circulation Element of the County General Plan (County of Merced 2013), and the City also regulates aspects of the circulation system under the City Code (Title 10, *Traffic Regulations* and Title 11, *Public Ways and Property*).

Non-Motorized Transportation Plan

The Non-Motorized Transportation Plan is intended to guide development of bicycle and pedestrian facilities throughout the City (City of Newman 2013) and focuses on the portion of the General Plan Bicycle Network Plan (City of Newman 2007, Figure TC-2) within and immediately adjacent to City limits. As a step-down from bicycle and pedestrian planning at the General Plan level, the Non-Motorized Transportation Plan integrates and builds on policies in the General Plan (City of Newman 2007) as well as regional non-motorized transportation planning efforts. It assesses City needs, lays out specific goals, policies, and actions for bicycle and pedestrian transit in the City, recommends specific projects to achieve these ends, provides design standards, and

identifies potential funding sources to defray project costs. It also identifies support programs to increase public awareness and encourage bicycling and walking for pleasure and transportation, including a Safe Routes to School program. As laid out in the Non-Motorized Transportation Plan, the City's vision emphasizes the following overall goals (City of Newman 2013).

- Improving pedestrian and bicyclist safety
- Making trails accessible to all users, including pedestrians, bicyclists, and the physically disabled
- Creating a cohesive pedestrian and bicycle network that meets the needs of the community and encourages bicycling and walking
- Implementing General Plan policies in order to create an enjoyable environment that promotes walking and bicycling
- Encouraging community members to take advantage of non-motorized transportation opportunities in the City

One of the City's aims in selecting the location for the NCCA—immediately outside City limits and easily accessible from anywhere in the City—was to encourage the community to visit the NCCA on foot or by bicycle, and to provide a desirable destination for walkers and bicyclists. This will be facilitated in the future by construction of a bicycle route/multi-use trail extending along Canal School Road, connecting bike lanes and paths in the City proper with points south, as recommended in the Non-Motorized Transportation Plan (Figure 3-6). Additionally, as described in Section 2, the NCCA is planned to provide an internal network of trails for pedestrian and bicycle use, including the O&M access roads serving the NEWS and MDTW projects, which would be open to the public for non-motorized recreational use, as well as dedicated trails constructed as part of the Newman Nature Park project. The Nature Park is also expected to provide bicycle racks, restrooms, and a drinking water station, per the Non-Motorized Transportation Plan's Education and Encouragement Policy 1, which requires "end-of-trip" facilities to make bicycling a genuinely viable alternative to driving. These facilities would be designed to meet applicable County standards. As a result, the NCCA is considered consistent with and supportive of the Non-Motorized Transportation Plan. There would be No Impact with regard to conflict with this plan, and no mitigation is required.

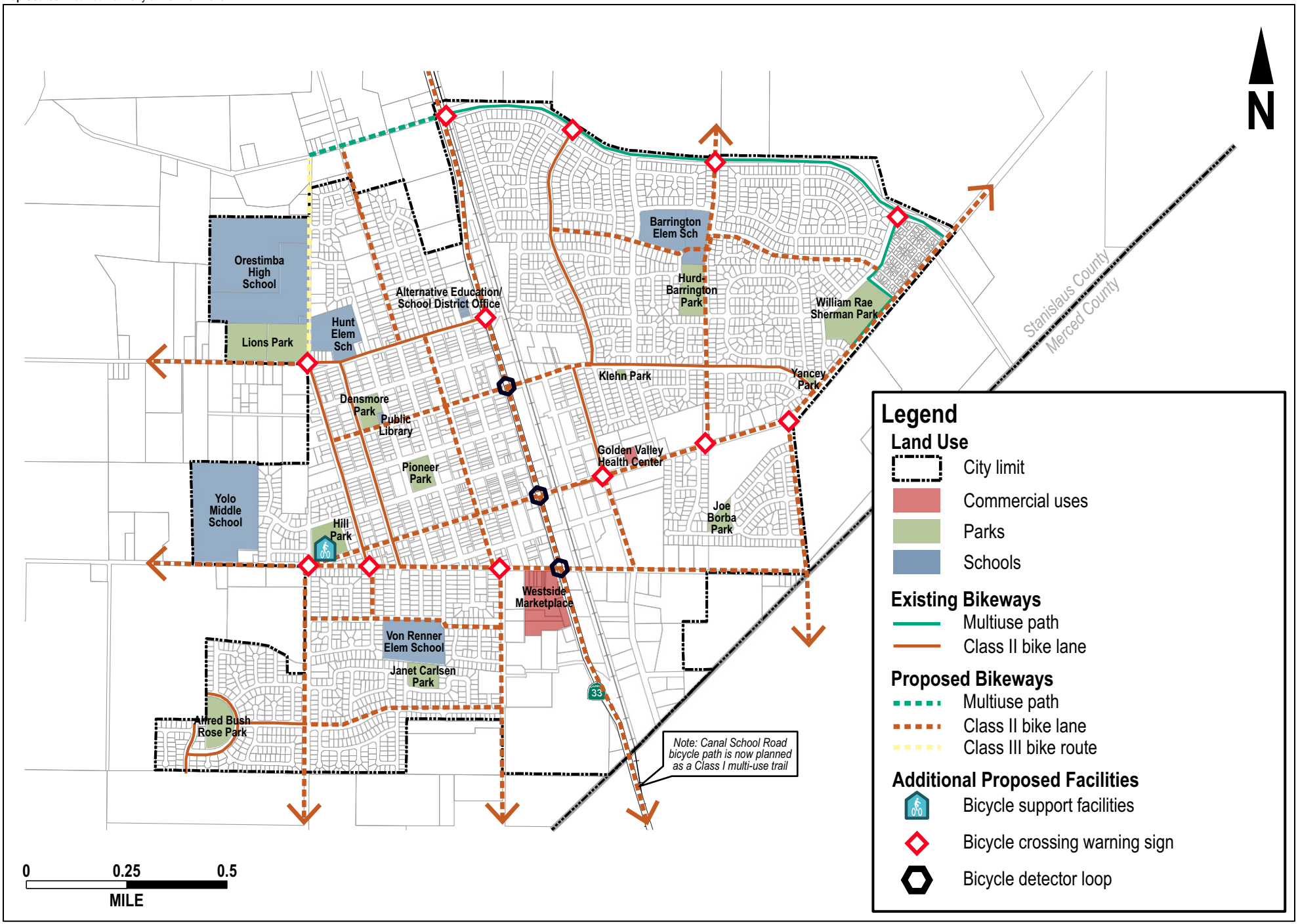
Regional Bicycle Transportation Plan

The Regional Bicycle Transportation Plan (County of Merced 2008) is intended to provide a long-range vision for development of a regional bikeway network connecting cities and unincorporated areas Countywide. Desired outcomes include reducing single-occupant vehicle travel and increasing bicycle use for commute travel. To support these outcomes, the Plan provides

- guidance to make new development and roadway design more bicycle-friendly
- standards for bikeway design
- standards for end-of-trip bicycle parking and storage facilities

Although the NCCA would not directly support bicycle commuting or reduce vehicle usage, none of the NCCA projects would be contrary to the Regional Bicycle Transportation Plan's vision or goals. Moreover, as identified above, the NCCA's location adjacent to City limits and the planned Canal School Road multi-use trail/bikeway is intended to encourage local users to access the site by bicycle, as identified above. Additionally, trails within the NCCA itself would encourage bicycle use in general and as such could have an indirect effect in support of

Map Source: *modified from* City of Newman 2013



Redtail Consulting
Environment & Community

Figure 3-6. Bicycle Projects Recommended in City Non-Motorized Transportation Plan

Newman Community Conservation Area Master Plan

City of Newman

bicycle use in other locations and for non-recreational purposes such as bicycle transit. They would also be designed consistent with applicable County standards, as identified above. There would be No Impact with regard to conflict with the Regional Bicycle Transportation Plan, and no mitigation is required.

Regional Transportation Plan

The Regional Transportation Plan/Sustainable Communities Strategy links transportation and land use planning with the goal of ensuring that the County's transportation network addresses both existing and future needs and will continue to operate efficiently over the next 25 years, offering sufficient capacity to meet demand and providing mobility options for all County residents. The Regional Transportation Plan component focuses on transportation infrastructure needs, while the Sustainable Communities Strategy component addresses planned growth patterns (County of Merced 2008).

Goals of the Regional Transportation Plan/Sustainable Communities Strategy include creating a "safe, connected, and integrated regional transportation system for bicyclists and pedestrians" and providing "economical, long-term solutions to transportation problems by encouraging community designs that encourage walking, transit, and bicycling." An additional goal focused on sustainable community design envisions "[r]educ[ing] per capita [GHG] emissions by coordinating compact growth with alternative transportation" and "[p]rotect[ing] and enhanc[ing] the natural environment." The plan also recognizes that infrastructure that encourages bicycle and pedestrian travel will help the County to meet statewide emissions reduction standards by reducing vehicle use (County of Merced 2008).

As identified in the previous paragraphs, the NCCA's location and design are specifically intended to encourage bicycle as well as pedestrian use, both to access the site and within the NCCA itself. Locating the NCCA immediately adjacent to City limits on parcels easily accessible from the City center is also consistent with the Plan's emphasis on compact growth, and NCCA goals (itemized in Section 1 of this Initial Study) are oriented toward preservation and enhancement of the natural environment in the Newman area. The NCCA projects, and the program as a whole, are therefore considered consistent with the County's Regional Transportation Plan/Sustainable Communities Strategy. There would be No Impact related to conflict with this plan, and no mitigation is required.

County General Plan Transportation and Circulation Element

The County General Plan Transportation and Circulation Element lays out a policy context to support safe and efficient circulation of people, vehicles, and goods throughout the County, identifying goals and policies for the circulation system in order to balance the needs of motorists, bicyclists, and pedestrians while accomodating the unique needs of farm equipment and movement of agricultural commodities. Recognizing that the circulation needs of urbanized areas differ from those of rural areas, the functional roadway classification used in the Transportation and Circulation Element identifies different roadway classes with differing functions and standards for urban and rural portions of the County (County of Merced 2013).

Relevant goals identified in the Transportation and Circulation Element include the following.

- Goal CIR-2: Provide and manage parking to accommodate auto usage while minimizing the impacts of excessive parking supply
- Goal CIR-4: Maintain and expand a safe, continuous, and easily accessible bicycle and pedestrian circulation system

Policies identified under these goals are not directly germane to the NCCA, but the NCCA is generally consistent with these goals, as follows.

- As discussed under *Potential to Increase Hazards Due to Design Geometry or Incompatible Uses* below, the NCCA would provide parking for NCCA users who arrive by car, at a level that is expected to be adequate but would not be excessive, including provisions for safe overflow parking under Mitigation Measure TR-3. As described in detail below, overflow parking improvements on Brazo Road will be required to meet County roadway design standards as laid out in the County Department of Public Works Improvement Standards and Specifications
- The NCCA would provide a destination that is connected to the City via the future multi-use trail along Canal School Road

Moreover, the NCCA projects are all consistent with the County's overarching vision of balancing the needs of drivers, bicyclists, and pedestrians. There would be No Impact related to conflict with the County's Transportation and Circulation Element, and no mitigation is required.

Newman City Code

Title 10 of the City Code lays out the City's traffic regulations, including "rules of the road" for pedestrians and bicyclists and various requirements and limitations on stopping, standing, and parking for vehicles. Title 11 provides standards for the design and construction of public ways, including general provisions, standards for underground utilities, street trees, water services, stormwater management, and parks and recreation–related improvements. As City undertakings, all four of the NCCA projects will be required to comply with all relevant portions of the City Code. No Impact with regard to conflict with the City Code is anticipated, and no mitigation is required.

Potential for Conflict or Inconsistency with *CEQA Guidelines* Section 15064.3[b]

Background

Section 15064.3 of the state's *CEQA Guidelines*, adopted as an option in December 2018, and mandatory statewide as of July 1, 2020, lays out the state's current process for evaluating and determining the significance of transportation impacts, with an emphasis on vehicular (roadway) traffic.

For many years, the prevailing approach to analysis of traffic impacts under CEQA focused on roadway and intersection function or *level of service* (LOS)—that is, on the experience of the driver in traffic. Under this approach, as long as roadways and intersections were projected to function at acceptable levels as defined by local agency standards, a project's impacts were typically found to be Less than Significant even if the project would add a considerable volume of traffic to the roadway system.

In recent years, however, the focus of concern has shifted progressively from roadway and intersection function to the potential for projects to increase overall vehicular travel, expressed as *vehicle miles traveled* or VMT. In part, this responds to the increasing visibility of climate change issues; vehicle exhaust is a source of GHG emissions. It also reflects growing concern about the other environmental impacts of development "sprawl" and an increased will to capitalize on opportunities for infill and redevelopment of more compact urban centers.

Now, under *CEQA Guidelines* Section 15064.3[b], VMT—defined as "the amount and distance of automobile travel attributable to a project"—is explicitly recognized as the most appropriate metric for transportation impacts and lead agencies are directed that a potential "effect on automobile delay" should not be regarded as a significant environmental impact for most projects. The lead agency has discretion in choosing the method used

to identify a project's VMT (*CEQA Guidelines* 15064.3 [b][4]) and, implicitly, the responsibility to identify an appropriate, substantiated threshold of significance (the level at which project VMT is considered a significant impact and requires mitigation). The *Guidelines* (15065.3[b][3]) also afford lead agencies the discretion to utilize qualitative methodology if quantitative methods or models are not yet available to estimate VMT for near-term projects.

Potential VMT Impacts

To estimate VMT generated by a new facility or project, it is necessary to understand how many vehicle trips would access the facility each day, and where those trips would come from. Daily VMT is then a function of number of trips per day and the typical or average mileage per trip. In the following discussions, trip generation refers to one-way trips unless otherwise specified; VMT calculation doubles the mileage assumed for a one-way trip to obtain totals based on two-way mileages.

Construction Period. Construction of each of the NCCA projects would generate vehicle trips for contractor mobilization/demobilization, materials deliveries, and worker commutes, translating to an increase in VMT in the Newman area. As discussed in Section 2, the maximum number of workers onsite for construction of any single project would be on the order of 18 – 20 at the peak of Newman Nature Park grading (see Table 2-12). Even assuming construction of all four projects during the same timeframe (which is highly unlikely since implementation of each project would be contingent on the City obtaining grant funding and only two of the projects have been funded to date), maximum onsite staffing would not exceed about 60 persons. This represents 60 commute round trips per day, with a small number of additional trips for materials deliveries, plus mobilization and demobilization of construction equipment.

Guidelines issued by the Governor's Office of Planning and Research (2018) indicate that projects with a *long-term* trip generation rate of less than 110 one-way trips per day can be assumed to have a Less than Significant transportation impact. At a maximum of slightly over 60 round trips, or 120 one-way trips, per day, even an unrealistic worst-case scenario for construction traffic is within 10% of this threshold More realistic scenarios of 20 staff onsite at a time (slightly over 20 round trips or 40 one-way trips per day) are well below the threshold. Implementation of Mitigation Measure TR-3, described in detail below, could slightly increase trip generation due to the presence of additional construction workers for a short portion of the NEWS and Newman Nature Park projects, but even with this measure incorporated, trip generation would likely be within the maximum estimate above. Additionally, as discussed elsewhere in this checklist, the City has a policy of "hiring local" to the extent feasible, so the majority of the trips generated would be fairly low-mileage—and construction traffic would be a temporary short-term contribution to overall VMT in the Newman area and western San Joaquin Valley region. In this context, construction VMT generation associated with the NCCA projects is considered Less than Significant. No mitigation is required.

Long Term. Long-term VMT generation associated with the NCCA is expected to represent two types of visitors: *local users* from the City and immediate surrounding area, and *regional visitors* who access the NCCA from outside the Newman area. O&M would also periodically generate VMT associated with City staff trips to the NCCA site, disposal of sediment removed from the NEWS and MDTW project forebays (anticipated once every 5 – 10 years on average), and potentially also for occasional delivery of materials and supplies required for maintenance, including long-term implementation of mitigation measures such as BIO-2 (*Biological Resources*), GEO-1 (*Geology, Soils, & Seismicity*), HAZ-1 (*Hazardous & Hazardous Materials*), and TR-1 (*Transportation*).

Table 3-17 summarizes anticipated local visitor usage based on usage at other City facilities, including Sherman Park, which offers walking trails with well-documented visitor use. Values in Table 3-17 represent estimated

usage at "full buildout" conditions with all four of the NCCA projects completed and open to the public. As indicated in the table, the NCCA is expected to generate on the order of 45 daily trips by local visitors at buildout.[24]

Table 3-17. Anticipated Local Visitor Usage at NCCA

Use Category	# of Visitors	Rate of Visits	Transport	Vehicle Occupancy	Trips/Day (Average)	Annual Visitor-Days	Daily One-Way Trips (Average)	Daily VMT
School field trips	30	3 days/week	bus	30	0.9	4,680	0.9	1
Weekday walkers	20	5 days/week	car	2.25	12.7	5,200	12.7	20
Weekend walkers	30	2 days/week	car	2.25	7.6	3,120	7.6	12
Casual bicyclists	25	2 days/week	car	2.75	5.2	2,600	5.2	8
Senior field trips	20	1 day/week	bus/van	8	7.5	1,040	0.7	0
Classes/workshops	50	2 days/week	car	2.25	12.7	5,200	12.7	12
Special events	50	4 days/month	car	2.75	4.8	2,400	4.8	20
Seasonal visitors	30	1 day/month	car	2.25	0.9	360	0.9	8
					Total local use:	**24,600**	**45.3**	**73**
					Average daily local visitors:	**67.4**		

Source: K.D. Anderson & Associates 2020

Regional visitor usage at the NCCA is more difficult to predict, particularly as there is no analogous facility elsewhere in the region, uses at the closest open space parklands in the Newman area differ from those proposed at the NCCA[25], and detailed usage data for facilities in the region were largely unavailable as of the preparation of this Initial Study. For perspective, analysis considered usage rates at two facilities that have some important factors in common with the NCCA, and for which fairly detailed visitor data are available: the San Luis National Wildlife Refuge (NWR) in Los Banos (within Merced County), and the East Bay Regional Park District's Coyote Hills Regional Park in Fremont (in Alameda County). Table 3-18 provides an overview of these facilities and their similarities to—and key differences from—the NCCA.

Table 3-18. Overview of Facilities Considered for Regional VMT Assessment

Facility	Uses Offered	Key Similarities	Key Differences
San Luis National Wildlife Refuge	Hiking, hunting, fishing, wildlife viewing, bird watching, visitor center, public events	• Focus on nature-oriented recreation and education • Located in western San Joaquin Valley	• Far larger than NCCA at 26,800 acres • Offers auto tour routes • Offers visitor center with educational exhibits and group events

[24] Note that Table 3-17 includes trips by "casual bicyclists" who drive to the NCCA site to take advantage of user-friendly trails and other amenities for bicycle use. Because the NCCA site is not currently accessed by bicycle trails/bikeways, vehicle access is assumed for families with small children and other riders who may prefer not to ride along Canal School Road or Inyo Avenue to reach the site—neither of these roadways offers paved shoulders and vehicle travel speeds are high, which could be discouraging to some riders. Over the longer term, as the City completes the planned Class I multi-use trail along Canal School Road, bicycle access to the NCCA will become more feasible for all riders, and is expected to increase, although some riders may still choose to access the NCCA by car in order to ride there.

[25] For instance, the China Island Unit and Salt Slough units of the state's North Grasslands Wildlife Area—two of the open space resources closest to the City—see primarily hunting use, and the George J. Hatfield State Recreation Area, also located close to the City, offers swimming, fishing, and camping. None of these uses are planned for the NCCA.

Facility	Uses Offered	Key Similarities	Key Differences
			• Regionally and nationally visible due to National Wildlife Refuge status
Coyote Hills Regional Park	Bicycling/mountain biking, walking, bird watching, jogging, nature exploration, picnicking, group camping, visitor center, open house events including 2,000-year old Ohlone village	• Focus on nature-oriented recreation and education • Offers walking trails through water treatment marshlands	• Substantially larger than NCCA at 1,266 acres • Located in urbanized San Francisco Bay area • Has visitor center with exhibits and events • Offers extensive upland as well as wetland experiences

Sources: U.S. Fish and Wildlife Service 2020, East Bay Regional Park District 2020

Table 3-19 below summarizes visitor usage data for San Luis NWR and Coyote Hills Regional Park.

Table 3-19. Visitor Usage at San Luis NWR and Coyote Hills Regional Park

Facility	Annual Usage	Visits/Day
San Luis National Wildlife Refuge	• 80,000 visits total • 70,000 visits for non-hunting uses • 55% of non-hunting visits (38,500 visits/year) are from outside western San Joaquin Valley Region, including East Bay region, San Jose area, Sacramento area, Fresno area • 45% of non-hunting visits (31,500 visits/year) are from within western San Joaquin Valley region	• 192 total visits/day for non-hunting uses, on average – 106 non-hunting visits/day from outside western San Joaquin Valley region – 48 non-hunting visits/day from within western San Joaquin Valley region
Coyote Hills Regional Park	*Annual visit data not tabulated* *Data on visitor origin not currently available*	• Weekdays: 250 – 500 visits/day • Weekends: 1,250 – 1,750 visits/day

Sources: Sparks pers. comm., McDonell pers. comm.

As Table 3-18 shows, both San Luis NWR and Coyote Hills Regional Park are much larger facilities than the approximately 100-acre NCCA would be at buildout, both offer a wider range of uses, and both have advantages over the NCCA in terms of visitor draw—San Luis NWR no doubt benefits from the visibility associated with being part of a well known national system, and Coyote Hills is part of a highly visible regional park system in a densely populated metropolitan area. As a result, visitor figures for these two parklands would be an outside maximum that is probably unrealistic for what the NCCA might be expected to draw from the larger region. It is unlikely that the NCCA would ever match Coyote Hills' weekend VMT figures in particular; these almost certainly reflect the park's location in an urbanized area with easy access for nearby suburban residents and freeway adjacency facilitating visits from other parts of the Bay Area.

However, City staff have estimated that regional recreational visits to the NCCA at buildout could be double the visit rates generated by the local Newman population; the NCCA would be a unique facility located within easy reach of several other small municipalities whose residents would likely also make use of it, and it also has the potential to draw from a larger area, as evidenced by usage patterns at other open space in the region. Doubling local NCCA usership rates would give an estimated (2 x 67.4) or about 135 visits per day by regional (non-Newman-area) visitors, which is within about 27% of the 106 non-hunting visits per day from outside the western San Joaquin Valley region reported by San Luis NWR staff (Sparks pers. comm.). As such it is probably within a reasonable ballpark, and may be somewhat conservative (i.e., overestimated) since the NCCA would

be a smaller facility and would not have the visibility of the NWR system.

At an average automobile occupancy rate of 2.25 persons per vehicle (which is conservatively based on East Bay Regional Park District usage of 2 – 3 persons per car; McDonell pers. comm.), 135 visits per day translates to about 120 annual average trips per day. Added to that total should be visits by community college and university students engaged in research and/or living laboratory experiences, since the City will invite participation by institutions throughout the western San Joaquin Valley (City of Newman 2021) and possibly extending into the Bay Area. This is roughly estimated at about 20 students per year visiting the site weekly or about 4 days per month, each of whom is assumed to travel alone, by car. Based on these assumptions, student visits would add about 5 trips per day on annual average; this gives an estimated total of about 125 regional trips/day.

Adding total local trips per day and total regional trips per day gives a combined total of about (45.3+119.8+5.3) or 170.4 (one-way) trips per day generated by NCCA usage. Table 3-20 shows the corresponding VMT generation based on the mileage assumptions presented in notes to the table. As shown, the NCCA could generate 9,457 daily VMT at buildout.

Table 3-20. Potential VMT Generation Associated with NCCA Usage

Visitor Category	Average Daily Trips*	Mileage per Trip	Daily VMT
Local users	45.3	1.6**	73
Regional users (general public)	119.8	75***	8,986
Regional users (research students)	5.3	75***	398
Totals:	**170.4**	**N/A**	**9,457**

* Trip calculation assumed an average of 2.25 persons per car, based on East Bay Regional Park District usage of 2 – 3 persons per car (McDonell pers. comm.).

** Local trip mileage represents the distance from Newman city center via arterial routes to Newman Nature Park parking area.

*** Regional trip mileage was calculated as the average of the highway/freeway distances between City of Newman and San Jose, San Rafael, Sacramento, and Fresno.

Source: K.D. Anderson & Associates 2020

As discussed in Section 2 and elsewhere in this checklist, the NCCA projects are planned for implementation one at a time as funding becomes available. Additionally, the NCCA is expected to gain visibility—both in the local community and regionally—over time. As a result, visitor use, and associated VMT generation, would ramp up gradually over time. Assuming the NCCA reaches maximum usage in about 10 years, NCCA VMT generation due to visitor usage would represent only about 0.11% percent of Countywide daily VMT, based on projections by the Merced County Assocation of Governments, which place Countywide daily VMT at about 8,300,000 as of 2030 (Merced County Association of Governments 2018).

The current state Office of Planning and Research guidance for evaluating transportation impacts using the VMT standard does not identify significance thresholds for undertakings like the NCCA projects that would not involve residential, retail, or office uses (Office of Planning and Research 2018), and neither the City nor the County has currently adopted significance thresholds for VMT, although the City expects to develop them in the near future. Combined with the substantial uncertainty in projecting regional usership, this makes it difficult to assess the significance of NCCA VMT generation in a meaningful way.

However, as identified in *Construction Period* above, projects that would generate less than 110 trips per day over the long term are currently presumed to have a Less than Significant transportation impact (Office of Planning and Research 2018). In this context, based on visitor usage alone there is some potential that the

NCCA could result in a Significant impact with regard to VMT generation, since estimates detailed above suggest it could generate on the order of 170 trips per day when both local and regional visitors are considered. Additional VMT would be generated by O&M. To address the potential for Significant VMT impacts, the City will implement the following mitigation measures, which take advantage of the anticipated slow increase in NCCA usage to enable the City to monitor NCCA usage, improve understanding of local and regional use patterns, refine understanding of associated VMT generation, and respond adaptively over time. With Mitigation Measures TR-1 and TR-2 in place, impacts would be addressed to the extent feasible without undermining the NCCA's overarching purpose of providing a nature-oriented recreational and educational resource that serves not only the immediate City but also the larger surrounding region. Residual impacts, if any, are considered Less than Significant.

Mitigation Measure TR-1. NCCA Usage Monitoring

Prior to construction of the Newman Nature Park, the City will take the following actions to monitor NCCA usage

- At least monthly, the City will conduct one weekday and one weekend user poll at peak use hours to determine the number of visitors onsite, identify whether they are local or from outside the area, and if they are from outside the City's Sphere of Influence, how far they travelled to visit the NCCA. Information on number of visitors per car will also be collected to calibrate understanding of visitors/car trips ratio, supporting more accurate projections of future VMT generation
- Data will be maintained by the Public Works Department and will be summarized, reviewed, and evaluated annually to determine whether NCCA usage is generating in excess of 110 trips per day. Data analysis will include projections of coming-year usership and trip generation

When the Newman Nature Park is constructed, the City will ensure that the entrance to the parking area is equipped with a vehicle detection loop or similar technology such that vehicles entering the parking area are counted. The City will also continue to conduct user surveys as described above, and all data will continue to be maintained, and evaluated annually, by the Public Works Department, also as described above.

If or when usership is found to exceed 110 trips per day or alternate screening criteria adopted by the City of Newman through a process consistent with *CEQA Guidelines* requirements and applicable recommendations of the Office of Planning and Research, or is projected to exceed this threshold in the coming year, the City will implement Mitigation Measure TR-2. Alternately, if at some time in the future a regional VMT reduction program meeting Office of Planning and Research (2018 or future-current) standards is developed and offers other opportunities to address VMT generation (such as in-lieu fees to support mitigation actions that can reasonably be expected to occur), the City may elect to participate in this program rather than implementing Mitigation Measure TR-2, assuming an appropriate offset for NCCA-generated VMT can be demonstrated.

The Public Works Department will also monitor and track VMT associated with O&M at the NCCA site and will seek to minimize VMT where this is feasible without compromising the function, value, or community benefits of the NCCA facilities.

Mitigation Measure TR-2. Reservations System and Usage Management

The City will install an automatic gate on NCCA parking lot access and will develop and implement an online reservations system to limit site visitation. This may be used to maintain overall usership at a trip generation level that represents a Less than Significant transportation impact per current guidance from the Office of Planning and Research or other relevant entity, *and/or* to prioritize local over regional users such that projected VMT generation is maintained at a level below current applicable significance thresholds. If VMT generation is selected as the metric to guide usership management, it will be projected using current prevailing methods as of the time the relevant analysis is prepared. Management of regional usership may use any of several methods to control trip and/or VMT generation, potentially including but not necessarily limited to

- prioritizing group visits that access the NCCA by bus or van, such as school field trips and senior excursions
- promoting and facilitating carpools and ridesharing for NCCA visitors
- prioritizing local usage over regional usage
- other methods developed by the City based on usership surveys and community priorities and needs

Potential to Increase Hazards Due to Design Geometry or Incompatible Uses

Existing Design Geometry

In 2013, responding to concerns about travel speeds and safety on Canal School Road between Inyo Avenue and Driskell Avenue to the north, the City retained a traffic engineering consultant to perform a safety assessment, identify traffic constraints, and recommend improvements to increase roadway and intersection safety. Traffic volumes were found to be low, but northbound speeds along Canal School Road were high, related to vehicles entering the City from the unincorporated rural County. Collision rates were also substantially higher than would typically be anticipated on similar roadways based on Caltrans studies (3.75 collisions per million vehicles vs. a projected 0.86 collisions per million vehicles over an approximately 4-year period). The majority of the reported collisions involved northbound drivers leaving the road. All but two were single vehicle incidents; one involved failure to yield by a motorist entering Canal School Road from a side street, and another involved a conflict created by motorists slowing to turn at an intersection (K.D. Anderson & Associates 2013).

Factors contributing to roadway safety concerns were identified as including difficulty identifying the roadway margin in dark conditions at night, a horizontal curve at Inyo Avenue that was likely somewhat undersized for higher travel speeds. The study recommended a number improvements to reduce roadway hazards, as follows (K.D. Anderson & Associates 2013).

- installation of an oversized speed limit sign at Inyo Avenue with 45 mile per hour speed limit pavement marking
- restriping of the centerline stripe on Canal School Road within the City
- installation of an edge line stripe on the east side of Canal School Road north of Inyo Avenue
- installation of a street light at the Canal School Road/Inyo Avenue intersection
- installation of a flashing speed limit beacon on the speed limit sign at Inyo Avenue

As of 2021, all of these recommendations have been implemented. As a result, No Impact is anticipated with regard to existing design geometry.

New Design Geometry

None of the NCCA projects are planned to result in modification to public roadways, other than where driveways are added to allow access to the NEWS project gateway area, the MDTW project O&M roads/trails, and the Newman Nature Park parking area. The City's adopted *Improvement Standards and Standard Details*, which apply to all City undertakings, lay out specific requirements for driveway design. First and foremost, all driveway design must comply with Section 73 of Caltrans' *Standard Specifications*, which covers driveways along with related features such as sidewalks, gutters, and curb ramps. In addition to compliance with statewide specifications, the *Improvement Standards* also define additional requirements for vehicle, pedestrian, and facility safety specific to driveway design for City projects.

Additionally, because County encroachment permits would be needed for driveway access to the NEWS project from Canal School Road and to the MDTW and Newman Nature Park projects from Brazo Road, all driveways and associated roadway modifications would be required to meet relevant County standards; designs would be subject to County review and approval. In particular, as mentioned in Section 2, driveway access to the NEWS project may be shifted farther south on Canal School Road from the location shown on Figure 2-4, or may be reconfigured, if requested by the County.

With adherence to the City's required design standards (City *Improvement Standards and Standard Details* and Section 73 of the Caltrans *Standard Specifications*) and relevant County requirements, and with County review to ensure that safety standards are met, there would be No Impact related to hazardous design geometry. No mitigation is required.

Although the planned water service extension could be installed within existing roadways (Option 1, Figure 2-9), affected portions of roadways would be restored to their pre-project conditions following pipeline installation, with no modification to existing designs. The water service extension would therefore have no potential to result in roadway alterations with hazardous design geometry; there would be No Impact, and no mitigation is required.

Overflow Parking

The wetland project, which was funded under a 2019 DFW grant to the City, would be the first project implemented at the NCCA. It would not include provisions for public access and therefore would not generate public parking demand. The NEWS project, funded by an SWRCB grant awarded in early 2021, is expected to be the next project implemented. Because it would include O&M access opened to the public for trails use, some demand for public parking would be generated once the NEWS project comes online. As described in Section 2, this is expected to be accommodated in the gateway area, which would have space for 8 – 10 vehicles at a time and would also offer a space for bus drop-offs. In the first few years of operation, the NEWS project is expected to draw visitors primarily from the local Newman area, anticipated at about 23 visits (= 45.3 / 2; see Table 3-20) per day at a maximum. The length of daylight hours in the Newman area ranges from about 9 hours in the winter to about 14 hours in the summer (Sunrise Sunset 2020). Assuming daytime-only use, and an average visit length of 3 hours, this means each space could turn over about three times on a winter day and about four and a half times on a summer day. These turnover rates would provide capacity for 24 – 30 daily vehicle-visits in the winter and 36 – 45 vehicle visits in the summer, exceeding the anticipated number of daily visits year-round.

Once the Newman Nature Park comes online, it would provide additional parking for NCCA visitors in a parking area off of Brazo Road (Figure 2-7). As described in Section 2, the parking area is expected to provide a total of

35 stalls, including five ADA stalls. As at the NEWS project—assuming about 9 hours of daylight in the winter and 14 hours of daylight in the summer (Sunrise Sunset 2020), daytime use only, and an average visit length of 3 hours—each space at the Nature Park could turn over about three times on a winter day and about four and a half times on a summer day, providing capacity for 90 daily vehicle-visits in the winter and 135 vehicle visits during the summer, in addition to use of the five ADA stalls. On average, as discussed above, the NCCA is projected to generate 85 daily vehicle visits (i.e., 170 daily trips / 2; see Table 3-20) once it is fully operational and regional visitors are added to local usage. At buildout, therefore, the NCCA is expected to continue to have adequate capacity to accommodate anticipated parking demands year-round.

As with any public park, however, there may be periods during the day when peak visitation creates parking demand that exceeds the available supply. This may be particularly true if the NEWS project is in fact constructed first and usage ramps up more quickly than anticipated, before the Newman Nature Park and its larger parking area are constructed. In this case, overflow parking would likely spread onto unpaved shoulders along adjacent roadways. Allowing 25 feet per vehicle, roughly 52 overflow vehicles could be accommodated along just the north side of Inyo Avenue in the 0.25-mile stretch south of Inyo Avenue, increasing available parking by a factor of 5 – 6. This is expected to be more than adequate for peak demands before the availability of additional parking at the Nature Park

Once the Nature Park is completed and the public is accessing the south portion of the 78-acre parcel, about 100 additional vehicles could be accommodated using both sides of Brazo Road east of Canal School Road. This would triple parking supply at the Nature Park, and again should be more than adequate for peak demands. However, although both Inyo Avenue and Brazo Road offer wide shoulder areas, the shoulders are currently unsurfaced and there is a possibility that parking would encroach onto the paved roadway surfaces, which could create conflicts with vehicle travel and/or emergency vehicle passage. Additionally, if NCCA visitors park along the south side of Inyo Avenue, they could impede overflow parking and/or access for homes along this roadway. At worst, all of these impacts could be significant. To address this, the City will implement the following mitigation measure. With Mitigation Measure TR-3 in place, impacts would be reduced to a Less than Significant level.

Mitigation Measure TR-3. Overflow Parking Improvements on Inyo Avenue and Brazo Road

If the NEWS project is constructed before the Newman Nature Park, as part of the NEWS project the City will provide improvements to the north shoulder (only) of Inyo Avenue to provide for safe accomodation of overflow parking. The shoulder will be graded if necessary and will be graveled and/or paved for parking. Existing utilities will be protected in place. Improvements will initially be equal to 20 parking spaces (500 feet), but the City will continue to monitor usage at the NCCA per Mitigation Measure TR-1, and will extend the graveled and/or paved shoulder if necessary, taking into account the anticipated timing of Newman Nature Park construction and increased availability of onsite parking. *No Parking* signage meeting City standards will be installed along the south side of Inyo Avenue to prevent overflow parking from encroaching on residential frontages and access.

In conjunction with improvements to the shoulders of Inyo Avenue, the City will also coordinate with the County Public Works Department to install *No Parking* signs along both sides of Canal School Road adjacent to the NCCA, to prevent overflow parking from encroaching on travel and residential frontages and access along Canal School Road. Installation of signage will be the City's responsibility.

If the NEWS project is constructed after the Newman Nature Park, the City may reevaluate the need for overflow parking along Inyo Avenue based on usage monitoring conducted per Mitigation Measure TR-1. Improvements as described above will be provided if warranted.

As part of the Newman Nature Park project, the City will provide improvements to the shoulders of Brazo Road to provide for safe accommodation of overflow parking. Shoulders on both sides of the road will be graded if necessary, and graveled and/or paved for parking. The length of the improvements will initially be equal to 30 parking spaces (750 feet), but the City will continue to monitor usage at the NCCA per Mitigation Measure TR-1, and will expand the graveled and/or paved shoulder length as needed. If the Newman Nature Park is constructed before the NEWS project, *No Parking* signage along both sides of Canal School Road adjacent to the NCCA will be installed at the time the Nature Park is constructed.

All improvements along Inyo Avenue and Brazo Road will be the City's responsibility but Brazo Road improvements will be coordinated with the County Public Works Department and will meet County roadway standards as laid out in the current version of the *Merced County Department of Public Works Improvement Standards and Specifications*.

Incompatible Uses

Construction of the NCCA projects, installation of the water service extension, and some O&M activities at the NCCA site would temporarily add heavy construction equipment and haul trucks to roadways around the site, for contractor mobilization/demobilization, materials deliveries, and City O&M access. However, area roadways already support some similar types of uses as agricultural equipment is mobilized/demobilized between cultivated areas. Moreover, the presence of equipment and truck traffic for each project, and for future O&M activities, would be short-term and limited. As a result, impacts are considered Less than Significant. No mitigation is required.

Potential to Result in Inadequate Emergency Access

As discussed in the *Hazards & Hazardous Materials* portion of this checklist, the City's *Improvement Standards and Standard Details* provide for traffic control and safety while work is in progress. Roadway closures are generally prohibited, public rights-of-way must be maintained in a convenient, accessible condition, access to private properties must be maintained, and where barricades, pylons, or other similar measures are needed to ensure traffic safety, they must be configured in a manner than enables emergency vehicle passage. With adherence to the *Improvement Standards and Standard Details,* neither construction nor O&M at the NCCA site itself or offsite for the water service extension would result in inadequate emergency access to the NCCA site or to neighboring parcels. There would be No Impact related to inadequate emergency access as a result of construction or O&M, and no mitigation is required.

Additionally, as discussed in the previous item, the City requires driveway design to comply with Caltrans standards and additional City requirements; driveways accessing the NEWS project, MDTW project, and Newman Nature Park would thus be adequate to provide safe ingress and egress by emergency vehicles. O&M access roads would also be designed to accommodate trucks and other large vehicles, enabling emergency vehicles to move through the parcel if needed for emergency response. There would be No Impact related to inadequate emergency access as a result of project design, and no mitigation is required.

Potential to Conflict with Applicable Congestion Management Program and/or LOS Standards

Congestion Management Program

The City does not have a congestion management program, and as a small rural community, has no need for one. The Merced County Association of Governments is responsible for managing congestion Countywide, and does so through its Regional Transportation Plan/Sustainable Communities Strategy (Merced County Association of Governments 2018), which links transportation and land use planning to ensure that the

transportation network addresses both existing and future needs and will continue to operate efficiently over the next 25 years. As identified above, the NCCA projects, and the program as a whole, are consistent with the Regional Transportation Plan/Sustainable Communities Strategy. There would be No Impact related to conflict with this plan, and no mitigation is required.

LOS Standards

The most recent available information on traffic volumes carried by arterial roadways accessing the NCCA site—collected in 2013 as part of a safety assessment for the Canal School Road/Inyo Avenue intersection—are summarized in Table 3-21. Traffic counts were collected each hour in each direction over a 24-hour period, using pneumatic tube counters, and data were then summed to develop daily totals and totals for the morning and evening commute hours (AM Peak Hours and PM Peak Hours, respectively) when traffic is typically at its heaviest.

Table 3-21. Traffic Volumes on Roadways Accessing NCCA

Roadway	Location	Direction	Traffic Volumes		
			Daily	AM Peak Hour	PM Peak Hour
Canal School Road	South of Inyo Avenue	Northbound	1,574	112	149
		Southbound	1,380	111	107
		Total:	***2,954***	***223***	***256***
Canal School Road	South of Rodeo Grounds Way	Northbound	1,684	117	165
		Southbound	1,438	119	105
		Total:	***3,122***	***236***	***270***
Hills Ferry Road	East of Canal School Road	Northbound	2,503	222	202
		Southbound	2,550	131	238
		Total:	***5,053***	***353***	***440***

Source: K.D. Anderson & Associates 2013

As shown in Table 3-21, traffic volumes are comparatively low even taking into account the potential for increases since 2013. All of these roadways are classified as 2-lane arterials[26] that would be expected to maintain the City's (and the County's) minimum LOS standard (LOS C, or light congestion with occasional backups at critical approaches) at traffic volumes between 14,000 and 16,000 (K.D. Anderson 2013, City of Newman 2007). Traffic volumes less than 10,500 represent LOS A (uncongested operation) on 2-lane arterial roadways (City of Newman 2007). Inyo Avenue also qualifies as a 2-lane arterial.

As discussed above and itemized in Section 2, construction of each of the NCCA projects would add a small number of vehicles to roadways in the vicinity of the NCCA site: a (likely unrealistic) outside maximum of slightly over 60 round trips or 120 one-way trips per day if all projects were under construction at the same time, with slightly over 20 round trips or 40 one-way trips per day more likely. Since these roadways are all currently operating well under capacity, and expected to continue in this condition for the immediate foreseeable future, there should be No Impact on roadway or intersection LOS as a result of construction traffic. No mitigation is required.

[26] The City defines *arterials* as "major roadways that provide the primary routes across Newman and connect the city with surrounding sities as well as with adjacent major highways" (City of Newman 2007).

At buildout, the NCCA is anticipated to generate as much as 170 one-way trips per day, factoring in both local and regional visitor usage, with all projects considered; trip generation for each of the projects individually would represent a fraction of this total. O&M would add an additional small number of trips, as detailed in Section 2 and mitigation measures in this checklist. This comparatively small increase in traffic—considered project-by-project or as a buildout total—would be well within roadway capacity and would have No Impact on roadway or intersection LOS in the vicinity of the NCCA. Regional effects on LOS would be proportionally smaller, since regional visitors would come from a wider area, distributing a small number of trips over a larger roadway network. No Impact on regional roadway or intersection LOS is anticipated. No mitigation is required.

References Cited in this Section

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XVIII. TRIBAL CULTURAL RESOURCES *Would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as 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 Section 5024.1[a]	☐	☐	☐	■

[a]In applying the criteria set forth in Subdivision [c] of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Discussion of Checklist Responses

Potential for Adverse Change in Significance of a Tribal Cultural Resource

As discussed in more detail in the *Cultural Resources* section of this checklist, a search of the NAHC's Sacred Lands database and outreach to local Native American authorities identified no tribal cultural resources associated with the NCCA site. No known prehistoric, ethnographic, or contemporary Native American tribal cultural resources, including sacred places and traditional use areas, were identified in, adjacent to, or near either of the NCCA parcels (Basin Research Associates 2020). No Impact on tribal cultural resources—including NRHP- and CRHR-listed resources and those identified by local agencies—is anticipated, and no mitigation is required.

Reference Cited in this Section

Basin Research Associates. 2020. Historic Property Survey Report/Finding of Effect: City of Newman Community Conservation Area, 78- and 24-Acre Parcels, Merced County, California. San Leandro, CA. Prepared for Redtail Consulting, Fremont, CA. (Appendix D to this Initial Study.)

XIX. UTILITIES & SERVICE SYSTEMS *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Require or result in the relocation or construction of new or expanded water or wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	■ (NEWS and project and Newman Nature Park, water service only)	☐	■ (wetland and MDTW projects, all utilities; NEWS project and Newman Nature Park, wastewater, stormwater, natural gas, electricity telecommunications)
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	■
(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
(d) 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?	☐	☐	☐	■
(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	■

Discussion of Checklist Responses

Potential Need for New or Relocated Utilities

The wetland project and MDTW project would not require water or wastewater service, additional offsite stormwater drainage infrastructure, electricity, natural gas service, or telecommunications service. They would have No Impact related to the need for new or relocated utilities, and no mitigation is required.

The NEWS project similarly would have no need for wastewater service, improvements to offsite stormwater drainage infrastructure, electricity, natural gas service, or telecommunications service. It would have No Impact

related to the need for new or relocated utilities of these types, and no mitigation is required.

Lighting at the Newman Nature Park would be solar-powered, so there would be no need for electric service. Restrooms would offer composting toilets, avoiding the need for wastewater service. Runoff from small areas of hardscape would be directed to landscape and garden areas for onsite reuse, so there would be no effect on offsite storm drainage needs. There would also be no need for natural gas service or telecommunications services at the Nature Park. The Newman Nature Park would therefore have No Impact related to these any of these utilities, and no mitigation is required.

The NEWS project and Newman Nature Park would, however, be served by City water—at the NEWS project, this would support water-efficient irrigation in the gateway area, and at the Nature Park, it would be used for irrigation in the demonstration gardens and parking area landscaping, and for the hydration station, learning area sink, and handwashing facilities. As discussed in Section 2 and previous checklist sections, water service would be extended from the City's existing 8-inch-diameter water pipeline at the corner of Canal School Road and Inyo Avenue. The new installation could be coordinated with NEWS project or Newman Nature Park construction, phased between the projects, or—less likely—could occur as a separate installation once it is certain the other projects will proceed. Impacts of extending water service to the Nature Park have been considered under all relevant resource topics in this checklist, with mitigation identified where appropriate (see *Noise* section). No additional impacts not discussed elsewhere in this checklist are anticipated. Since mitigation has been identified elsewhere in this checklist for impacts of water service installation, and the need for water service is an outcome of the NEWS and Newman Nature Park projects, impacts of these projects with regard to water service installation are considered Less than Significant with mitigation incorporated. No additional mitigation is required.

Potential for Insufficient Water Supplies

The NCCA projects would not involve housing construction and would neither increase nor relocate populations (see *Population & Housing* above). As a result, they would not increase regional water demand. As discussed in the *Hydrology & Water Quality* section of this checklist, construction of each of the NCCA projects would entail limited, short-term, and temporary use of City water supply. Limited use of Miller Ditch and/or City water could continue to support hand watering of plantings at the NEWS, wetland, and MDTW projects in the vegetation establishment period immediately following construction, particularly if construction occurs during unusually dry or hot years. If Miller Ditch water is used, consumption would likely be less than under the current flood irrigation regime. Over the long term, irrigation at the NEWS project and Newman Nature Park and the handwashing and outoor classroom area sinks and hydration station at the Nature Park would rely on City water. Some O&M activities would also likely make intermittent use of City water over the long term. However, usage both during and after construction would be limited, and, as discussed in *Hydrology & Water Quality* above, City water planning takes both construction and municipal usage into account; as a result, none of the NCCA projects is expected to result in water supply insufficiency in normal, dry, or even multiple dry years. No Impact is anticipated, and no mitigation is required.

Potential for Determination of Inadequate Capacity by Wastewater Treatment Provider

The City provides wastewater treatment for most uses within City limits, although some properties, both within City limits and in the City's larger Sphere of Influence, remain on septic systems. Wastewater from the City is conveyed to the City's Wastewater Treatment Plant (WWTP), located about 1 mile north of the City adjacent to the Newman Wasteway, within the Sphere of Influence but outside City limits. The WWTP is operated by the Public Works Department and is mandated by the General Plan to maintain adequate capacity to serve the needs of existing and future development (City of Newman 2007).

The NEWS project, wetland project, and MDTW project would not generate wastewater and thus would have no potential to result in a determination of inadequate wastewater treatment capacity. The only wastewater generated by the Newman Nature Park would be from the handwashing sinks at the restrooms and sink in the outdoor classroom/learning area, since the restrooms would be equipped with composting toilets. Drainage from the handwashing and classroom area sinks would be accommodated in vegetated planter/French drain systems; there would be no need to route wastewater from the Nature Park offsite for treatment. As a result, the Newman Nature Park would also have no potential to result in a determination of inadequate wastewater treatment capacity. There would be No Impact, and no mitigation is required.

Potential to Generate Excessive Solid Waste or Impair Waste Reduction Goals

The following discussion addresses the potential to generate solid waste that would exceed the capacity of local infrastructure or otherwise impair the attainment of the City's solid waste reduction goals. Compliance with federal, state, and local waste reduction standards is discussed below, under the next item.

Solid waste from the City and immediate surrounding area is handled by Bertolotti Disposal. Solid waste is transported to the Stanislaus County Fink Road Sanitary Landfill, located nearby in Crows Landing, for disposal. The County of Stanislaus recently applied to the California Department of Resources Recycling and Recovery (CalRecycle) for a revision to the Fink Road Landfill's operating permit that would authorize increasing landfill design capacity from 14.64 to 18.29 million cubic yards and extending the landfill's anticipated closure date from 2023 to 2050 (CalRecycle 2020a). The requested permit revisions were approved in March 2020, nearly doubling the landfill's permitted capacity. Greenwaste is collected by the City for composting at a facility in the Modesto area.

Construction Period. Construction of each of the NCCA projects would generate some waste, including excavated soils, vegetation slash suitable for greenwasting, and trash and food refuse from construction staff meals onsite..

For the NEWS project, the majority of the "waste" generated by construction would be excavated soils, estimated to total on the order of 108,000 CY (Whitaker Construction 2020). The City has received a request from a local landowner to purchase excavated soils for offsite reuse and anticipates that the majority of NEWS excavation spoils would be sold to this party or other local developers; this is a common practice in the Newman area due to the need to raise building pads above the flood elevation. A similar arrangement is anticipated for excavation spoils from the MDTW project. Excavation—and the resulting need for spoils reuse or disposal—would be substantially less for the wetland project and Newman Nature Park.

With larger volumes of excavation spoils sold to private parties for offsite reuse, the total amount of construction waste requiring disposal is expected to be well within the expanded capacity of the Fink Road Landfill for all of the NCCA projects. If any site soils are found unsuitable for offsite reuse as a result of the soil testing required under Mitigation Measure C-1 (see Table 3-23 in *Mandatory Findings of Significance* below), they would be offhauled for appropriate disposal per applicable state and federal regulations. Volumes are not expected to be large and should be easily accomodated at suitable facilities. Construction is therefore not expected to result in generation of solid waste exceeding the capacity of local infrastructure, nor would it otherwise impair the the City's ability to achieve its goals of reducing solid waste at the source. There would be No Impact, and no mitigation is required.

Water service extension would also generate some waste during construction. If Option 2 (Figure 2-9) along the boundaries of the 78-acre parcel is selected, the types of waste would be similar to those described for the four NCCA projects: excavated soils, vegetation slash, and trash and food refuse from construction staff meals. If

Option 1 within existing roadways is chosen, waste would include pavement removed to open the pipeline trench and any excavated materials that cannot be reused onsite. In either case, volumes would be comparatively small and are expected to be well within the scope of projects typically accommodated at the Fink Road landfill. No Impact related to exessive solid waste generation or impedance of solid waste reduction goals is anticipated, and no mitigation is required.

Operations & Maintenance. Similar to construction, ongoing O&M at the NCCA site would also generate some solid waste. This would include sediment removed from the NEWS and MDTW project forebays, trash and recycling collected in onsite receptacles from visitors to the facilities, and waste materials from periodic facilities upkeep and repairs.

Sediment removal is expected to occur once every 5 – 10 years at the NEWS project; the MDTW project would likely be similar. Volumes at both projects would be comparatively small. At the NEWS project, removals would be approximately 50% of the total forebay capacity (see *Project Operations & Maintenance* in Section 2 of this Initial Study), or about 10,000 CY, assuming a 2.5-acre forebay with a depth of approximately 5 feet (RICK Engineering 2020). Design for the MDTW project is still in the conceptual phases, but assuming an approximately 1.75-acre forebay per the conceptual design (Figure 2-8) and a similar program of removals when sediment accumulation reaches 50% of total forebay capacity, removals would be on the order of 7,000 CY with a forebay depth of 5 feet and 14,000 CY if the forebay is as deep as 10 feet.

Because of the potential for heavy metal and other contamination, sediment from the NEWS project may need to be disposed rather than sold for reuse. This may also be appropriate for the MDTW project due to the potential for agricultural contaminants. As discussed in the *Hazards & Hazardous Materials* section of this checklist (see Mitigation Measure HAZ-1), sediment would be tested prior to disposal and would be routed to the appropriate type of landfill based on contaminant levels. This could be the Fink Road Landfill, or—if contaminant levels are elevated—could be an alternate Class II or Class I facility. Alternately, if sediment proves not to be contaminated, some or all of it may be saleable for offsite reuse, and the City would seek to do so if feasible. Because of the infrequent need for disposal of sediment, the limited volumes involved at any one time, and the potential for waste to be diverted to any of several facilities and/or sold offsite, disposal of sediment removed from the NEWS and MDTW project forebays is expected to be within the capacity of receiving landfills. Sediment removal is therefore not considered to represent generation of solid waste in excess the capacity of local infrastructure, nor would it otherwise impair the attainment of the City's solid waste reduction goals. There would be No Impact, and no mitigation is required.

Based on experience at other City recreational facilities, the City estimates that routine generation of trash and recycling from the NCCA projects would be on the order of 2 cubic yards/week or less, although special events or periods of higher than normal use could temporarily increase waste generation. As of 2019, however, the Fink Road landfill was receiving almost 800 tons of solid waste each day, or more than 5,000 tons weekly (County of Stanislaus 2019); thus, even doubling or tripling the anticipated waste generation level of 2 cubic yards/week would still represent a small fraction of the total waste received by the Fink Road Landfill and recycling facilities. Waste generated by occasional facility repairs would be intermittent and small-volume. Neither source is considered to represent excessive waste generation and neither source would exceed the capacity of local infrastructure or otherwise impair the attainment of the City's solid waste reduction goals. There would be No Impact, and no mitigation is required.

Compliance with Federal, State, and Local Solid Waste Management and Reduction Statutes

Numerous statutes and regulations at the federal, state, and local levels govern solid waste management and waste stream reduction. At the federal level, these include the Resource Conservation and Recovery Act

(RCRA) of 1976 and Pollution Prevention Act (PPA) of 1990. At the state level, the most relevant statue is the Integrated Waste Management Act of 1989.

Responding to concerns about dwindling availability of landfill capacity, the Integrated Waste Management Act established targets of 25% diversion of solid waste from landfills by January 1, 1995, and 50% diversion of waste by January 1, 2000, applicable to all California cities and counties. Each city and county was required to develop a Source Reduction and Recycling Element that lays out a program of source reduction, recycling, and composting to reduce waste delivery to landfills, identifies the landfill and transformation capacity needed to accommodate waste that cannot be diverted, and provides for public education on waste reduction, among other requirements. Counties were also required to prepare a Siting Element that identifies areas where waste disposal and transformation facilities can be located to meet the needs identified in Source Reduction and Recycling Elements. Source Reduction and Recycling Elements, and County Siting Elements, were required to be reviewed and approved by the California Integrated Waste Management Board (established by the Act from prior existing state boards), and must be updated and re-approved every 5 years.

The City, as well as the County of Stanislaus (where the City is located) and the County of Merced (where the NCCA site is located), all have Source Reduction and Recycling Elements in place. The City's General Plan includes a Goal requiring that the City "provide for the collection and disposal of solid waste while minimizing the generation of waste" (Goal PFS-7, City of Newman 2007). Policies under this goal include PFS-7.1, requiring continued compliance with and updates to the adopted and state-approved Source Reduction and Recycling Element, and PFS-7.4, requiring the City to meet or exceed all state standards relative to waste management and reduction. Enforcement at the project-specific level is provided by Building Department oversight and the Public Works Department's construction inspectors.

With the City's waste management and waste reduction policies in place, both construction and O&M for the NCCA projects would be maintained in compliance with all applicable local and state statutes and regulations governing solid waste management. The state statutes are complementary to and consistent with federal requirements; compliance with state statutes would therefore also maintain the City and NCCA projects in compliance with applicable federal requirements. There would be No Impact related to conflict with federal, state, or local waste management and reduction statutes. No mitigation is required.

References Cited in this Section

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XX. WILDFIRE *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or to the uncontrolled spread of a wildfire?	☐	☐	☐	■
(c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, or power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
(d) 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?	☐	☐	☐	■

Discussion of Checklist Responses

Background

Firefighting responsibility in California wildlands is divided among local, state, and federal entities depending on land ownership, characteristics, population, and incorporation status. Section 4125 of the California Public Resources Code charges the Board of Forestry and Fire Protection with delineating portions of the state where the financial responsibility for preventing and suppressing wildland fires rests primarily with the state. These *State Responsibility Areas* (SRAs) include

- lands that are partially or wholly covered by forests or by trees that produce or are capable of producing forest products
- lands that are sources of water for irrigation, domestic, or industrial use and are partially or wholly covered by vegetation that protects the soil from excessive erosion, retards runoff, or accelerates groundwater infiltration

Adjacent lands that are used, or have the potential to be used, for range or forage purposes are also considered SRAs, as are unincorporated city and county areas with populations less than 25,000, unless the county has accepted fire prevention and suppression responsibility by ordinance. The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for protection within SRAs.

Lands owned or controlled by a federal agency are considered Federal Responsibility Areas (FRAs), and most lands within incorporated city or county boundaries are considered Local Responsibility Areas (LRAs) (California Code of Regulations Sections 4125 – 4129). Within FRAs, fire protection is typically provided by the federal agency that owns or manages the land. Within incorporated LRAs, the local jurisdiction is typically the fire protection provider. In the City itself, fire protection is provided by the Newman Fire Department, a 20-member volunteer force that recently received an Insurance Services Office (ISO) rating of 5.[27] Lands outside city limits to the south and east, including the NCCA site, are served by the Merced County Fire Department.

Potential for Wildfire Impacts

The NCCA site is surrounded by actively cultivated croplands immediately outside City limits; as discussed in the *Hazards & Hazardous Materials* section of this checklist, it is not within a wildland area nor is it on the urban-wildland interface. It is also outside zones of High and Very High Fire Hazard Severity identified by CAL FIRE for the western San Joaquin Valley and the adjacent rangefront (California Department of Forestry and Fire Protection 2020). The NCCA projects

- would have no potential to impair an adopted emergency response plan or emergency evacuation plan for a wildland area
- would not involve or modify the management of wildlands and thus would have no potential to increase the overall risk of wildfire in the area
- would not result in development in or adjacent to wildlands, potentially increasing exposure to wildfire or wildfire-related pollutants
- would not require installation or maintenance of infrastructure in wildlands, potentially increasing wildfire risks
- would not construct housing or relocate populations and therefore would not expose people or structures to risks associated with wildland fire, including fire and smoke damage, accelerated post-fire runoff, post-fire slope instability, and drainage changes

There would be No Impact related to an increase in wildfire-related hazards, and no mitigation is required.

Reference Cited in this Section

California Department of Forestry and Fire Protection. 2020. FHSZ Viewer. Available: https://egis.fire.ca.gov/FHSZ/. Accessed: August 2020.

[27] The ISO evaluates fire departments to determine property insurance costs using a 100-point Fire Suppression Rating Schedule that evaluates key factors affecting department performance: emergency communication systems (10 points), department-related factors (personnel, capabilities, equipment, and training) (50 points), water supply (40 points), and community risk reduction (5.5 "extra credit" points). Overall ISO ratings range from 1 to 10, with 1 considered the best.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	■ (overall degradation of environmental quality, elimination of examples of major periods of California history/prehistory)	☐	■ (reduction or elimination of fish and wildlife populations, including rare species, elimination of plant or animal communities)
(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■ (*Hydrology & Water Quality*, contributions to downstream impairments for mercury, pesticides)	■ (all other resources)	☐
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■ (multiple potential Benefits)	☐	☐

Discussion of Checklist Responses

Potential to Degrade the Quality of the Environment

Potential for Substantial Environmental Degradation

As detailed in prior sections of this checklist (*Aesthetics*, *Biological Resources*, *Cultural Resources*, *Geology & Soils*, *Hazards & Hazardous Materials*, *Noise*, and *Transportation*), the NCCA projects would have some potential to result in Significant short- and/or long-term impacts on several resources. However, the City has committed to mitigation measures to address all of these impacts, as laid out in Table 3-22. With these measures in place, all impacts identified would be reduced to Less than Significant levels. The potential for substantial environmental degradation is therefore considered Less than Significant with Mitigation Incorporated, and no additional mitigation is required.

Table 3-22. Summary of Potentially Significant Impacts and Mitigation Measures

Potentially Significant Impact	Mitigation Measure(s)
Aesthetics	
Adverse Effects on a Scenic Vista *(construction period)*	• AES-1. Construction Site Housekeeping and Visual Screening • AES-2. Visual Disturbance Coordinator
Degradation of Visual Character or Quality *(construction period)*	• AES-1. Construction Site Housekeeping and Visual Screening • AES-2. Visual Disturbance Coordinator
New Sources of Light or Glare *(long-term O&M)*	• AES-3. Use of Non-Glare Finishes • AES-4. Standards for Nighttime Security Lighting
Biological Resources	
Adverse Effects on Special-Status Species: Disturbance and/or Removal of Parry's Rough Tarplant *(construction, NEWS and wetland projects)*	• BIO-1. Protection and Recovery of Parry's Rough Tarplant at NCCA Site
Adverse Effects on Sensitive Natural Communities (Coastal and Valley Freshwater Marsh) *(long term)*	• BIO-2. Long-Term Protection and Restoration of Coastal and Valley Freshwater Marsh and Other Sensitive Habitats
Cultural Resources	
Adverse Change in Significance of Historical Resources *(construction and long-term O&M)*	• CUL-1. Protection of Old Santa Fe Grade
Adverse Change in Significance of Archaeological Resources *(construction and long-term O&M)*	• CUL-2. Retention of On-Call Archaeologist • CUL-3. Worker Awareness Training for Cultural Resources • CUL-4. Evaluation and Treatment of Unanticipated Archaeological Discoveries
Disturbance of Human Remains *(construction and long-term O&M)*	• CUL-5. Procedures for Discovery of Human Remains
Geology & Soils	
Topsoil Loss *(construction and long-term O&M)*	• GEO-1. Topsoil Protection
Destruction of Paleontological Resources *(construction)*	• GEO-2. Final Design Evaluation and PRMP Development • GEO-3. PRMP Implementation • GEO-4. Worker Awareness Training for Paleontological Resources
Destruction of Paleontological Resources *(long-term O&M)*	• GEO-5. Paleontological Consultation for Ground-Disturbing O&M Activities
Hazards & Hazardous Materials	
Hazards Related to Transport, Use, or Disposal of Hazardous Materials *(long-term O&M)*	• HAZ-1. Testing and Appropriate Disposal of Forebay Sediment
Unanticipated Hazardous Materials Discoveries *(construction and long-term O&M)*	• HAZ-2. Hazardous Materials Response • C-1. Pre- and Post-Construction Soil Testing for Mercury
Noise	
Potential to Generate Substantially Increased Ambient Noise Levels *(construction)*	• NOI-1. Reduced Construction Hours in Vicinity of Residences • NOI-2. Noise Disturbance Coordinator
Potential to Generate Excessive Groundborne Vibration/Groundborne Noise *(construction, water service extension only)*	• NOI-3. Limits on Use of Impact and Vibratory Equipment Near Residences

Potentially Significant Impact	Mitigation Measure(s)
Transportation	
Conflict or Inconsistency with *CEQA Guidelines* Section 15064.3[b] *(long term)*	• TR-1. NCCA Usage Monitoring • TR-2. Reservations System and Usage Management
Increased Hazards Due to Design Geometry *(overflow parking)*	• TR-3. Overflow Parking Improvements on Inyo Avenue and Brazo Road

Potential for Substantial Reduction in Habitat, Reduction in Fish and Wildlife Populations Below Self-Sustaining Levels, Elimination of Plant or Animal Communities, or Reduction or Restriction of Rare or Endangered Plant or Animal Ranges

As discussed in detail in the *Biological Resources* section of this checklist, all of the NCCA projects would incorporate AMMs for special-status species during construction (Table 2-15). AMMs would remain in force during O&M for the lifespan of all four projects. Additionally, as itemized in Table 3-22, the City has committed to mitigation measures to address potential impacts on Parry's rough tarplant and sensitive natural communities, reducing them to levels evaluated as Less than Significant. Moreover, over time, the NEWS, wetland, and MDTW projects would all improve habitat function and value on the NCCA site by comparison with current conditions. As a result, none of these projects would substantially reduce fish and wildlife habitat availability, reduce fish or wildlife populations, eliminate plant or animal communities, or substantially reduce the number or restrict the range of any rare or endangered plant or animal species. On the contrary, they are expected to result in long-term overall Benefits to special-status plants and several special-status wildlife species, including northwestern pond turtle, western spadefoot, giant garter snake, and Yellow-billed Magpie. They are also expected to result in Benefits to breeding for a number of special-status bird species: Tricolored Blackbird, Swainson's Hawk, Northern Harrier, Loggerhead Shrike, Yellow-billed Magpie, and non-listed birds protected by the federal Migratory Bird Treaty Act. There would be No Impact under this criterion as a result of the NEWS, wetland, or MDTW project, and no mitigation is required.

The Newman Nature Park would result in a small loss of fairly low-value wetland and non-native grassland habitat to enable construction of the community facilities on the 78-acre parcel. However, in view of the NCCA site's disturbed condition and current use for grazing, the abundance of open cultivated lands surrounding the site, and the availability of less-disturbed and higher-quality habitat along the nearby San Joaquin River corridor, this is not considered to represent a substantial reduction in wildlife habitat and would not create pressures causing local populations to drop below self-sustaining levels or threatening to eliminate plant or animal communities. Moreover, losses of wetland habitat are expected to be compensated consistent with regulatory requirements under permits needed to authorize the project. Additionally, like the other NCCA projects, the Newman Nature Park would incorporate extensive AMMs (Table 2-15) to protect special-status species both during initial construction and over the long term. It would therefore have no potential to substantially reduce the number or restrict the range of any rare or endangered plant or animal species. There would be No Impact under this criterion as a result of the Newman Nature Park project, and no mitigation is required.

Potential to Eliminate Important Examples of California History or Prehistory

As discussed in more detail in the *Cultural Resources* section of this checklist, if work associated with the wetland project is not staged and contained appropriately, there would be some potential for direct impacts on the historic Santa Fe Grade, which was originally constructed to provide railroad passage through wetlands in the western San Joaquin Valley, was never used for its intended purpose, and was subsequently converted to a roadway accessing ranchlands owned by the Miller and Lux cattle company. The City has committed to mitigation to prevent such impacts (Mitigation Measure CUL-1, *Protection of Old Santa Fe Grade*). With this

measure incorporated, impacts would be reduced to a Less than Significant Level. No additional mitigation is required.

The NCCA site is not considered sensitive for archaeological resources, but as in any area with a long history of human habitation, there may be some potential for unanticipated discoveries, including both archaeological resources and human remains. To address this potential, the City has committed to additional mitigation measures, as follows.

- CUL-2. Retention of On-Call Archaeologist
- CUL-3. Worker Awareness Training for Cultural Resources
- CUL-4. Evaluation and Treatment of Unanticipated Archaeological Discoveries
- CUL-5. Procedures for Discovery of Human Remains

With these measures in place, impacts would be reduced to a Less than Significant level. No additional mitigation is required.

Potential Contributions to Cumulative Impacts

CEQA Requirements

The state's *CEQA Guidelines* explicitly recognize that no project is implemented in a vacuum: a project's effects may combine with those of other past, present, and future projects to create an additive effect on the environment. Repeated small impacts over time may also accumulate to create a larger impact. As a result, in addition to considering a proposed project's incremental (project-specific) outcomes (discussed in the preceding checklist sections), lead agencies are required to analyze *cumulative impacts,* which include:

- the combined impacts of multiple projects, including the proposed project (*CEQA Guidelines* 15355[b]), and
- the combined impact of repeated activities under a single project over time (*CEQA Guidelines* 15355[a])

A project's incremental (project-specific) impact may be individually less than significant, but become significant when viewed in connection with the effects of of other past, present, and future projects—that is, it may become *cumulatively considerable* in the larger context (*CEQA Guidelines* 15065[a][3]). Both types of impacts must be discussed in detail when the impact would be significant and the project has the potential to make a cumulatively considerable contribution (*CEQA Guidelines* 15130).

Two approaches are permitted as the basis to identify cumulative impacts that warrant analysis

- a list of past, present, and probable future projects, including projects outside the control of the lead agency for the proposed project (*CEQA Guidelines 15130*[b][1][a]), or
- a summary of projections contained in an adopted local, regional, or statewide plan, such as a general plan, a regional transportation plan, or a greenhouse gas emissions reduction, or a prior environmental document prepared for such a plan (CEQA Guidelines 15130[b][1][B])

When the "list" approach is used, the lead agency must consider and define the appropriate geographic scope for analysis (*CEQA Guidelines* 15130[b][1][B][3]). Although not explicitly required by the *Guidelines*, this step also makes sense as the starting point for analysis using the "summary of plan projects" approach.

Methods Used in Cumulative Impacts Analysis

The following analysis used a modified version of the "summary" approach. The summary approach requires a broad, long-term view of regional conditions, and was therefore identified as suitable for the resources most relevant to the NCCA projects' potential impacts (and benefits)—for instance, biological resources and water quality. In view of the comparatively short duration of work required to construct each the NCCA projects and their location at a remove from rapidly developing areas, the potential for overlap, if any, between NCCA project construction and other projects would be fairly limited. However, the NCCA projects themselves are both individual undertakings and components of a long-term program of improvements to the NCCA site. Thus, even without additional projects in the vicinity, these four projects would have the potential to result in combined cumulative effects on the environment, potentially both adverse and beneficial. Analysis therefore considered the individual projects' potential to (1) contribute to and (2) independently create cumulative impacts, as well as their combined potential to result, as a program, in new cumulative impacts.

Outcomes of Cumulative Impacts Analysis

Table 3-23 presents the cumulative impacts analysis and findings for the NCCA projects. AMMs referenced in Table 3-23 are presented in detail in Table 2-15.

Note that Table 3-23 omits the resources on which the NCCA projects have been found to have No Impact at the project-specific level (*Agriculture & Forestry Resources*, *Energy*, *Land Use & Planning*, *Mineral Resources*, *Population & Housing*, *Public Services*, and *Wildfire*). With No Impact, the NCCA projects would have no potential either to contribute to an existing Significant cumulative impact on these resources, or to create a new cumulative impact due to repeated activities over the long term, either individually or collectively.

The only projects anticipated in the NCCA vicinity are minor undertakings (single building permits) in the unincorporated County that would have very short construction periods and very limited potential for impacts (Maxey pers. comm.). As a result, cumulative impacts on all resource topices, if any, resulting from overlap between any of the NCCA projects and other reasonably foreseeable unrelated undertakings in the vicinity are expected to be Less than Significant. This topic is not discussed further, and no mitigation is required.

Potential for Substantial Adverse Effects on Human Beings

As described in Section 2 of this Initial Study, the City has committed to a suite of AMMs to avoid and reduce adverse environmental effects during construction and long-term O&M (Table 2-15). Additionally, as Table 3-22 above itemizes, the City has committed to mitigation measures that would reduce project-specific impacts that cannot be avoided through the AMMs to a Less than Significant level. The City will also implement mitigation measures at the cumulative level to address the potential for contributions to the Significant existing cumulative impacts with regard to mercury impairment and pesticide impairment in downstream receiving waters (Mitigation Measures C-1, C-2, and C-3; see Table 3-23). With all of these measures incorporated, the short- and long-term potential for the NCCA projects to result in adverse effects—either direct or indirect—on human beings would be Less than Significant. No additional mitigation is required.

Additionally, the NCCA—and the individual NCCA projects—were developed with the aim of providing specific benefits to the community and the environment, as laid out in the *Goals and Objectives* presented in Section 1 of this Initial Study. Based on analysis presented in the preceding sections of this checklist, the following

Table 3-23. Cumulative Impacts Analysis

Area of Analysis		Significant Existing Cumulative Impact?	Analysis Needed		Discussion
Area Included	Rationale		Contribution to Existing Impact	Potential for New Impact	
Aesthetics					
General Plan Planning Area and immediate surrounds	Aesthetic values in incorporated areas are regulated at the local jurisdiction level, through the General Plan, Precise or Specific Plans, zoning ordinances, and other regulations and policies. Aesthetic character and quality can vary substantially between adjacent communities, and even within a single jurisdiction, depending on permitted land uses and the governing plan document(s), and aesthetics in each community exists in the context of that community as well as neighboring jurisdictions (in this case, portions of unincorporated Stanislaus and Merced Counties adjoining the Planning Area).	No. Aesthetic character and quality in the City (including the Sphere of Influence and larger Planning Area) are controlled and maintained through the General Plan (City of Newman 2007) and zoning ordinance, which provide Goals, Policies, Actions, and standards aimed at maintaining community character and aesthetics. Aesthetics in adjacent areas of unincorporated Stanislaus and Merced Counties are controlled by the Counties' respective General Plans (County of Merced 2013, County of Stanislaus 2015) and zoning ordinances.		■	<u>Individual Potential to Create or Contribute to New Impact</u> Lands surrounding the NCCA site are currently zoned and planned for agricultural use. The following discussion assumes that agricultural uses would continue in the site vicinity, but allows for the potential that zoning could change in the future, such that construction related to new development replaces agricultural activity on some neighboring parcels. The planned water service extension would have No Impact over the long term on visual resources, other than enabling some of the Benefits associated with the NEWS project. As a result, it is discussed below only when relevant. *Construction Period and Visual Recovery.* All of the NCCA projects would require vegetation removal, some degree of grading, and construction staging/laydown, which would result in visual changes some viewers may experience as adverse, potentially representing Significant impacts at the project-specific level. Additionally, if construction of any of the NCCA projects were to overlap with construction on nearby parcels, total visual disturbance would be amplified and could represent a Significant cumulative impact. All of this would also be true for water service extension. However, as described in the *Aesthetics* section of this checklist, the City has committed to mitigation measures to reduce the visual impacts of construction at the NCCA site and provide the community with a way of reporting any aesthetic concerns and ensuring that reasonable measures are implemented to correct the problem. With measures AES-1 (*Construction Site Housekeeping and Visual Screening*) and AES-2 (*Visual Disturbance Coordinator*) in place, project-specific visual impacts during the construction period would be reduced to a Less than Significant level, and each project's construction-period contribution to potential cumulative impacts would be controlled, rendering it Less than Cumulatively Considerable. Following construction, each of the NCCA projects would undergo a visual recovery period while new plantings become established, transitioning to the project's final, mature appearance. During this period, visual disturbance would be substantially reduced from that experienced during construction since earthwork would be complete, heavy equipment would no longer be active on the site, and there would be no need for materials staging, and the appearance of the completed project site would be neat, orderly, and generally consistent with the cultivated character of surrounding agricultural lands. As a result, visual changes during the recovery/establishment period are not expected to substantially affect the visual intactness or unity of views in the vicinity of the site, and some viewers may experience the addition of water features at the NEWS and MDTW projects and tree plantings at the NEWS and wetland projects as Benefits to the vividness of area views. Recovery period conditions associated with water service extension Option 2 would be similar, and although it would not independently result in visual Benefits, it would enable Benefits associated with the NEWS project. The individual projects' recovery period contributions to potential cumulative impacts associated with overlapping construction periods are therefore evaluated as Less than Cumulatively Considerable and potentially Beneficial. No additional mitigation is required at the cumulative level, and no further analysis is warranted. *Long Term.* Once the projects become fully established, their appearance would be relatively stable. As green, vegetated areas, the footprints of the NEWS, wetland, and MDTW projects would be generally consistent with surrounding agricultural lands, and farther to the east, with natural areas along the San Joaquin River corridor. Repeated activities associated with the projects would be limited to routine O&M and the presence of visitors enjoying the new amenities. The small numbers of vehicles and staff onsite for O&M at each of the projects would not be visually out of place in an actively cultivated agricultural area, and even the infrequent presence of heavy equipment for sediment removal in the NEWS and MDTW project forebays would be consistent with activity on neighboring parcels. The routine presence of visitors and their vehicles would add a new visual element but would be largely screened from offsite viewers by vegetation, including trees planted along Canal School Road and in the gateway area by the NEWS project and plantings around the Newman Nature Park parking area (see Figures 2-5 and 2-7). As a result, neither long-term O&M nor visitor activity at the individual NCCA projects is expected to result in material visual disturbance. New cumulative impacts, if any, related to ongoing O&M and use of the individual NCCA projects are expected to be Less than Significant, and contributions to larger cumulative impacts on visual resources in the site vicinity, if any, are expected to be Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted.

Area of Analysis		Significant Existing Cumulative Impact?	Analysis Needed		Discussion
Area Included	Rationale		Contribution to Existing Impact	Potential for New Impact	
					Program Potential to Create or Contribute to New Impact *Construction Period and Visual Recovery*. Depending on the availability of funding, there is some potential that more than one of the NCCA projects could be under construction at the same time, and water service extension would likely be coordinated with construction of the NEWS project and/or Newman Nature Park. If so, visual impacts of construction would be more extensive, and would represent a cumulative effect. The contribution to a larger cumulative impact would also be greater, if multiple NCCA projects overlap with construction on nearby parcels. However, the same mitigation measures (AES-1 and AES-2) would be in effect to reduce visual disturbance, decreasing both the cumulative impact of constructing more than one NCCA project at the same time and the projects' combined contribution to larger effects. Additionally, with multiple projects at the NCCA constructed at once, the total duration of visual disturbance would be reduced. As a result, potential cumulative impacts associated with constructing multiple NCCA projects during the same window are expected to be Less than Significant, and the contribution to a larger cumulative impact would be Less than Cumulatively Considerable. No additional mitigation is required at the cumulative level, and no further analysis is warranted. *Long Term*. As each NCCA project is completed, the level of O&M activity at the site would increase, incrementally increasing the number of vehicle visits to the site, and the number of staff intermittently present. Visitor use is also expected to increase as the NCCA becomes increasingly established and well known in the community. The potential for visual disturbance would therefore amplify as each project is added to the site. As identified above on a project-specific level, however, activity and usage would still be limited, and the maximum level of activity and usage would still be generally consistent with agricultural activity on surrounding parcels. Additionally, as identified above on a project-specific level, activity and vehicles would be increasingly screened by tree plantings along Canal School Road, in the NEWS project gateway area, and around the Newman Nature Park parking area. As a result, long-term cumulative impacts related to O&M and visitor presence and activity at the NCCA are evaluated as Less than Significant. No mitigation is required at the cumulative level, and no further analysis is warranted.
Air Quality					
San Joaquin Valley Air Basin	California's air basins are defined based on a combination of political, geographic, and meteorological criteria (California Air Resources Board 2012, 2018) to include both source and receptor areas for pollutant emissions. Addressing cumulative air quality impacts in a basinwide context supports comprehensive analysis.	Yes. The SJV Air Basin is currently in Extreme Nonattainment of federal standards for ozone, and in Nonattainment of state ozone standards and federal and state standards for PM2.5. Each Nonattainment status represents a Significant existing cumulative impact on air quality.	■		Air quality degradation is an inherently cumulative impact since it represents the contributions of multiple projects and multiple pollutant sources over time. Analysis in the *Air Quality* section of this checklist is therefore also inherently cumulative. No further analysis is warranted, and no mitigation is required.
Biological Resources					
Western San Joaquin Valley region	The location, nature, and extent of biological and jurisdictional habitat resources are controlled by physiography and climate, with a secondary overprint resulting from human influences via patterns of land development. As a result, habitats and patterns of species use at and around the NCCA site are interconnected with the larger mosaic in the western San Joaquin Valley region, necessitating analysis in a regional context.	Yes. Like many parts of California, the western San Joaquin Valley region has experienced substantial loss and degradation of natural habitats as a result of extensive agricultural use and localized urban expansion over the past 2 centuries. This represents a Significant cumulative impact at the landscape or habitat level. Additional Significant cumulative impacts at the species level are considered to exist where individual plant and wildlife species have been identified as qualifying for federal or state special status.	■	■	Contribution to Existing Impact As described in the *Biological Resources* section of this checklist, a number of state- and/or federally listed wildlife species (i.e., species subject to a Significant existing cumulative impact) have the potential to use habitat on the NCCA site. These include northwestern pond turtle, western spadefoot, giant garter snake (unlikely but not impossible), Tricolored Blackbird, Burrowing Owl, Northern Harrier, Yellow-billed Magpie, American badger (also very unlikely), and San Joaquin kit fox. Swainson's Hawk and Loggerhead Shrike have been observed on the site in recent months. One special-status plant species, Parry's rough tarplant, has also recently been documented on the site. Several other special-status plants (heartscale, crownscale, lesser saltscale, vernal pool smallscale, and San Joaquin spearscale) were not observed during protocol-level surveys conducted in the 2020 blooming season, but are conservatively assumed to have some potential to be present in subsequent years since they are known from the vicinity and the site offers suitable habitat. To address the potential for impacts to special-status species, the City has committed to a suite of AMMs that will be required both during construction of the NCCA projects and water service extension and also during ongoing O&M at the NCCA site once each project is completed. The AMM suite includes a provision for periodic reevaluation of site conditions and reassessment and updates of the AMMs to enable adaptive response as the habitat mosaic on the site changes with the implementation and maturation of each project. This would

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					provide for long-term species protection under evolving conditions. Additional measures may be required by the resource agencies as conditions of the regulatory permits authorizing each project. If so, these will be incorporated into the AMM suite, becoming part of short- and long-term protection for species at the NCCA. The City has also committed to a mitigation measure (BIO-1) to address potential reductions in the Parry's rough tarplant population due to construction of the NEWS and wetland projects, which includes provisions for revegetated Parry's tarplant to be monitored, maintained, and protected as part of the wetland project, subject to DFW oversight. With these protections in place, impacts on all special-status species except Parry's rough tarplant were evaluated as Less than Significant at the project level, with a potential for Benefit to special-status plants, northwestern pond turtle, western spadefoot, giant garter snake, Tricolored Blackbird breeding, Swainson's Hawk breeding, Northern Harrier breeding, Loggerhead Shrike breeding, and overall use by Yellow-billed Magpie. Potential construction period impacts of the NEWS and wetland projects on Parry's rough tarplant were evaluated as Less than Significant with Mitigation Measure BIO-1 incorporated. Since impacts on special-status species and their habitats are inherently a contribution to a Significant cumulative impact, these same AMM protections and Mitigation Measure BIO-1 would ensure that the projects' individual short- and long-term contributions to existing impacts on listed and other special-status species are Less than Cumulatively Considerable. No additional mitigation is required at the cumulative level, and no further analysis is warranted. Over time, there may be some potential for additional listed or candidate species (which would also qualify as species subject to a Significant existing cumulative impact) to use the NCCA site, as habitat conditions change as a result of the NEWS, wetland, and MDTW projects. For this reason, the AMM suite was designed to be adaptive over time, such that it will not only maintain protection for species known to be present but will also be expanded to incorporate protective measures for any additional species identified as potentially present on the site in the future. With this adaptive provision in place, the potential for construction, O&M, and use of the NCCA projects to contribute to additional existing cumulative impacts on special-status species is expected to be Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted. <u>Individual and Program Potential to Create New Impact</u> At just over 100 acres, the NCCA site is small in the context of the western San Joaquin Valley. Ongoing O&M and visitor presence at the site is therefore extremely unlikely to result in cumulative impacts that would imperil species not already listed, either at the program (sitewide) level, or, even more unlikely, at the project-specific level. The NCCA projects, and the NCCA program as a whole, are therefore evaluated as having No Potential to create new cumulative impacts related to listing or regional decline of species not already affected in this manner. No mitigation is required at the cumulative level, and no further analysis is warranted.
Cultural Resources					
Western San Joaquin Valley region and greater California	The presence or absence of cultural resources is independent of current political boundaries, reflecting instead past patterns of land use combined with complex factors that control resource preservation and loss over time. For a more comprehensive and conservative analysis, cumulative impacts on these resources were therefore addressed in the context of the western San Joaquin Valley region and California as a whole rather than focusing exclusively on the immediate vicinity of the NCCA site or an area defined by current political boundaries.	Yes. Urban/suburban expansion has substantially modified the Native American cultural legacy in the western San Joaquin Valley region and throughout California in the past 200 years. This includes culturally important sites, culturally important plant and wildlife resources, and traditional cultural practices. This is considered a Significant cumulative impact with regard to loss of cultural resources.	■	N/A	<u>Contribution to Existing Impact</u> The NCCA site is not considered sensitive for archaeological resources, but, as in any area with a long history of human habitation, there may be a potential for unanticipated discoveries, potentially including human remains. To address this, the City has committed to several mitigation measures: CUL-2 (*Retention of On-Call Archaeologist*), CUL-3 (*Worker Awareness Training for Cultural Resources*), CUL-4 (*Evaluation and Treatment of Unanticipated Archaeological Discoveries*), and CUL-5 (*Procedures for Discovery of Human Remains*). These measures would reduce impacts consistent with the prevailing standard of care and applicable state law, and with them in place, impacts were evaluated as Less than Significant at the project-specific level. Potential contributions to the existing cumulative impact with regard to loss of the Native American cultural legacy are also evaluated as Less than Cumulatively Considerable. No additional mitigation is required at the cumulative level, and no further analysis is warranted. <u>Potential to Create New Impact</u> In the project region, this analysis does not apply to cultural resources, since a cumulative regional impact related to loss of cultural resources already exists. The NCCA projects' long-term incremental impacts on individual cultural resources, if any, would constitute contributions to the existing cumulative impact, rather than creating a new, separate cumulative impact. No further analysis is warranted.

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Geology & Soils					
Western San Joaquin Valley region	The mosaic of permissable land uses—which relates directly to patterns of topsoil loss, and to the exposure of people and structures to seismic hazards—is regulated at the local jurisdiction level, but the impacts are felt both locally and regionally, at the landscape level. Accordingly, impacts related to soil resources and seismic hazards were considered in the regional context of the western San Joaquin Valley region.	*Topsoil loss/unavailability:* No. Progressive development in the western San Joaquin Valley has resulted in some loss and reduction in availability of topsoil, and extensive agricultural cultivation has disturbed native soil profiles. However, the San Joaquin Valley urban footprint remains comparatively small by comparison with many parts of California. Additionally, soils remain productive in the region, as demonstrated by the continued dominance of agriculture as a mainstay of the regional economy and the emphasis on agriculture in local jurisdiction planning documents (e.g., City of Newman 2007, County of Merced 2013, County of Stanislaus 2015). As a result, the existing cumulative impact with regard to topsoil loss is considered Less than Significant. No further analysis is warranted, and no mitigation is required at the cumulative level. *Seismic hazards:* Yes. Over time, progressive development of western San Joaquin Valley communitieshas has placed an increasing number of residents and structures, and an expanding infrastructure network at some level of risk of earthquake effects. Although this cumulative impact is arguably less than in other parts of the state (for instance, the Bay Area and Los Angeles County – Orange County regions, which are densely developed and traversed by numerous active faults), it is nonetheless considered Significant.	■ (seismic hazards)	■ (topsoil loss)	<u>Contribution to Existing Impact – Exposure to Seismic Hazards</u> As discussed in the *Geology & Soils* section of this checklist, all of the project elements added by the individual NCCA projects and the water service extension would be exposed to seismic groundshaking risk, and there is some potential they could be affected by seismically induced liquefaction. Where structures are involved—such as the pump station that may be added to the NEWS project, and the community facilities at the Newman Nature Park—there would be corollary risks that structural damage could result in injury to NCCA visitors and/or City staff. However, all NCCA project elements and facilities would be constructed in accordance with the City's adopted building code (the 2019 version of the CBSC), which includes extensive provisions for seismic safety. The City will also require a geotechnical investigation prepared by qualified staff for each of the NCCA projects. Consistent with prevailing engineering practice and building code requirements, the geotechnical investigations will, if appropriate, include additional site-specific recommendations[1] to address seismic risks. Although the potential for impacts cannot be entirely avoided, adherence to current City/CBSC design criteria and the recommendations of site-specific geotechnical investigations would ensure that seismic risks are minimized consistent with good engineering practices and the current prevailing standard of care. Residual impacts, if any, were evaluated as Less than Significant at the project-specific level, and contributions to the regional impact related to seismic hazard exposure are also considered Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted. <u>Individual and Program Potential to Create New Impact – Topsoil Loss</u> Ongoing O&M for each of the NCCA projects would include some activities that could result in disturbance or loss of topsoil. However, the purpose of O&M will be to keep each project functioning at its best, which puts a priority on minimizing topsoil disturbance and loss over the long term. Moreover, the City has committed to implement a mitigation measure (GEO-1, *Topsoil Protection*) with specific requirements to avoid and minimize loss of topsoil. This measure will be in effect for construction of each of the NCCA projects and for portions of the planned water service extension in vegetated areas, and will remain in effect for ground-disturbing O&M activities. With Mitigation Measure GEO-1 in place, impacts related to loss of topsoil were evaluated as Less than Significant at the project level, and contributions to cumulative regional loss of topsoil would also be Less than Cumulatively Considerable both for the individual NCCA projects and for the NCCA on a sitewide basis. No additional mitigation is required at the cumulative level, and no further analysis is warranted. [1] Referred to in the industry as recommendations, these are actually binding requirements, as identified in the *Geology and Soils* section of this checklist.
Greenhouse Gas Emissions					
San Joaquin Valley Air Basin	Analysis of cumulative impacts related to GHG emissions considered emissions within the project vicinity and SJV Air Basin, within the larger context of a globalized impact.	Yes. A growing scientific and regulatory consensus recognizes GHG as a cumulative long-term concern at the local, national, and worldwide scales.	■	N/A	Similar to air quality degradation, GHG levels are an inherently cumulative impact. GHG emissions are analyzed at a cumulative level in the *Greenhouse Gas Emissions* section of this Initial Study checklist; no further analysis is warranted, and no mitigation is required.

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Hazards & Hazardous Materials					
General Plan Planning Area and surrounds	Hazardous materials contamination reflects past and current land use patterns, as well as topographic, climatic, hydrologic, and soils-related factors. For a comprehensive assessment, analysis considered hazardous materials throughout the City's jurisdiction and in the immediate surrounding area.	No. Although the SWRCB's GeoTracker database (State Water Resources Control Board 2020) shows a number of known contaminated sites within and surrounding the Planning Area, all but one have been remediated and are in "Closed" status as of 2020. As a result, the vicinity of the NCCA sites is not considered to be subject to a Significant cumulative impact with regard to hazardous materials contamination.		■	<u>Individual and Program Potential to Create New Impact</u> As discussed in the *Hazards & Hazardous Materials* section of this checklist, both construction and O&M for all of the NCCA projects and the water service extension would involve the use of substances that qualify as hazardous materials as defined by the State of California, such as fuels, lubricants, paints, and—if Option 1 is selected for the water service extension—roadway paving and striping media. However, all such substances would be handled and disposed in strict accordance with good construction practices and applicable federal and state regulations; this is a standard City requirement. The City has also committed to implementing an AMM to protect water quality and habitat at the NCCA site (AMM-4,Table 2-15), which includes additional precautions to avoid and respond to spills, and the four NCCA projects are expected to require SWPPPs that may include further measures. With these protections in place, impacts related to hazardous materials use and handling during construction were evaluated as Less than Significant at the project-specific level. The potential for ongoing, repeated activities that involve hazardous substances to create a new long-term cumulative impact related to hazardous material contamination is also considered Less than Significant, both for the individual NCCA projects and sitewide, for the NCCA as a whole. No mitigation is required at the cumulative level, and no further analysis is warranted.
Hydrology & Water Quality					
Bennett Valley – San Joaquin River watershed and downstream receiving waters	*Surface Water.* The NCCA site is located in the Bennett Valley – San Joaquin River watershed. Contributions to existing cumulative impacts on surface drainage and surface water quality would be limited to the NCCA site vicinity and downstream receiving waters, which include the Newman Wasteway, San Joaquin River, and portions of the Sacramento – San Joaquin Delta, Suisun Bay, and San Francisco Bay. *Groundwater.* The NCCA site overlies the Delta-Mendota Groundwater Subbasin of the San Joaquin River Groundwater Basin. Contributions to cumulative impacts on groundwater supply and quality would be limited to the subbasin.	*Surface Water.* Yes. As detailed in Table 3-13, the Newman Wasteway and San Joaquin River have been identified as impaired for numerous pollutants. Additional impairments have been identified in waters farther downstream. Each of these impairments, which is the result of inputs from multiple sources over time, represents a Significant existing cumulative impact. Well-documented bioaccumulation of methylmercury in the regional food web also represents a Significant existing cumulative impact. *Groundwater.* Yes. The Delta-Mendota Subbasin is designated as critically overdrafted by the state Department of Water Resources (2020). The condition of overdraft is considered to represent a Significant existing cumulative impact. Additionally, groundwater in the Delta-Mendota Subbasin shows elevated levels of nitrate, arsenic, hexavalent chromium, selenium, total dissolved solids (TDS), sulfate, chloride, and boron, which must be addressed for municipal potable use. Groundwater from the lower aquifer also locally exhibits elevated iron, manganese, and hydrogen sulfide concentrations, and high pH and sodium adsorption ratios that can pose challenges for irrigation use (Kenneth D. Schmidt & Associates 2019). Although some of these constituents are naturally occuring rather than a result of human activity, this is nonetheless	■	■	<u>Contribution to Existing Impacts</u> *Surface Water Quality.* Existing water quality impairments (Significant cumulative impacts to water quality) identified for the Newman Wasteway include dissolved oxygen, fecal indicator bacteria, salinity, the pesticides chlorpyrifos and DDE, and the herbicide simazine. Chlorpyrifos is attributed to agricultural use, while the sources of the other pollutants are unknown (State Water Resources Control Board 2016). Existing water quality impairments for the San Joaquin River at and downstream of the confluence with the Newman Wasteway include boron, electrical conductivity, fecal indicator bacteria, low dissolved oxygen, mercury, selenium, specific conductivity, total dissolved solids, toxicity, water temperature, Group A pesticides, additional pesticides including alpha-benzenehexachloride (alpha-BHC), chlorpyrifos, DDE, DDT, diazinon, and toxaphene, as well as the herbicide diuron (see Table 3-13 for details by reach). Sources of the majority of these pollutants are unknown, although diuron is attributed to agricultural use (State Water Resources Control Board 2016). The following paragraphs discuss the NCCA projects' individual and collective potential for contributions to these existing Significant cumulative impacts, and related Benefits. Since the Newman Nature Park would not offer direct water quality treatment, it is only addressed where relevant. However, as the *Hydrology & Water Quality* section of this checklist describes, the Nature Park would offer public education components related to water quality issues and watershed health, and would provide tools and techniques for water quality improvement that can be used at area homes and businesses. This was evaluated as an indirect long-term Benefit to area water quality at the project-specific level, and is also considered a Beneficial contribution with regard to cumulative water quality degradation in the Newman area and downstream. *Boron and Selenium.* Boron is an essential micronutrient. It is taken up by plants but does not biomagnify in the food web, and can be removed in treatment wetlands by sorption to metal oxides, clays, calcareous minerals (such as pedogenic carbonates or caliche), and accumulated peat (Beutel pers. comm.[a]). Boron removal has not been modeled for the NEWS and MDTW projects, but both projects are expected to reduce boron levels in discharged waters. With increased extent and functionality of wetlands at the NCCA site, this would likely represent a Beneficial contribution to downstream impairments for boron by comparison with existing conditions. Selenium is also taken up by plants, and unlike boron, can bioaccumulate and biomagnify in the food web in its oxidized and organic forms. However, anoxic conditions in wetland environments foster the formation of insoluble reduced forms of selenium, which does not bioaccumulate or biomagnify (Beutel pers. comm.[a]). As a result, enhanced and created wetlands at the NCCA site are expected to act as a sink for selenium, representing a potential Benefit to selenium levels in downstream receiving waters. *Mercury.* As mentioned in the *Hazards & Hazardous Materials* section of this checklist, mercury was a key component in historic Gold Rush ore refining operations, resulting in extensive mining and the deposition and subsequent downstream transport of mercury-bearing tailings and wastes in California waterways. More recently, both native mercury (quicksilver) and mercury ores such as cinnabar have continued to be extracted for their economic applications, although use has been decreasing due to concerns about

Area of Analysis		Significant Existing Cumulative Impact?	Analysis Needed		Discussion
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		conservatively considered a Significant cumulative impact.			toxicity. Mercury also occurs as a byproduct of fossil fuel combustion and accumulates at the surface due to atmospheric deposition (e.g., Central Valley Regional Water Quality Control Board 2015). Mercury occurs in several forms in the environment. In aquatic settings it may occur in solution, but because it is extremely hydrophobic it is more commonly present in a colloidal state or bound to particulate matter. Mercury may also react to form toxic organic compounds such as monomethylmercury (CH_3Hg+), commonly referred to as methylmercury. Mercury methylation typically occurs due to bacterial activity at or near the sediment-water interface, although methylation may also occur in anoxic waters. Because methylmercury is largely produced by anaerobic sulfate-reducing (and, to a lesser extent, iron-reducing) bacteria, anoxic conditions tend to foster mercury methylation (California Water Boards Statewide Mercury Program 2017). Methylmercury in particular has become a substantial concern statewide because it is toxic and highly bioaccumulative and tends to concentrate "up the food chain," with concentrations increasing at higher trophic levels (e.g., Wiener et al. 2003, Central Valley Regional Water Quality Control Board 2015). Both the NEWS project and the MDTW project would depend in part on local development of low-oxygen or anoxic conditions for water treatment; bacterial denitrification requires anoxic conditions, and as identified above, such conditions would also be beneficial for selenium removal. Anoxic conditions could also develop in deeper portions of the emergent marsh expanded by the wetland project. Consequently, to the extent that mercury is present in the system at the NCCA site, or in input waters, there is potential for mercury methylation to occur. Unfortunately, although the San Joaquin River between Mud Slough and the Merced River confluence is identified as impaired for mercury (State Water Resources Control Board 2016; see Table 3-13), there is very little information currently available on mercury levels in sediments or waters in the immediate Newman area (see California Environmental Data Exchange Network 2020). However, samples from the immediate NCCA vicinity were recently collected and analyzed by the UC Merced team; results are presented in Table C-1 and sampling locations are shown on Figure 3-5. **Table C-1. Total Mercury Content in Water, Sediment, and Soil, NCCA Vicinity** | Location | Total Hg, Water[a] | Total Hg, Sediment[b] | Total Hg, Soil[b] | |---|---|---|---| | MD1A | 9.34 ng/l | 77.0 µg/kg | 70.6 µg/kg | | MD1B | 6.77 ng/l | 126.6 µg/kg | 115.0 µg/kg | | MD1B Far | — | — | 60.5 µg/kg | | MD2B | 7.08 ng/l | 97.7 µg/kg | — | Notes: [a] EPA Method 1631 [b] EPA Method 7473, values reported as dry weight; sediment samples collected in Miller Ditch at same locations as corresponding water samples, soil samples collected from terrestrial landscape 10 – 20 meters from corresponding water/sediment sample locations, except for MD1B Far (see Figure 3-5) *Source: Beutel pers. comm.[b]* As shown in Table C-1, mercury concentrations in four of the six sediment/soil samples are well below the 0.1 mg/kg dry weight threshold at which levels are considered elevated[2] (State Water Resources Control Board 2017a) and further action is typically triggered, and mercury levels in Miller Ditch waters are below the 12 ng/l threshold applicable for municipal wastewater and industrial

[2] As identified *in Hazards & Hazardous Materials*, the SWRCB (2017a) recognizes a naturally *mercury-enriched region* where California's principal deposits of mercury ores occur, in contrast to *trace mercury areas* where ambient mercury levels are not naturally elevated by geologic conditions. In trace mercury areas, typical background levels of mercury in soils and sediments range from 0.05 to 0.1 mg/kg; in the mercury-enriched region, naturally occuring mercury levels typically exceed 0.1 mg/kg and may be as high as 0.3 mg/kg.

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					discharges and considered protective of human health and the food web in flowing water bodies by the SWRCB (2017b). However, both sediment and soil at one location (MD1B on Figure 3-5) exceeded 0.1 mg/kg total mercury (dry weight). Increased offsite delivery of sediment-bound mercury as a result of the NCCA projects is not anticipated, since the NEWS and MDTW projects would Benefit downstream sediment delivery and the wetland and project and Newman Nature Park would not increase it (see discussion in *Increased Erosion or Siltation* under *Potential to Alter Existing Drainage Patterns*, *Hydrology & Water Quality* section of this checklist). Additionally, both the NEWS and MDTW projects are expected to reduce downstream delivery not only of coarser sediment load but also of the fine sediment fraction that is likely of greatest concern for mercury contamination, due to settlement in the forebays, followed by additional settlement in wetland areas, and—at the NEWS project—final polishing in the micropool. However, the NEWS, MDTW, and wetland projects are all considered to have some potential to result in increased mercury methylation. Mercury methylation may be occurring in wetlands onsite under existing conditions, and in the Miller Ditch, but since all three projects would increase the extent of wetlands, they could increase total mercury methylation sitewide, both individually and collectively. Although elevated nitrate levels have been shown to decrease mercury methylation (e.g., Beutel et al. 2017), it is not clear that this would be sufficient to offset the potential for increases in methylation due to implemenation of the NEWS, wetland, and/or MDTW projects. As a result, both the NEWS project and—to the extent it discharges offsite—the MDTW project are considered to have the potential to increase offsite (downstream) delivery of methylmercury, and all three projects could increase bioaccumulation of methylmercury at the NCCA site. Identifying the level at which such increases would become cumulatively considerable is difficult because it must take context and feasibility into consideration. Ideally, the water column in slow-moving water bodies such as marshlands should contain no more than 4 nanograms per liter (ng/l) total mercury; this is the level identified as protective of human and environmental health by the SWRCB's current Statewide Mercury Provisions (State Water Resources Control Board 2017b). As identified above, in flowing municipal wastewater and industrial discharges to receiving water bodies with designated Community, Cultural, Wildlife, Marine, and Rare beneficial uses, the water column can contain up to 12 ng/l without adverse effect on human health or higher trophic levels in the food web (State Water Resources Control Board 2017). Potential to result in exceedance of 4 ng/l in wetlands at the NCCA site or 12 ng/l in receiving waters could be considered the threshold at which a project's individual and collective contributions to mercury impairment become cumulatively considerable. However, achievement of the 4 ng/L target likely will not be practicable, due to preexisting levels of mercury in input waters, which meet the 12 ng/L standard for flowing waters but exceed the 4 ng/L standard applicable to slow-moving or standing waters. Thus, although the 4 ng/l and 12 ng/l thresholds provide useful guidance, and represent highly desirable targets, because of the baseline level of mercury contamination, the site-specific focus for each NCCA project must—pragmatically—be on minimizing onsite and downstream contributions to existing impairments to the extent feasible, taking into account existing mercury levels at the project site. Moreover, the SWRCB has identified that wetland and restoration projects should not be prevented due to mercury concerns (State Water Resources Control Board 2017c; see discussion in Section 6.10). In this context, recognizing that there may be some potential for the NCCA projects to (1) result in a cumulatively considerable contribution to the existing Significant impact related to impairment of downstream waters for mercury, (2) contribute to existing regional levels of mercury bioaccumulation, and/or (3) over time, collectively result in a new Significant cumulative impact related to mercury bioaccumulation at the NCCA site, the City will implement the following measures. With Mitigation Measures C-1 and C-2 in place, the NCCA projects' contribution(s), both individually and collectively, to existing downstream impairments for mercury would be reduced to the extent feasible, consistent with current RWQCB practices, and would be under ongoing oversight by the RWQCB. The projects' individual and collective potential to contribute to existing levels of mercury bioaccumulation, and to create a new localized cumulative impact with regard to mercury bioaccumulation, would also be reduced to the extent feasible. Additionally, under Mitigation Measure C-2, the NEWS, wetland, and MDTW projects stand to provide a Benefit to understanding of mercury presence and cycling in constructed and restored San Joaquin Valley wetlands. Residual contributions, and residual impacts, if any, are considered Less than Cumulatively Considerable and Less than Significant respectively. No further analysis is warranted.

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					Mitigation Measure C-1. Pre- and Post-Construction Soil Testing for Mercury Prior to construction of the NEWS, wetland, and MDTW projects, the City will conduct further testing to characterize mercury levels in soils involved in project earthwork. Samples will be collected from at least 3 locations within each proposed habitat type within each project footprint. Soil testing will also be conducted in the footprint of the Newman Nature Park, with samples collected from at least 3 locations within each area planned for earthwork and/or future public use. At each location within each project, samples from surface, mid-depth, and maximum anticipated depths of excavation will be collected. Sample locations will be areally distributed to maximize coverage, and sample locations at the NEWS, wetland, and MDTW projects will be coordinated with RWQCB staff and subject to RWQCB approval. Sample collection will conform to Chapter 3 (*Inorganic Analytes*) of EPA's SW-846 Compendium. Testing will conform to EPA Method 7473. Site soils found to exceed the 0.1 mg/kg total mercury (dry weight) threshold will be removed from the site and disposed of appropriately, consistent with all applicable state and federal protocols. Alternately, they may be separately stockpiled for onsite reuse in lower fill lifts that will not be exposed at the surface and will not be subject to surface water flow or ponding when the project is complete. If soils are stockpiled for reuse, stockpiles will be covered and soils will be watered during placement, to prevent the generation of fugitive dust with elevated mercury levels, and runoff control will be in place to prevent offsite transport. Appropriate personal protective equipment will be required for all construction-site personnel working with or potentially exposed to these soils, consistent with any applicable California state requirements. At the NEWS, wetland, and MDTW projects, once construction is complete, and before new water flows are introduced to the project, at least one soil sample will be collected and analyzed from each habitat type/land use within the project footprint (including wetland habitat, uplands, and—if any—access roadways and parking area). At the Newman Nature Park, at least one sample will be collected within each public use area that has exposed soils (i.e., is not paved or surfaced); multiple samples will be collected from each trail, covering and characterizing the length of the trail. Sample locations at the NEWS, wetland, and MDTW projects will be coordinated with RWQCB staff and will be subject to RWQCB approval, and sampling and analysis protocols will be the same as those identified above. The purpose of this second round of analysis will be to verify that all surface-exposed soils and soils exposed to surface water flow or ponding are below the 0.1 mg/kg total mercury (dry weight) threshold. If this is confirmed, no further action with regard to soils will be required. If any soils are found to exceed the 0.1 mg/kg total mercury (dry weight) threshold, remedial action will be taken. Remedial action at the NEWS, wetland, and MDTW projects will be coordinated with RWQCB staff and a remedial action plan will be submitted to the RWQCB and must be approved by the RWQCB before action is taken. At all of the projects, remedial actions may include, but will not necessarily be limited to, the following: capping with clean imported fill verified to contain levels below the 0.1 mg/kg total mercury (dry weight) limit, removal, appropriate disposal, and replacement with clean imported fill verified to contain levels below the 0.1 mg/kg total mercury (dry weight) limit, or—where feasible without impeding the function of the project—capping with rock or permeable paving media. At all four NCCA projects, unless preconstruction soil testing has shown that soils within the project footprint are consistently below the 0.1 mg/kg total mercury threshold throughout the site, future modifications requiring earthwork in areas not previously disturbed by construction will be subject to the same testing and remedial action requirements laid out for construction. **Mitigation Measure C-2. Aqueous Mercury Monitoring and Management** Following construction completion at the NEWS, wetland, and MDTW projects, the City will conduct testing for aqueous methylmercury levels in input, onsite, and effluent waters. Testing will be initiated once vegetation is established and each project is determined by the design team or other appropriately qualified personnel to be functioning at a mature level. Samples will be collected from the following locations. • NEWS project: Miller Ditch input to project, at least one location within each wetland cell within project, micropool, discharge to Miller Ditch • Wetland project: Miller Ditch input to project, at least one location within each wetland habitat type on 78-acre parcel, at least one location within each wetland habitat type on 24-acre parcel

Area of Analysis		Significant Existing Cumulative Impact?	Analysis Needed		Discussion
Area Included	Rationale		Contribution to Existing Impact	Potential for New Impact	
					• MDTW project: Miller Ditch input to project, at least one location in each wetland cell within project, discharge from project Sample collection will follow EPA Method 1669 or updated EPA equivalent. Samples will be analyzed consistent with EPA Method 1631 or updated EPA equivalent. Sample locations will be coordinated with RWQCB staff and will be subject to RWQCB approval. The goal of sampling and analysis will be to show that wetlands on the NCCA site are not increasing methylmercury above input levels. Testing and analysis will be conducted each year for a minimum of 3 consecutive years. If the methylmercury level in any of the tested samples is found to substantially exceed the level in input waters to the project (as determined by the City in consultation with RWQCB staff), corrective action will be taken. A corrective action plan will be submitted to RWQCB staff for review and feedback, and may include, but will not necessarily be limited to, the following: managing wetland inputs seasonally, managing wetland throughput to modify residence times, and capping of bottom sediment in the location producing exceedance. If/when sampling has shown that NCCA wetlands are not increasing methlymercury above input levels over 3 consecutive years of testing, no further action with regard to aqueous methylmercury will be required. To enable the NCCA projects to contribute to long-term increased understanding of mercury cycling in enhanced and restored wetlands, the City will provide the RWQCB with annual reports describing that year's (1) sampling and analysis activities, (2) results, and (3) corrective actions implemented, if any. Activities and results will be detailed on a project-specific basis, but monitoring reports for all three projects may be combined for efficiency. *Dissolved Oxygen.* Constructed wetlands at both the NEWS and MDTW projects are expected to develop low-oxygen or anaerobic areas, analogous with natural wetlands of similar size. This is positive, since removal of nitrate—the denitrification process, with bacterial reduction of nitrate ions resulting in inert molecular nitrogen—depends on low-oxygen conditions (e.g., Rodal Morales and Beutel 2020a). The wetland areas would not be uniformly low-oxygen, however, and movement of water between wetland cells, and from the project footprints to offsite receiving waters, would foster re-oxygenation. Contributions of the NEWS and MDTW projects to downstream impairment for low dissolved oxygen levels are therefore expected to be Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted. *Fecal Indicator Bacteria.* Depending on their ecology, treatment wetlands may act as either sources or sinks of fecal bacteria, but in general, when inflow bacterial concentrations exceed a level about 1,000/100 milliliters (anticipated following storm events), removal is expected (Beutel pers. comm.[a]). Additionally, a recent study suggests that fecal coliform removal in treatment wetlands correlates at least weakly with removal of turbidity, implying that sediment settlement is an important mechanism for fecal coliform removal (Beutel et al. 2013). This further suggests that forebays will be important in removing fecal coliform delivered to the NEWS and MDTW projects. Based on modeling summarized in the *Hydrology & Water Quality* section of this checklist (see Tables 3-14 and 3-15) and detailed in Appendix E, the NEWS project is expected to remove about 72% of the fecal indicator bacteria load delivered by the 85th percentile 24-hour storm event and 58% of inflow fecal indicator bacteria loading on annual average. Removals would likely be broadly similar in the MDTW project. Both of these projects are therefore expected to have a Beneficial effect on fecal indicator bacteria loading delivered to the Miller Ditch, San Joaquin River, and receiving waters farther downstream. No mitigation is required at the cumulative level, and no further analysis is warranted. The wetland project would not discharge offsite. As a result, it has No Potential to contribute to (or to directly Benefit) existing downstream impairments for fecal indicator bacteria. No mitigation is required at the cumulative level, and no further analysis needed. Considered as an aggregated program, the NCCA projects are expected to result in substantial reduction of fecal indicator bacteria loading delivered offsite. This would be due in part to fecal coliform removal at the NEWS and MDTW projects, discussed above. Additionally, although grazing use is likely to continue on the project, substantially less acreage would be available for grazing with all of the projects implemented. Grazing would be restricted primarily or entirely to the wetland project footprint, where it would be strictly managed for wetland health. This would probably mean a reduction in number of animals present. Seasonal restrictions are also likely. Grazing is likely to be excluded from the central swale at least seasonally, and cattle would no longer have access to the ditch along the south boundary of the 78-acre parcel because it would be incorporated into the MDTW project, conveying inflow from the Miller Ditch to

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					the forebay. Reducing cattle access to open water would further reduce the potential for delivery of fecal indicator bacteria offsite, as would discontinuing the current regime of flood irrigation (Foss pers. comm.). The combined contribution of the four NCCA projects to downstream impairments for fecal indicator bacteria would thus be Beneficial. No mitigation is required at the cumulative level, and no further analysis is warranted. *Pesticides.* Construction is not expected to make use of either pesticides or herbicides, but there is some potential for limited use of pesticides and herbicides during O&M, particularly at the Newman Nature Park. Some of the pesticides for which the Newman Wasteway and/or San Joaquin River have been identified as impaired have been banned in the United States, most for several decades. These include benzene hexachloride and its isomers, DDT, and toxaphene (Colorado Environmental Pesticide Education Program 2006, Agency for Toxic Substances and Disease Registry 2020). DDE, although chemically related to DDT, has no commercial use (Agency for Toxic Substances and Disease Registry 2020). As a result, there is no potential for these substances to be used in any capacity at the NCCA. However, use of other pesticides and herbicides could contribute to the existing identified impairments for these substances in the Newman Wasteway and San Joaquin River. To address this concern, the City will implement the following mitigation measure. With Mitigation Measure C-3 incorporated, the NCCA projects' contributions to existing identified impairment for pesticides in the Newman Wasteway and San Joaquin River would be reduced to a Less than Cumulatively Considerable level. No additional mitigation is required, and no further analysis is warranted. **<u>Mitigation Measure C-3. Integrated Pest Management and Limited Use of Chemical Pesticides</u>** Pest and invasive species control at the NCCA—whether conducted by City staff or by contractor(s) retained by the City—will emphasize Integrated Pest Management (IPM) practices consistent with prevailing best practices and current guidance of the Integrated Pest Management Institute of North America. The City's Public Works Department will be responsible for ensuring that IPM is the go-to standard operating procedure for the NCCA. Use of chemical pesticides and herbicides will be avoided to the extent practicable at the NCCA while maintaining habitat function and quality and appropriate public recreation values. Pesticides and herbicides for which impairments have been identified in immediate downstream receiving waters (the Newman Wasteway and San Joaquin River) will not be used under any circumstances. As of 2021, prohibited substances are Group A pesticides, chlorpyrifos, diazinon, diuron, and simazine, in addition to all substances banned in the United States. The City's Public Works Department will be responsible for reviewing the State Water Resources Control Board's Clean Water Act Section 303[d] list as it is updated and ensuring that if additional pesticide or herbicides impairments are identified in the Newman Wasteway or San Joaquin River downstream of Mud Slough, these substances are added to the list of substances prohibited at the NCCA. *Pollutant Remobilization.* In addition to direct delivery of pesticides as a result of O&M, ground disturbance associated with both construction and O&M at the NCCA projects could mobilize contaminants potentially contained within soils at the site. If runoff from disturbed areas is not properly contained, these could be delivered to adjacent reaches of the Miller Ditch or transported by overland runoff, in either case potentially reaching the Newman Wasteway, San Joaquin River, and receiving waters farther downstream. There would thus be some potential for ground disturbance to contribute to existing impairments for pesticides, herbicides, fecal indicator bacteria (due to animal wastes), generalized toxicity, and possibly also mercury, salinity, selenium, and conductivity. However, as described in Section 2 (see Table 2-15) and the *Hydrology & Water Quality* section of this checklist, the City has committed to an AMM to protect water quality, which includes provisions for erosion and runoff control. This AMM will be in force during construction of each NCCA project and will continue to be required for all ground-disturbing O&M activities at the NCCA. Additional conditions may be required by the resource agencies as conditions of the permits authorizing the NCCA projects. With these protections in place, the NCCA projects' potential to contribute to these additional identified impairments as a result of ground disturbance—both individually and collectively—would be controlled to a Less than Cumulatively Considerable Level. No mitigation is required at the cumulative level, and no further analysis is warranted. *Salinity and Related Factors.* As discussed in the *Hydrology & Water Quality* section of this checklist, constructed treatment wetlands typically increase salinity somewhat as water in wetland cells evaporates and is taken up by vegetation. Evapotranspiration rates, and resulting increases in salinity, depend on a variety of factors, including wetland configuration, type and density of vegetation, ambient temperature, and relative humidity. Salinity increases between inflow and outflow at the MDTW are expected to be on the order of 10%

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					on annual average, with slightly higher values in the warm dry months of summer and early fall, and lower values in winter and early spring (Beutel pers. comm.[a], Rodal Morales and Beutel 2020). Values are expected to be similar for the NEWS project. Both projects would therefore deliver treated water with a slightly higher salinity than the untreated inflow they receive. The SWRCB's limits on salinity in potable water supply—which are consistent with salinity WQOs for waters carrying the domestic or municipal supply use ("MUN") designation established by recently adopted Basin Plan amendments (Central Valley Regional Water Quality Control Board 2020)—were used to assess project-specific impact severity in the absence of WQOs for salinity specific to immediate downstream receiving waters. The salinity of outflows from the MDTW would be well within the limits established by the SWRCB for potable water supply. NEWS project outflows could periodically exceed the SWRCB's upper salinity for potable water supply, but are expected to be below both the recommended and upper limit salinity thresholds on annual average. Based on compliance with potable water standards, which should be relatively protective of most beneficial uses, impacts related to offsite delivery of waters with (slightly) increased salinity were evaluated as Less than Significant on the project-specific level. As shown in Table 3-13, waters immediately downstream of the NCCA site have identified impairments for factors related to salinity: the Newman Wasteway is identified as impaired for salinity, and the San Joaquin River between Mud Slough and the Merced River confluence is identified as impaired for electrical conductivity. Reaches of the San Joaquin River farther downstream (Merced River to Tuloumne River, Tuolumne River to Stantislaus River) are also impaired for conductivity. Various waterways within the Sacramento – San Joaquin Delta are also identified as impaired for conductivity, total dissolved solids, and/or chloride, again all aspects of salinity (State Water Resources Control Board 2016). No TMDLs are currently in place for any of these identified impairments and sources of salinity have not been specifically identified, although a review of the current Section 303[d] list of impaired water bodies shows multiple tributaries delivering elevated-salinity input to the San Joaquin River (State Water Resources Control Board 2016). In this context, salinity inputs from the Newman Wasteway are only one of many sources. Moreover—and more importantly—outflows from the NEWS and MDTW projects would be in compliance both with state salinity limits for drinking water supply and with the recently adopted Basin Plan WQOs for water bodies carrying the MUN designation. WQOs in particular are established in a cumulative context, taking into account the effect of multiple inputs into a watershed system, and with the goal of protecting uses both in and downstream of a water body. Accordingly, based on compliance with WQOs, potential increases in NEWS and MDTW project outflow salinities are evaluated as a Less than Cumulatively Considerable contribution to downstream impairments for salinity and related factors. No mitigation is required at the cumulative level, and no further analysis is warranted. *Groundwater Supply*. As discussed in the *Hydrology & Water Quality* section of this checklist, both construction and routine O&M would use City water supply, which is entirely reliant on groundwater at this time. However, usage would be limited and comparatively short-term for construction and temporary post-construction irrigation of plantings, and even more limited and intermittent for O&M. Some water would also be used on an ongoing basis at the Newman Nature Park hydration station, handwashing sinks, and for irrigation. The City's water supply planning takes typical construction as well as municipal O&M into account, however, and the anticipated level of usage is not expected to impede sustainable groundwater management. Additionally, the NEWS and wetland projects are expected to increase net infiltration of surface water into the shallow subsurface over the long term. The MDTW project would decrease recharge of shallow groundwater within its footprint, but would discharge to the central swale, where infiltration would occur. On balance, as discussed in the section of this checklist, these three projects are expected to increase groundwater recharge at the NCCA site. The Newman Nature Park would not increase infiltration, but also—because of the use of permeable media in exterior surfaced areas, the small footprints of the new structures, and drainage of hardscape to permeable vegetated planters/swales—would not materially decrease groundwater recharge. On balance, therefore, the NCCA projects' contributions to the existing impact with regard to overdraft in the Delta-Mendota Subbasin—both individually and at the collective programmatic level—are expected to be Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is required. *Groundwater Quality*. Significant existing impacts to groundwater quality in the Delta-Mendota Subbasin are identified under *Significant Existing Cumulative Impact?* above and to the left. In the unconfined upper aquifer (assumed to be hydrologically connective with shallow

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					groundwater at the NCCA site), they include elevated levels of nitrate, arsenic, hexavalent chromium, selenium, total dissolved solids (TDS), sulfate, chloride, and boron. Currently, untreated stormwater from the majority of the City and some adjacent agricultural lands is conveyed via the Miller Ditch to the Newman Wasteway, and untreated agricultural tailwater is used for flood irrigation to improve grazing at the NCCA site. Infiltration through the unlined Miller Ditch invert and on the NCCA parcels themselves thus delivers untreated storm- and tailwater to shallow groundwater and potentially, over time, to the upper aquifer, which is the primary producing aquifer in the Newman area. With implementation of the NEWS project, stormwater infiltrating at the NEWS project would be partially treated through residence in the forebay and wetland cells, reducing levels of nitrates and other pollutants; infiltration would not occur via the NEWS project micropool, which would be lined. This would represent a Beneficial contribution to existing cumulative impacts on groundwater quality by comparison with current conditions at the site. Additionally, although the MDTW's wetland cells would be lined to increase residence times for treatment, treated water from the MDTW—also with reduced levels of nitrate—would be discharged to the central swale, enabling infiltration in this unlined area. This would also represent a Benefit by comparison with current conditions. Some level of Benefit to groundwater may also result from the wetland project, due to longer ponding times and natural treatment processes in higher-quality wetlands than are currently present on the NCCA site. As a result, the individual contributions of the NEWS, MDTW, and wetland projects to existing impacts on groundwater quality in the Delta-Mendota Subbasin are considered Less than Cumulatively Considerable, with a Benefit anticipated as a result of all 3 projects. No mitigation is required at the cumulative level, and no further analysis is warranted. As discussed under *Surface Water Quality* above, both the NEWS and MDTW projects would increase salinity of outflow waters slightly by comparison with inflow (estimated at 10% based on modeling conducted for the MDTW). However, NEWS and MDTW project outflows are still expected to meet or exceed state standards for potable water supply. As a result, potential increases in NEWS and MDTW project outflow salinities are evaluated as a Less than Cumulatively Considerable contribution to existing elevated levels ofsalinity in area groundwaters, particularly when viewed in the context of the other water quality benefits the projects would provide. No mitigation is required at the cumulative level, and no further analysis is warranted. With the City's identified AMMs (Table 2-15) in place, the Newman Nature Park is not expected to materially affect the quality of water infiltrating via its permeable surfaces. Its individual contribution to existing impacts on groundwater quality in the Delta-Mendota Subbasin is therefore expected to be Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted. The collective program-level contribution of the NCCA projects to existing identified impacts on groundwater quality, as the aggregate of the 4 projects' individual Less than Cumulatively Considerable/Beneficial contributions—is also expected to be Less than Cumulatively Considerable, with net overall Benefits anticipated. No mitigation is required, and no further analysis is warranted. <u>Individual and Program Potential to Create New Impact</u> *Surface and Groundwater Quality*. With AMM-4 (see Table 2-15) and Mitigation Measure CUME-1 implemented, the potential for the NCCA projects—either individually or collectively at the program level—to result in new degradation of surface or groundwater quality would be effectively curtailed. Moreover, as discussed in the *Hydrology & Water Quality* section of this checklist, the NEWS project, which would discharge offsite to the Miller Ditch, is expected to be subject to new WDRs issued and overseen by the RWQCB. The same would be true of the MDTW project if it is equipped with a secondary outfall to the Miller Ditch, and possibly also if it only discharges to the central swale. WDRs for offsite discharge would provide additional protection for receiving and downstream surface waters. They would also be protective of groundwater quality, by mandating the standards to which water is treated in the NEWS and MDTW projects and indirectly controlling the quality of water that infiltrates into the subsurface. In consideration of AMM-4, Mitigation Measure CUME-1, and anticipated output water quality control via WDRs, none of the NCCA projects is expected to result in new adverse effects on water quality due to repeated activities over the long term. The potential for new cumulative impacts as a result of the NCCA projects (individually or collectively) is considered Less than Significant. No additional mitigation is required at the cumulative level, and no further analysis is warranted. *Groundwater Supply*. With an existing Significant cumulative impact on groundwater supply identified (critical overdraft in the Delta-Mendota Subbasin), any further impacts on groundwater supply due to repeated activities over time at the NCCA would represent contributions to

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					that impact rather than a new separate impact created by the NCCA projects. As discussed above, contributions are expected to be Less than Cumulatively Considerable. No further analysis is warranted.
Noise					
Area within 1,500 feet of NCCA site	The 1,500-foot radius around the NCCA parcels represents the distance potentially affected by maximum construction noise levels at the NCCA. This is conservatively based on the long-term noise compatibility guidelines for residential uses established in the City's General Plan (City of Newman 2007), and construction noise levels calculated using methods of the Federal Transit Administration (2006) and the equipment assumptions detailed in Section 2 of this Initial Study checklist. O&M-related noise levels would be lower since fewer pieces of equipment would be in use at the same time for the infrequent activities requiring heavy equipment. Areas outside this radius would not be substantially affected by construction or O&M noise from the NCCA site, so NCCA noise would neither create nor substantially contribute to cumulative impacts outside this radius.	No.		■	As discussed in the *Noise* section of this checklist, the City does not have quantitative standards in place. Rather, City ordinances and policies emphasize preserving the "quiet city" environment and reducing or avoiding disturbance due to construction noise. In that context, this analysis focused on the potential for disturbance of project neighbors, particularly the residences near the NCCA site, as a result of cumulative noise effects. <u>Individual Potential to Create New Cumulative Impact</u> **Construction.** Construction of each of the NCCA projects and the planned water service extension would be a temporary and comparatively short-term process, but could still last long enough that project neighbors would find the effects of noise due to ongoing construction activities disturbing. To address this at the project-specific level, the City has committed to mitigation measures that would limit construction activity within 1,500 feet of noise-sensitive uses (residences) near the NCCA site to daytime weekday hours to reduce disruption (NOI-2), and provide an avenue to address project neighbor noise concerns should any arise (NOI-2). The City has also committed to a measure (NOI-3) to reduce the potential for construction vibration disturbance. With these measures incorporated, impacts were evaluated as Less than Significant at the project level. These measures are also expected to effectively prevent each project from creating a Significant cumulative noise disturbance impact due to ongoing activity throughout the construction period. No additional mitigation is required at the cumulative level, and no further analysis is warranted. **O&M and Facilities Use.** As discussed in the *Noise* section of this checklist, O&M and use of each of the new NCCA projects would add noise to the community environment. However, routine O&M activities would be intermittent and short-term, and the types and levels of noise generated would be generally consistent with ambient noise in the surrounding active agricultural area. Use of the NCCA would be restricted to non-motorized recreation; activities that would take place on the site, such as walking, bicycling, and nature viewing are typically fairly quiet, although the presence of visitors on NCCA trails would generate some noise, such as conversations and laughter. Like O&M however, these types of noise would be consistent with noise associated with small groups of agricultural workers in the vicinity, likely would not represent a substantial change from current conditions, and would not be out of place in the context of neighboring residential uses. Additionally, large group gatherings would typically focus in the Newman Nature Park community area and the outdoor learning areas, which would be located in the southeast and east portions of the 78-acre parcel, separated from the closest residences by at least 0.3 mile. Amplified sound—such as live music or DJ events—would not be permitted at group gatherings, and the intervening distance should prevent larger gatherings from disturbing project neighbors. Moreover, the City intends to continue to enforce its quiet city policy to prevent disturbance over time. Impacts associated with O&M and visitor presence at the new NCCA projects were therefore found Less than Significant at the project-specific level, and are also expected to represent a Less than Significant impact at the cumulative level. No mitigation is required at the cumulative level, and no further analysis is warranted. <u>Program Potential to Create New Cumulative Impact</u> **Construction.** As discussed in the NCCA Master Plan (City of Newman 2020, Appendix A to this Initial Study), the wetland project has been funded by a DFW grant, and the City will need to obtain additional outside (grant) funding to implement the other three NCCA projects. As a result, it is unlikely that more than one of the projects would be constructed at the same time. Nonetheless, depending on grant timelines and the City's success in acquiring funding, it is conceivable that construction windows could overlap to some extent, increasing cumulative noise levels generated by construction activity. However, although adding more pieces of heavy equipment to the site would increase cumulative noise levels, the increase would be comparatively small for each added piece because of the way additive noise is perceived (discussed in detail in Federal Transit Administration 2006). Additionally, as identified above, with no quantitative standards in place for construction noise, the primary concern with regard to cumulative noise and vibration effects is the potential for increased disturbance to neighboring residences. This should be effectively addressed by Mitigation Measures NOI-1, NOI-2, and NOI-3 (discussed above and detailed in the *Noise* section of this checklist). With these mitigation measures in place, overlapping construction of two or more of the projects is not expected to result in a

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					Significant cumulative impact related to noise disturbance. No additional mitigation is required at the cumulative level, and no further analysis is warranted. **O&M and Facilities Use.** As each of the NCCA projects comes online, the level of O&M- and visitor-associated noise generated by the NCCA would increase. However, as discussed above, the level and types of noise generated are not expected to be excessive or out of place in the surrounding agricultural and residential context. Moreover (also identified above), the City is committed to continuing to enforce its quiet city policy to control noise and avoid disturbance. In view of these factors, cumulative long-term noise impacts resulting from the additive effects of the NCCA projects are expected to be Less than Significant. No mitigation is required at the cumulative level, and no further analysis is warranted.
Transportation					
City Sphere of Influence and western San Joaquin Valley region	Analysis focused on the area that is within the City's control for planning purposes, but also considered the larger area that would receive VMT due to regional visitor traffic, and where regional visitor traffic could affect roadway and intersection function and safety.	Yes. The Program Environmental Impact Report for the City's current General Plan (City of Newman 2007) identified Significant and Unavoidable impacts on LOS on City streets and traffic levels on the regional roadway system in Merced and Stanislaus Counties outside the City's Sphere of Influence. Because the "project"-level traffic analysis conducted for the General Plan addressed the buildout of the proposed General Plan along with projected regional growth in the two Counties, the conclusions of that analysis were identified in the Program Environmental Impact Report as both project-specific and cumulative (City of Newman 2006). These impacts are therefore considered to represent Significant existing cumulative impacts with regard to transportation.	■	■	<u>Contribution to Existing Impact</u> **LOS.** As discussed in the *Transportation* section of this checklist, the NCCA projects could generate as many as 170 new one-way trips per day at buildout, representing the addition of some 85 (= 170/2) vehicles to area roadways. This total represents an estimate for all four NCCA projects; trip generation for each individual project would be a fraction of the total. As discussed in the *Transportation* section of this checklist, this is not expected to degrade roadway or intersection function in the vicinity of the NCCA (where trips would be most concentrated), since these roadways are functioning at LOS A, well below ultimate roadway capacity (K.D. Anderson & Associates 2013). Regional effects on LOS would be proportionally smaller, since regional visitors would come from a wider area, distributing a small number of trips over a larger roadway network. Project-specific analysis presented in the *Transportation* section concluded that the NCCA projects (individually and collectively) would have No Impact on local or regional LOS, and their potential contribution to the existing Significant cumulative LOS impact is evaluated as Less than Cumulatively Considerable. No mitigation is required at the cumulative level, and no further analysis is warranted. **VMT.** Based on the level of trip generation associated with NCCA usage—170 trips per day, exceeding the 110-trips-per-day threshold below which the Office of Planning and Research (2018) advises that VMT impacts can be assumed to be Less than Significant—the NCCA projects would have some potential to result in a Significant impact related to VMT generation as usership increases over time. This is also evaluated as a Cumulatively Considerable contribution to regional VMT generation. However, as discussed in the *Transportation* section of this checklist, the City has committed to mitigation measures that will take advantage of the anticipated slow ramp-up in NCCA usage to enable monitoring of NCCA usage coupled with an adaptive response to manage usage so that trips to the facility are maintained below the 110-trips-per-day threshold. Alternatively, these measures allow the City to participate in a regional VMT reduction program rather than limiting NCCA usership, if a program meeting Office of Planning and Research standards becomes available in the future. With these measures in place, VMT impacts would be reduced to Less than Significant level when considered in the project-specific context, and would also represent a Less than Cumulatively Considerable contribution to regional VMT generation. No additional mitigation is required at the cumulative level, and no further analysis is warranted. <u>Individual and Program Potential to Create New Impact</u> Based on current Office of Planning and Research (2018) guidance for analysis of cumulative transportation impacts, "[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." Thus, although the NCCA would generate trips and VMT associated with visitor usage, the same suite of mitigation measures adopted to maintain trip generation and VMT below the threshold of significance at the project-specific level would also ensure that trip and VMT generation is maintained at a level that does not represent a Significant new cumulative transportation impact over time, both for each individual project (which would generate a proportion of the total facility-wide VMT) and for the NCCA as a whole. There would be No Impact with regard to creation of a new cumulative impact related to trip or VMT generation. No additional mitigation is required at the cumulative level, and no further analysis is warranted.

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Area Included	Rationale		Contribution to Existing Impact	Potential for New Impact	
Utilities & Service Systems					
General Plan Planning Area	Analysis focused on the area within which the City is responsible for providing or contracting utilities and services such as water treatment, wastewater treatment, and solid waste removal.	No. The City's General Plan (City of Newman 2007) explicitly requires the City to maintain an adequate level of water service (Goals PFS-3), wastewater collection and treatment (Goal PFS-4), storm drainage (Goal PFS-5), agricultural tailwater drainage (Goal PFS-6), and to provide for collection and disposal of solid waste while minimizing waste generation (Goad PFS-7). The City has been proactive in meeting these requirements. For instance, a new City potable water supply well is under construction and the City has embarked on a program of upgrades to the City's wastewater treatment plant (described in detail in Chapter 1 of the NCCA Master Plan, Appendix A to this Initial Study). Two of the NCCA projects also indirectly address utility/service system needs: the NEWS project would treat currently untreated stormwater, and the MDTW project would treat currently untreated agricultural supply and tailwater.		■	<u>Individual and Program Potential to Create New Impact</u> As discussed in the *Utilities & Service Systems* section of this checklist, over both the short and long term the NCCA projects would have No Impact at the project-specific level with regard to insufficient water supply, need for new supplies of water, inadequacy of wastewater treatment capacity, generation of excessive solid waste or waste in excess of available disposal capacity, and non-compliance with federal, state, or local solid waste statutes. They would therefore have No Potential, individually or collectively, to create new cumulative impacts in these areas through repeated activities over the long term. The NEWS project, wetland project, and MDTW project would also have No Impact, either short- or long-term, with regard to construction of new or expanded water or wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, and No Potential, individually or collectively, to create new cumulative impacts associated with such installations. No mitigation is required at the cumulative level, and no further analysis of any of these topics is warranted. The NEWs project would be served by City water for irrigation in the gateway area, and the Newman Nature Park would use City water for the hydration station, restroom hand washing, and irrigation. As discussed in Section 2 of this Initial Study, water supply would be provided by installing a new connection from the City's 8-inch-diameter water line at the corner of Canal School Road and Inyo Avenue. Like all pipelines, the new service could eventually require repair or replacement, with the potential for corollary impacts. The nature and timing of such repairs are not reasonably foreseeable at this time; future repairs would therefore be subject to separate future CEQA review. However, it is worth noting that the impacts of repairs to existing small-diameter pipelines within public roadways are typically minimal, such that stand-alone projects generally qualify for exemption from CEQA (either statutory exemption per *CEQA Guidelines* Section 15282[k] if less than 1 mile long with no surface facilities involved, or Class 1 categorical exemption per *CEQA Guidelines* Section 15301), and portions of future repair activities within the NCCA boundaries—where the potential for impacts would be greater—would be subject to all AMMs adopted for resource protection. Moreover, repair or replacement activities, while reasonably foreseeable, would be very infrequent. Cumulative impacts due to repeated activities in association with the new water service connection to the NEWS and Newman Nature Park are therefore expected to be Less than Significant. No mitigation is required at the cumulative level, and no further analysis is warranted.

Benefits would result from their implementation. All of these outcomes would represent direct or indirect Benefits to human beings in the Newman community and western San Joaquin Valley, as summarized in Table 3-24. No mitigation is required.

Table 3-24. Summary of NCCA Project Benefits and Human Outcomes

Benefit	Project(s)	Human Outcome
Benefits to scenic vistas and area aesthetics, at least as experienced by some viewers	All NCCA projects	Direct Benefit related to improved quality of life
Benefits to habitat function and quality	NEWS, wetland, and MDTW projects	Indirect Benefit due to overall environmental quality improvement
Benefits to special-status species	NEWS, wetland, and MDTW projects	Indirect Benefit due to overall environmental quality improvement
Improvements in the Santa Fe Grade's context, due to restoration/enhancement of the wetland environments the Grade was originally constructed to cross	NEWS, wetland, and MDTW projects	Direct Benefit resulting from improved conservation of cultural resources
Benefits to water quality onsite and in downstream receiving waters	NEWS, wetland, and MDTW projects	Indirect Benefits due to improvement in environmental quality and increased support of designated beneficial uses
Potential for minor Benefit to groundwater recharge	NEWS project	Indirect Benefit due to increase in groundwater resources
Benefit to (reduction in) offsite sediment delivery	NEWS, wetland, and MDTW projects	Indirect Benefit due to improvement in downstream water quality
Benefit to stormwater management	NEWS and wetland projects	Indirect Benefit due to improvement in environmental quality
Benefit to floodflow management	Wetland project	Potential minor direct Benefit due to improved safety
Increased support of Basin Plan implementation	All projects	Indirect Benefit due to improved water quality, increased support for designated beneficial uses
Benefits to parklands and recreational opportunities	All projects	Direct Benefit due to increase in nature-oriented recreational resources

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Acronyms & Abbreviations

ADA	Americans with Disabilities Act
ADWF	average dry weather flow
AFY	acre-feet per year
alpha-BHC	alpha-benzenehexachloride
AMM	Avoidance and Minimization Measure
BAU	Business-as-Usual
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
BPS	Best Performance Standards
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalRecyle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCID	Central California Irrigation District
CEDEN	California Environmental Data Exchange Network
CEQA	California Environmental Quality Act
CH_4	methane
CIMIS	California Irrigation Management Information System
cfs	cubic feet per second
City	City of Newman
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Construction General Permit	SWRCB General Permit for Discharges of Storm Water Associated with Construction Activity
Corps	U.S. Army Corps of Engineers
County	County of Merced
CRAM	California Rapid Assessment Method
CRHR	California Register of Historical Resources
CTS	California tiger salamander
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CY	cubic yards
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DFW	California Department of Fish and Wildlife
DG	decomposed granite
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EPA	federal Environmental Protection Agency
EPA SWMM	federal Environmental Protection Agency's Stormwater Management Model
FAR	floor area ratio
FHWA	Federal Highway Administration
FTC	full trash capture
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	groundwater sustainabiility planning
GTP	global temperature potential
GWP	global warming potential
HAP	hazardous air pollutant(s)
hp	horsepower
I	Interstate
ILRP	Irrigated Lands Regulatory Program
IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Services Office
ITP	Incidental Take Permit
LAFCo	Local Agency Formation Commission (Merced County)
LED	light-emitting diode
LOS	level of service
mg/kg	milligrams per kilogram
µg/l	micrograms per liter
µm	micrometer
µS/cm	microSiemens per centimeter
m^3/day	cubic meters per day
Master Plan	Newman Community Conservation Area Master Plan
MCL	maximum contaminant level
MGD	million gallons per day
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MT	metric tons
MWELO	Model Water Efficient Landscaping Ordinance
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCA	Newman Community Conservation Area
NCCA parcels	78-acre and 24-acre parcels comprising the NCCA site
NCCA projects	projects described in the NCCA Master Plan, implementing the Master Plan vision
NAL	numerical action level
NEL	numerical effluent limit
ng/l	nanograms per liter
NO_2	nitrous oxide
NO_x	oxides of nitrogen
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
O&M	operations and maintenance
PM2.5	airborne particulate matter smaller than 2.5 µm in diameter
PM10	airborne particulate matter smaller than 10 µm in diameter
PPA	Pollution Prevention Act
PRMP	Paleontological Resources Mitigation Plan
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RCRA	Resource Conservation and Recovery Act
REAP	Rain Event Action Plan
RPA	Registered Professional Archaeologist
RWQCB	Regional Water Quality Control Board
ROG	reactive organic gases
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SJREC	San Joaquin River Exchange Contractors
SJV Air Basin	San Joaquin Valley Air Basin
SJV APCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation
SPAL	SJV APCD Small Project Analysis Level
SR	State Route
SRA	State Responsibility Area
SVP	Society of Vertebrate Paleontology
SWAMP	Surface Water Ambient Monitoring Program
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant(s)
TDS	total dissolved solids
TMDL	total maximum daily load
UCMP	University of California Museum of Paleontology
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VdB	vibration decibels
VELB	Valley elderberry longhorn beetle
VMT	vehicle miles traveled
WDR	Waste Discharge Requirement
Williamson Act	California Land Conservation Act of 1965
WQO	water quality objective
WWTP	City of Newman Wastewater Treatment Plant