

NAPA COUNTY REGIONAL PARK AND OPEN SPACE DISTRICT

1195 3rd Street, Second Floor
Napa, Calif. 94559
www.napaoutdoors.org

Notice of Intent to Adopt a Mitigated Negative Declaration

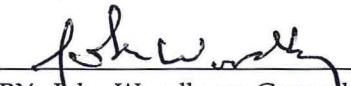
December 5, 2019

1. **Project Title:** Suscol Headwaters Park
2. **Property Owner:** Napa County Regional Park and Open Space District
3. **Contact person, phone number and email:** Kyra Purvis, Park and Open Space Planner, (707) 299-1788, kpurvis@ncrposd.org
4. **Project location and APN:** The proposed Mitigated Negative Declaration covers 709 acres owned by the Napa County Regional Park and Open Space District, spread among four parcels immediately south of Skyline Wilderness Park (APNs #045-360-013 (partial), -014, -022, and 057-030-014). County Zoning: Agricultural Watershed (AW) and Agricultural Watershed-Airport Compatibility (AW-AC).
5. **Project Sponsor's Name and Address:** Napa County Regional Park and Open Space District, Chris Cahill, Principal Planner, 1195 Third Street, Second Floor, Napa, Calif. 94559 (ccahill@ncrposd.org)
6. **General Plan Designation:** The project site is designated as Agricultural Watershed/Open Space in the County of Napa General Plan.
7. **Zoning:** The majority of the project site is designated as Agricultural Watershed in the County of Napa Zoning Code. The western-most portions of the project site are designated Agricultural Watershed-Airport Compatibility.
8. **Project Description:** Adoption of a Park Plan by the Napa County Regional Park and Open Space District and application to and adoption of a Use Permit by the County of Napa, to allow the Suscol Headwaters Park to be improved and operated as a publicly-accessible open space and park and recreational facility, with access via the existing Skyline Wilderness Park and development primarily consisting of trails for hiking, horseback riding, and mountain biking. The project also includes an amendment to Napa County Use Permit P04-0416 (Napa Solano Ridge Trail) to correct the route, provide a public through-connection to the Suscol Headwaters Park from the existing trail, and update the conditions of approval.

PRELIMINARY DETERMINATION:

The General Manager of the Napa County Regional Park and Open Space District has tentatively determined that the following project would not have a significant effect on the environment and the District intends to adopt a **negative declaration**. Documentation supporting this determination is contained in the attached Initial Study Checklist and is available for inspection at the offices of the Napa County Department of Planning, Building and Environmental Services, 1195 Third St., Suite 210, Napa, CA 94559 between the hours of 8:00 AM and 4:45 PM Monday through Friday (excepting holidays).

Dec 10, 2019
DATE:


BY: John Woodbury, General Manager

WRITTEN COMMENT PERIOD: Written comments may be submitted through January 10, 2020

Please send written comments to the attention of Kyra Purvis, Napa County Regional Park and Open Space District, at 1195 Third St., Second Floor, Napa, Calif. 94559, or via e-mail to kpurvis@ncrposd.org. The Board of Directors of the Napa County Regional Park and Open Space District will consider adoption of this Mitigated Negative Declaration at a public hearing subsequent to the close of the written comment period. A public hearing for the Use Permit and associated County approvals on this project will be held by the County of Napa thereafter. Oral and written comments may also be submitted at the time of these hearings. You may confirm the date and time of Napa County Regional Park and Open Space District hearing by calling (707) 299-1788. Please contact the Napa County Department of Planning, Building and Environmental Services for information on any County of Napa proceedings.

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Initial Study Checklist

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8. **Project Description:** Adoption of a Park Plan by the Napa County Regional Park and Open Space District and application to and adoption of a Use Permit by the County of Napa, to allow the Suscol Headwaters Preserve to be improved and operated as a publicly-accessible open space and park and recreational facility, with access via the existing Skyline Wilderness Park and development primarily consisting of trails for hiking, horseback riding, and mountain biking. The project also includes an amendment to Napa County Use Permit P04-0416 (Napa Solano Ridge Trail) to correct the route, provide a public through-connection to the Suscol Headwaters Park from the existing trail, and update the conditions of approval.
9. **Environmental Setting and Surrounding Land Uses**

The proposed project encompasses the 709-acre Suscol Headwaters property owned by the Napa County Regional Park and Open Space District. Suscol Headwaters is mostly undeveloped and currently includes a network of dirt ranch roads traversing the property. It has historically been used for cattle grazing, which continues to take place on the property under a lease with the District. The property contains a variety of mostly non-native grasslands, mixed Oak Woodlands, and riparian vegetation.

The land east and north of Suscol Headwaters is divided into four primarily undeveloped parcels, much of which are used for cattle grazing. There are four adjacent properties to the west and south that are developed with vineyard, and one permitted for vineyard but not yet developed. To the southwest, but not immediately adjacent to Suscol Headwaters are the Napa Sanitation District spray fields.

The Project is approximately 2 miles east of State Highway 29 and one mile north of State Highway 12.

10. **Other agencies whose approval is required:** (e.g., permits, financing approval, or participation agreement).
County of Napa (Use Permit, Use Permit Minor Modification)

Responsible (R) and Trustee (T) Agencies:

California Department of Fish and Wildlife
San Francisco Bay Regional Water Quality Control Board
Bay Area Air Quality Management District
US Fish and Wildlife Service

Other Agencies/Organizations Contacted:

Skyline Wilderness Park Citizen's Association

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS:

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, other sources of information listed in the file, the comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and where necessary visits to the site and surrounding areas. For further information see the environmental background information contained in the permanent file on this project.

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 proposed 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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

BY: John Woodbury
General Manager
Napa County Regional Park and Open Space District

Date

Detailed Project Description

Suscol Headwaters Park

The Suscol Headwaters Park project involves the Napa County Regional Park and Open Space District improving and providing public access to and nature-based recreation on 709 acres of publicly-owned ridgeline open space spread across the Suscol Creek, Sheehy Creek, and Fagan Creek watersheds adjacent to Skyline Wilderness and due north of Jameson Canyon Road.. Public access to the park would be via the Skyline Wilderness Park trail network with alternate administrative, public safety, and other by-invitation access from Anderson Road to the west over existing improved vineyard roads. The project also includes an amendment to Napa County Use Permit P04-0416 (Napa Solano Ridge Trail) to correct the route, provide a public through-connection to the Suscol Headwaters Park from the existing trail, and update the conditions of approval. Proposed uses, facilities, and other notable features of the project are summarized below:

Proposed Uses

- **Hiking.** Allowed except when the park is closed due to high fire hazard, excessively wet trails, or other hazards (see discussion in “Other Notable Features” section regarding park closure policy).
- **Mountain biking.** Allowed on all named trails, except when park is closed due to high fire hazard, excessively wet trails, or other hazards (see discussion in “Other Notable Features” section regarding park closure policy).
- **Horseback riding.** Same as for mountain biking.
- **Nature observation and study.** Allowed year-round, except when necessary to restrict use due to high fire hazard, excessively wet trails, or other hazards (see discussion in “Other Notable Features” section regarding park closure policy).
- **No Motorized Recreation.** Except as required or recommended by state and federal disability access laws and regulations, no motorized recreation will be permitted, and the public will not be permitted to drive any form of motorized vehicle within the preserve.
- **Other low-impact outdoor recreation and education.** Open space-based activities that do not disturb the natural character of the area, such as non-invasive geocaching or picnicking, but not including public hunting (hunting and trapping for management purposes by the District and its agents would be allowed), target shooting, or barbecuing, may be allowed.

Proposed Facilities¹

A total of 7.31 miles of trails are included in the project, +/- 6.25 of which are new trails.

- **Lookout Trail** (0.19 mile). An existing single-track trail that connects a lookout point in the northern portion of the property to the existing portion of the Suscol Ridge Trail, which in turn connects to the Napa County Regional Park and Open Space District’s Napa-Solano Ridge Trail, a dedicated easement over the Tuteur Family property that goes on to connect to Skyline Wilderness Park.
- **Suscol Ridge Trail** (1.70 miles). A new single-track trail that sweeps from higher elevations in the northeastern portion of the property down through grassland to meet the Perdida Trail. The Suscol Ridge Trail also includes a portion of existing single-track trail connecting Suscol Headwaters Park and the Napa Solano Ridge Trail.
- **Buckaroo Trail** (0.88 mile). A new single-track trail that descends from the existing portion of the Suscol Ridge Trail, following a tributary to Suscol Creek. This trail joins an existing ranch road

¹ Trail routes and lengths are approximate and may be adjusted, within the corridors shown in the Park Development Plan, as required by field conditions. Trail names are preliminary and subject to change.

for approximately 0.25 mile, where it crosses the Suscol Creek tributary at an existing ranch road crossing (no new crossing would be constructed).

- **Chance the Cowboy Trail** (1.16 miles). An existing unimproved ranch road that follows a north-south ridge on the northwestern portion of the property, plus an approximately 300-foot stretch of new single-track at the northern end of the ranch road and a 500-foot segment of new single-track at the southern end. This trail connects with the Buckaroo Trail to the north and the Big and Little Bend Trails to the south.
- **Big Bend Trail** (1.17 miles). A new single-track trail that begins at the southern terminus of the Chance the Cowboy Trail and loops around a prominent topographic feature ("the Knob") in the western portion of the property.
- **Little Bend Trail** (0.97 mile). A new single-track trail that follows a similar course to the Big Bend Trail, but at higher elevations around the Knob.
- **Zane Trail** (0.64 mile). A new single-track trail that follows a similar descent to the Buckaroo Trail, on the eastern side of the basin above the creek. This trail connects to the Buckaroo Trail in the north and the Perdida Trail in the south.
- **Perdida Trail** (0.60 mile). A new single-track trail connecting the Suscol Ridge and Zane Trails, creating a 2.09-mile loop through the central and eastern portions of the property.
- **Signage**. A kiosk and map will be installed at the park entrance from Skyline Wilderness Park, welcoming visitors to Suscol Headwaters and advising them of rules and regulations. Directional signage will be included at trailheads and junctions, and signs advising users of park boundaries.

Other Notable Features

- **Low Impact**. Every aspect of construction and operation of the park will be designed to be low impact in terms of resource and energy consumption and generation of pollutants. There will be no motorized recreation within the park.
- **California red-legged frog**. The District will be constructing a red-legged frog pond and improving the surrounding habitat as part of an existing funding and mitigation agreement with Caltrans and the US Fish and Wildlife Service. The area immediately surrounding the pond will be fenced to exclude both humans and wild pigs and to allow tightly controlled flash cattle grazing.
- **Wildfire hazard**. Park activities will be limited as appropriate, up to and including full park closure, as needed during periods of extreme wildfire hazard, as determined by the County Fire Marshall or additionally whenever in the District's judgment the combination of forecasted temperature, humidity, and wind suggest extreme wildfire hazard. No open fires will be allowed.
- **Wet weather**. Trails will be closed as needed during and after rainstorms to prevent soil erosion and damage to trails. Appropriate closure protocols for hikers, mountain bicyclists, and equestrians will be adopted and enforced. The performance standard used to guide the closure protocols will be that there is no trail-related sediment flow either directly or indirectly into local creeks.
- **Other Hazards**. Trails will be partially or fully closed, and the park may be completely closed to the public as needed to avoid conflict with District property maintenance activities, or as needed to avoid any other public safety hazard or to protect water quality or other natural resources.
- **Hunting and shooting**. No sport hunting or target shooting will be allowed.
- **Grazing**. Existing grazing will be allowed to continue. The duration and intensity of grazing will be guided by the existing Suscol Mountain grazing management plan, adopted as a component of the Suscol Mountain Vineyards ECP. A key grazing objective will be to use grazing to control the risk of wildfire and the spread of invasive weeds.
- **Fencing**. The property is largely fenced along its perimeter and internal fencing was reviewed and approved as a component of the Suscol Mountain Vineyards Agricultural Erosion Control Plan (ECP, P09-00176). Any additional fencing will be the minimum necessary to provide for

public safety and limit trespass onto neighboring agricultural properties or for resource protection.

Environmental Commitments and Best Management Practices

The project incorporates the following features to enhance environmental protections during construction and operation in order to ensure minimal impacts:

Air Quality Best Management Practices, during construction:

- All exposed surfaces (graded areas, staging areas, stockpiles, and unpaved roads) shall be covered or watered twice per day as needed to maintain sufficient soil moisture to control fugitive dust.
- All trucks hauling soil, sand, and other loose materials shall be covered in accordance with Section 23114 of the California Vehicle Code during transit to and from the site.
- The adjacent public roads shall be swept daily with wet power vacuum street sweepers, if visible soil material is carried/tracked out onto roadways.
- Traffic on unpaved areas and roads shall be limited to 10 mph.
- Grading and earthmoving activities shall be suspended when winds exceed 25 mph.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations (CCR). Signs clearly indicating this provision shall be installed at all access points.
- All construction equipment shall be maintained and properly tuned in accordance in manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A sign with the telephone number and person to contact at the Lead Agency regarding dust complaints shall be visibly posted at the site. The contact person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Biological Resources Protections:

- No construction or soil disturbance will take place within the banks of any blue line stream.
- Excavated materials along the entirety of the trail routes shall be distributed in a manner that does not create piles or berms of uncompacted disturbed soil that would encourage colonization by invasive plants.
- No sport hunting shall not be allowed. Hunting or trapping on the property would be limited to wildlife management activities by the District, its agents, and/or wildlife agencies having jurisdiction over the relevant resource.
- The presence of bears and mountain lions shall be regarded as natural and desirable, and depredation permits for problem animals shall only be sought as a last resort, and only if there is a clearly demonstrated and immediate need to protect public safety and where other methods of risk minimization, avoidance, and public education cannot be relied upon.
- In the event any mature trees (≥6-inch dbh) must be removed for trail construction, replacement trees of the same species shall be replanted and tended until successfully established at the ratio of two replacement trees for every one lost. No tree removal for trail construction purposes shall be allowed in recorded Oak Woodland Conservation Areas.

Cultural Resources Protections:

- Should any archaeological, cultural, or paleontological artifacts be found during any soil disturbing construction activities, construction will cease until the District has had the location inspected by a qualified professional and has taken appropriate steps as recommended by the qualified professional to protect the resource.

- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission will be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.

Soil Protections:

- New trail construction shall follow the standards and best management practices adopted by the District in its Moore Creek Trail Construction Standards, as amended.

Safety Features:

- Public motor vehicle use shall be prohibited, except as required or recommended by the Americans with Disabilities Act and related federal and state regulations.
- Power tools shall only be used by properly trained and equipped staff and volunteers.
- Smoking shall be prohibited.
- The park shall be closed to public use during periods of extreme wildfire hazard, as determined by the County Fire Marshall, as well as when in the District's judgment the combination of temperature, humidity and wind create a potentially unsafe situation.
- The public shall not be permitted to have open fires.

Water Quality Protections:

- New trail construction shall follow the standards and best management practices adopted by the District in its Moore Creek Trail Construction Standards, as amended.
- District shall obtain a grading permit or a grading permit exemption and comply with the conditions of the County's Grading Permit or exemption for all trail construction.
- No grading shall take place within the banks of any blue line streams.
- Where trails cross seasonal drainages, the drainages shall be kept clear of loose dirt created by trail grading activities, and then armored with native rock as needed to prevent soil from washing downhill during periods of significant rainfall and eventually getting into Suscol Creek.
- Trails will be closed as needed during and after rainstorms to prevent soil erosion and damage to trails. Appropriate closure protocols for hikers, mountain bicyclists, and equestrians will be adopted and enforced. The performance standard used to guide the closure protocols will be that there is no trail-related sediment flow either directly or indirectly into local creeks.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-d. Due to the topography of the area, singletrack trails, which have an average width of 4 feet and are surfaced with natural materials are unlikely to be visible from surrounding public roads; they are effectively no more visible than the game and cattle trails that already proliferate on this and neighboring properties. No physical changes to the property are proposed which would be visible from any public road or other public access point or from the handful of existing residences which have views of the property. Approximately 6.25 miles of new trails are proposed. No mature trees will be removed by the project and no new lighting is proposed.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
II. AGRICULTURE RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code Section 12220(g), timberland as defined in Public Resources Code Section 4526, or timberland zoned Timberland Production as defined in Government Code Section 51104(g)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a.-e. None of the subject property is classified as Prime, Unique, or of Statewide importance. The property is designated Agricultural Watershed/Open Space by the Napa County General Plan. The property has historically been grazed, and grazing will continue into the future under the long-term grazing lease in place with Five Dot Cattle Company. The County General Plan indicates that public recreation is permitted in areas designated Agricultural Watershed/Open Space, and that public recreation and agriculture can be compatible uses. The riparian corridors on the property qualify as forest land as defined by the Public Resources Code; however, there is no conflict or impact because forest land is defined in the code section as being compatible with recreation, water quality, and other public benefits. The proposed Use Permit would thus not cause any change in the forest land status of the property. The project site is not zoned as a Timberland Production Zone.				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a-c A small amount of dust (PM 10 and PM 2.5) may be generated during trail construction. The May, 2017 update to the Bay Area Air Quality Management District CEQA Guidelines (page 2-2) (BAAQMD Guidelines) indicates that the Threshold of Significance for fugitive dust for construction activities will not be exceeded if Best Management Practices are adopted. These practices are included in the environmental protections included in project design.

The amount of dust generated by trail users post-construction is expected to be too minor, infrequent, and localized to be significant based on the standards and examples provided in the BAAQMD Guidelines.

Reactive Organic Gases (ROG) and Oxides of Nitrogen (NOx) will be generated by both construction activities and by users driving to and from the park. The BAAQMD Guidelines indicate that the level of significance for ROG and for NOx is 54 lbs/day for both construction activities and ongoing operations. The BAAQMD Guidelines do not contain a specific threshold for the type of open space park proposed in this project, but Table 3-1 makes it clear that the proposed project will generate far less than these levels. The screening threshold for a city park is 2,613 acres for operations, and 67 acres for construction. In a city park, virtually every acre is constructed landscape, hardscape, or buildings, and is used intensively by the public. By comparison, the area of disturbance for trail construction for this project will be between $\frac{1}{2}$ and 6 acres. Nearly all of the remaining open space acres within the project will seldom if ever be used by the public. As such, the project does not begin to approach the screening thresholds that would require further analysis and impacts are less than significant with implementation of the BMPs included in the project description.

- d. According to the BAAQMD Guidelines, sensitive receptors within 1,000 feet of a proposed activity need to be considered relative to air pollutants for which the region is in non-attainment. The region is a non-attainment basin for particulates. Two sensitive receptors—both private residences—exist within 1,000 feet of the project area. As noted above, construction Best Management Practices will be utilized to control fugitive dust, and according to the BAAQMD Guidelines these will keep fugitive dust below the BAAQMD-prescribed level of significance. No public vehicular traffic will be allowed. Furthermore, the actual trail construction associated with the project is more than a mile from these residences. Thus, the two sensitive receptors within 1,000 feet of the project area will not be exposed to a significant level of particulates and impacts are less than significant.
- e. The project is not expected to generate any new odors. There are no impacts.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES. Would the project:				
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, Coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a.-d. No special status species are noted in the County's natural resources databases as potentially occurring in the project area. Three special status species are nearby: narrow-anthered brodiaea (*Brodiaea leptandra*) and Greene's narrow-leaved daisy (*Erigeron greenei*) were recorded approximately one mile northwest of the of the project area, and western pond turtle was recorded approximately 600 feet southeast. Additionally, the project area includes approximately 350 acres of designated California red-legged frog critical habitat, but no frogs have been observed. The County's databases identify two sensitive biotic communities that are present at various locations within the project area: California Annual Grasslands and Oak Woodland.

Botanical surveys were conducted on six days in 2019 at the appropriate times of year, in addition to biological surveys completed in 2007 and 2009 for a previously proposed project on the property. The surveys identified one special-status species onsite: Streamside daisy (*Erigeron bioletti*), a perennial herb endemic to California. This species has no state or federal listing status, but has a California Rare Plant Rank of 3, as listed by the California Native Plant Society, and analysis of impacts is therefore required under CEQA. Rank 3 plants are those for which the necessary information to assign them to one of the other ranks is lacking. Not enough about these plants is known to determine their threat level.

Eight streamside daisy locations were recorded during 2019 surveys in addition to a mitigation site for this species that is located just inside the western boundary of the property. This mitigation site was established without the knowledge or consent of the District by a neighboring property owner as compensation for 0.61 acre of habitat converted during establishment of Suscol Mountain Vineyards. In some areas, trails are proposed in the

vicinity of some streamside daisy individuals. As such, there is the potential for significant impacts. At present there are no trails proposed near the unauthorized mitigation site.

Based on the databases and surveys referenced above, there are a variety of other listed species that have the potential to inhabit the project area. However, no significant impacts to threatened, endangered, or sensitive species or habitats are expected, as discussed below:

- Nature based, non-motorized recreation as proposed will be low-intensity, with most of the property undisturbed and unlikely to experience much public use. Anticipated weekday use, based on visitorship at Skyline Wilderness Park, is not expected to exceed a couple dozen people, with peak summer weekends seeing up to 300. Conservatively assuming all Skyline users cross into Suscol Headwaters, these 300 users would be spread across the many miles of trails within Skyline and Suscol. Access to the preserve is currently provided through Skyline Wilderness Park, with proposed project trails commencing nearly 4 miles from the Skyline Wilderness Park staging area. These park users will be distributed over 25 miles of trail within Skyline and 6.25 miles of trails within Suscol, for a peak weekend density of less than 10 people per trail mile on average.
- The only notable potential disturbance to plants will occur due to trail construction. As described in the below mitigation measure, the known special status plants will be flagged and avoided.
- No construction or soil disturbance will take place within any wetland/blue line creek.
- The most sensitive habitat within the project area is the riparian habitat along the creeks. The project's proposed trails will utilize existing crossings using ranch roads and will therefore not result in any additional impacts to the creeks. Although Suscol Creek is designated critical habitat for steelhead (*Oncorhynchus mykiss*), a federally endangered species, the fact that no work will occur within the streams and that the project includes measures in the project design that minimize erosion and runoff during construction and operation, will result in no impacts to this species.
- The property is largely fenced along its perimeter and internal fencing was reviewed and approved as a component of the Suscol Mountain Vineyards ECP. Any additional fencing will be the minimum necessary to provide for public safety and limit trespass onto neighboring agricultural properties. Neither trail construction nor operation will have any effect on wildlife movement. Wildlife will continue to be free to move through the area.
- No California red-legged frogs or Western pond turtles have been observed onsite. Although the project property overlaps with red-legged frog critical habitat, the trails proposed are entirely outside of this area. The known western pond turtle occurrence is nearly a mile from the closest proposed trails. While the species can overwinter up to 1,500 feet from aquatic habitat and may migrate overland up to ½ mile, lack of habitat between the known occurrence and proposed trails would preclude turtles migrating into the project area.
- There are several Oak Woodland Conservation Areas throughout the property, areas where development is constrained by a deed restriction resulting from the Suscol Mountain Vineyards ECP. Natural surface single track trails operated by public agencies are in keeping with the requirements of the deed restriction and will not have any impact on the Oak Woodland Conservation Areas.

Mitigation Measure: Prior to the start of construction, a qualified biologist will flag the existing eight streamside daisy plants plus a 10-foot buffer surrounding the plants, such that all trail construction will avoid the plants.

Impacts after implementation of the mitigation measure will be less than significant.

- e. There will be minimal development as a result of the project. No trees are anticipated to be removed as a result of the project. However, in the unlikely event final trail alignments require that mature trees be removed to accommodate trail construction, trees of the same species shall be replanted in the same general area at a ratio of 2 to 1.

The project would not conflict with any local policy or ordinance protecting biological resources or any tree preservation policy or ordinance.

- f. The project will not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan, because no such plans have been adopted that include the project area.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-d. A Cultural Resources Study was prepared for a previous project on this property in 2009. It concluded that there are no known historical, archaeological, cultural or paleontological resources within the areas that would be affected by the project. Ground disturbance on the property is expected to be minimal, as improvements would be limited to a network of new single-track trail and some signage. No deep ripping, trenching, or extensive excavation of the type required for foundations, footings, or similar features is foreseeable. Should any artifacts be found during construction, construction will cease until the District has been able to have the location inspected by a qualified professional and appropriate steps taken to protect the resource, as described in the environmental protections section of the project description.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
VI. GEOLOGY and SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

- a. The County database indicates one potential earthquake fault running north-south approximately 1,200 feet south of the project area. This fault bisects the southern portion of the preserve property, where no improvements are currently planned. The County database also identifies a large landslide deposit within the project area, as well as large landslide deposits in parts of the preserve property that will not have any trails constructed at this time.

The proposed new trails avoid areas that show evidence as having active landslide problems, though they do often traverse steep slopes. One section of the proposed Basin Trail comes within approximately 35 feet of the large landslide deposit noted above, but tree growth in the area indicates it has not slid in at least several hundred years. The soils in the area (Hambright rock outcrop) are gravelly with moderately high permeability. This area has mature tree growth where tree roots provide considerable soil stability. For these reasons, as long as water is properly controlled as discussed below, landslides and soil erosion are not expected to be a significant problem.

- b. Trails will be constructed using modern trail design standards, specifically the standards and best management practices adopted by the District in its Moore Creek Trail Construction Standards, as amended.. These design standards include generally keeping trail slopes less than 9 percent, outsloping the trail tread and installing reverse grades as needed to prevent changes in natural water flows and concentration of water along the trail rather than across it, and by using native rock to stabilize the soil when needed where trails cross seasonal gullies.

- c. As noted in “a” above, one short section of proposed new trail skirts an area that has in the past or may in the future be subject to landslides. This is not expected to be a significant adverse impact, however, due to the following:
- New trails will have a four foot wide or narrower tread, which is much narrower than the typical 10 or more feet in width of dirt roads, so the amount of cutting into the hillside is considerably less than would be the case for the typical road.
 - Trails will be closed during periods of heavy rains when soils are saturated, which is when a landslide is most likely to occur.
 - A failure of a trail would not have any serious consequence other than the need to temporarily close the trail until repairs could be made.
- d. None of the project area contains highly expansive soils. Furthermore, no structures are proposed as part of this project and expansive soils pose little risk to trails. Therefore, there would be no impacts associated with expansive soils.
- e. The proposed project largely involves the development of trails. No septic tanks or alternative wastewater disposal systems are needed or proposed at the project site. Therefore, there would be no impact with regard to soils supporting septic tanks or alternative wastewater disposal systems

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate a net increase in greenhouse gas emissions in excess of applicable thresholds adopted by the Bay Area Air Quality Management District or the California Air Resources Board which may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with a county-adopted climate action plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a-b. Greenhouse gasses will be generated by construction activities and by users driving to and using the park. The BAAQMD Guidelines provide a screening threshold of 1,100 metric tons of carbon dioxide-equivalents per year, which is roughly equivalent to a 60-unit residential subdivision. Standard trip generation models used by traffic engineers project that a 60-unit residential subdivision will generate more than 600 vehicle trips per day. Assuming a likely maximum of no more than 30 additional park visitors on peak weekend days (a 10 percent increase over current Skyline Wilderness Park use), greenhouse gas emissions would still be only 10 percent of the Air District-prescribed threshold. The project does not conflict with any county-adopted or another applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases.

Although greenhouse gas emissions from the project will be far below significance levels, the project nonetheless has built into it several features designed to help reduce greenhouse gas emissions. First, non-motorized recreation relatively close to where Napa residents live and work is facilitated, which reduces the need to drive

greater distances, usually outside of Napa County, to enjoy this form of recreation. Second, motorized recreation of any kind is prohibited, except as is necessary to comply with the ADA.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
VIII.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, or, where such a plan has not been adopted, within two 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury or death involving wild-land fires, including where wild-lands are adjacent to urbanized areas or where residences are intermixed with wild-lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

- a.-b. No hazardous materials are expected to be used, with the possible exception of minor amount of gasoline and oil for running equipment, or herbicides for controlling invasive plants. Because of the small amounts that may occasionally be used, no significant impact is expected.

- c. There is no school within or near the project area. The closest school is over 2.5 miles from the project area.
- d. No part of the project is on any list of hazardous materials sites. The project area has historically been used for cattle grazing, which would not produce any historical hazardous materials such as buried tanks.
- e.-f. The closest public airport to the project site is Napa County Airport, approximately 3 miles west. The western-most portion of the project area is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS zoning layer). This portion of the project site is located in Zone E, Other Airport Environs, which prohibits noise-sensitive outdoor uses. Noise-sensitive resources usually include residential and school land uses. Outdoor recreation, including multiuse trails, is an allowed use within Zone E, and will not result in any safety hazard. Therefore, the project will result in less than significant impacts.
- g. The project will not affect the implementation of or interfere with any emergency response plan.
- h. According to CalFire, the project is located in an area which is subject to moderate risk of wildland fires (on a scale of low, moderate, high, and very high). The project area was burned in a back-fire lit in the fight against the 2017 Atlas Peak fire. The project is not expected to create a significant increased risk of wildland fire for the following reasons:
 - o The general public will not be allowed to drive cars, trucks, motor cycles, ATV's, or other motorized recreational equipment on the property.
 - o Only trained staff or volunteers will use motorized maintenance equipment, and its use will be limited to low-fire hazard periods.
 - o The public will not be permitted to smoke while in the park.
 - o Park activities will be limited as appropriate, up to and including full park closure, as needed during periods of extreme wildfire hazard, as determined by the County Fire Marshall and additionally whenever in the District's judgment the combination of forecasted temperature, humidity, and wind suggest extreme wildfire hazard.
 - o No open fires will be allowed anywhere within the preserve.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
IX.	HYDROLOGY AND WATER QUALITY. Would the project:				
	a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a. & f. Impacts to water quality could potentially occur from increased erosion and resulting sediment flows into Suscol Creek from trail construction, and from wildland fire. The District's Moore Creek Trail Construction Standards contain up-to-date standards for designing and maintaining trails; proposed trails will be constructed and operated consistent with those guidelines, thereby reducing erosion potential and sedimentation. Wildland fire is discussed in Section VII.8. As such, potential impacts to water quality will be less than significant.
- b. The project will not result in any significant increase in water usage. Potentially foreseeable new facilities would be limited to one or two water spigots for park visitors and/or a limited number of new cattle watering troughs. In net, water use would be substantially less than the amount permitted in the vineyard development erosion control plan already approved for this property.

- c.-e. The project will not increase impervious surface, and therefore stormwater runoff will not increase. Overall, groundwater recharge rates should actually increase due to improved range management which will increase vegetation cover and thus reduce runoff rates.
- g.-h. No construction is proposed within any mapped floodplain.
- i. There is no reservoir upstream of the project site, so there is no risk of dam failure affecting the project. The park will be closed during major storm events, so there is no risk of injury to people or significant harm to property.
- j. The project location is such that it is not subject to any reasonably conceivable seiche or tsunami, and the soils are not conducive to mudflows.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a. The project will not divide any established community.
- b. The project does not conflict with any applicable land use plan, policy or regulation of any agency with jurisdiction over the project. The project is consistent with and helps implement many policies in the County General Plan that call for expanded nature-based public recreational opportunities.
- c. There are no habitat conservation plans or natural community conservation plans applicable to this area.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-b. The closest mineral resource is the Syar Industries aggregate quarry, which is located adjacent to Skyline Wilderness Park, approximately one mile from Suscol Headwaters. The proposed project would not interfere with this resource. No other resources are known in the vicinity, resulting in no impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-b. Currently the only noises present at the site are natural sounds made by animals and flowing water, and occasional distant engine noises (from Highways 12 and Highway 29, and from aircraft overhead) and the adjacent vineyard operation. Park users will therefore not be exposed to excessive amounts of noise.

- c.-d. Regular park use will result in a minor increase in ambient noise levels due to human voices. However, any such noise will be well within the limits of what the Napa County Exterior Noise Ordinance considers reasonable.
- e.-f. As noted in Section VIII, Hazardous Materials, the eastern-most portion of the project area is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS zoning layer). This portion of the project site is located in Zone E, Other Airport Environs, which prohibits noise-sensitive outdoor uses. Noise-sensitive resources usually include residential and school land uses. Outdoor recreation, including multiuse trails, is an allowed use within Zone E, and will not result in any safety hazard. No one will be residing within the preserve, and any work done in this portion of the park will be intermittent and short in duration. Therefore, the project will result in less than significant impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XIII. POPULATION and HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a. This project will not build new housing, establish new businesses, or induce substantial population growth in or near the project site. It will not change the projections and cumulative impacts related to population and housing balance that were identified in the County of Napa 2008 General Plan EIR.
- b.-c. The proposed project will not result in the loss of any existing housing units and will not necessitate the construction of replacement housing elsewhere.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the project result in:				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a. Based on the experience with Skyline Wilderness Park, which is the adjacent open space used by hikers, mountain bikers, and equestrians, and thus comparable to the proposed project, the project will result in occasional new emergency calls for ambulance, police, or fire services. However, recreation users of wilderness areas are informed of and accept a certain amount of risk, and do not expect and are not provided with the level of public services and response times that are considered standard within urban areas. No new ambulance, fire, or police facilities, staffing, or equipment will be required as a result of the project. Most of the trails proposed by the project are accessible by ATV's. If needed, emergency service helicopters can land at several locations within the project area. Excellent cell phone coverage exists at all ridgetop locations with the project area. No impacts to schools, parks, or other public facilities are foreseeable.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. RECREATION. Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-b. The project increases the supply of outdoor recreation opportunities. It will not increase the physical deterioration of any existing facility, nor require the construction or expansion of other recreational facilities.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and/or conflict with General Plan Policy CIR-16, which seeks to maintain an adequate Level of Service (LOS) at signalized and unsignalized intersections, or reduce the effectiveness of existing transit services or pedestrian/bicycle facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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 Napa County Transportation and Planning Agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature, (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with General Plan Policy CIR-23, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the site's capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

- a.-b. County General Plan Policy CIR-16 states that the County's policy is to maintain at least a Level of Service (LOS) of "D" or better.

Access to Suscol Headwaters will be primarily via Skyline Wilderness Park, the staging area for which is at the main park entrance at the intersection of Imola Avenue and Fourth Avenue, approximately 1 1/3 miles from the signalized intersection of Imola Avenue and Soscol Avenue/State Route 221. Based on annual users of approximately 25,000, busy weekends at Skyline Wilderness Park likely see approximately 300 visitors, while off-season weekdays approximately 20 people may visit the Park. Assuming the opening of Suscol Headwaters increases visitorship by 10 percent and conservatively assuming that half of these new trips occur during the peak hour, the number of trips to the Imola Avenue entrance would be no more than 15. The most recent available traffic counts for the area are from 2005, at which time the peak hour Level of Service (LOS) on this segment of Soscol Avenue/State Route 221 was LOS D, which translates to a peak hour traffic count of 3,256. The 15 additional vehicles generated as a result of this project would be an 0.5 percent increase in traffic on Soscol

Avenue, which would not affect the Level of Service and would be a less than significant impact. The segment of Imola Avenue that intersects with the Skyline Wilderness Park entrance operates at peak hour LOS B, or a traffic count of 177. The 15 additional cars on Imola Avenue represent an 8.5 percent increase in traffic, and given the road's peak hour capacity of 1,480, the projected number of trips from the project would easily be accommodated by this road.

Additional access to Skyline and thus Suscol is provided via the River to Ridge Trail, which enters Skyline Wilderness Park from farther south on State Route 221. Parking for the River to Ridge Trail is available in a City of Napa public lot near Kennedy Park on Streblow Drive, just off State Route 221. Annual entry via the River to Ridge Trail was recently recorded at approximately 6,000 visitors. Making similar assumptions as above, the project would add approximately four trips to peak hour traffic. The segment of State Route 221 terminating at Streblow was LOS D in 2005, with a traffic count of 3,256. The additional four trips would increase peak hour traffic by 0.1 percent and would not impact the service level.

There is existing access to Skyline Wilderness Park via a continuous off-road trail system, including the Napa River, Bay, Vine, and Ridge Trails, from central Napa to the River to Ridge Trail entrance. Some portion of the new Suscol Headwaters Park users will arrive via bike, and will not contribute to increased traffic. As such, the above analysis is quite conservative.

The project does not conflict with any applicable congestion management program or other standards adopted by the Napa County Transportation Planning Agency.

- c. The project will not cause any change in air traffic patterns.
- d. The project would result in a potential minor increase in the number of people entering or leaving the park using Imola Road and Fourth Avenue. The access driveway to the park is located on the outside circumference of a curve in the road, at a location where there are good sight distances to both Imola Road and Fourth Avenue. There will also be minor increases in use of the River to Ridge entrance and associated parking off Streblow Drive. This access driveway is located on a straight segment of road with unobstructed views in both directions. Thus, the modest increase in turning movements at these locations should not create any increased safety risk.
- e. The entrance and main parking within Skyline Wilderness Park is paved and provides access to the staging area for both Skyline and Suscol Headwaters. South of the main entrance are existing trails that traverse Skyline connecting to the proposed trails on the project property. While these are not passable by standard on-road vehicles, they can be traveled by ATV. There is also a network of existing ranch roads, which require a high clearance/four-wheel drive vehicle, that provide access from State Route 221 to much of the project property, and to Skyline. The District has right of administrative access using these roads. Although these roads do not reach Skyline, they provide much closer vehicular access to the southern-most portions of that park, thereby improving emergency access to that property as well as the project property. Thus, emergency access for purposes of rescuing an injured user is as good as or better than is typical for a regional park.
- f. The existing parking available associated with both the main and River to Ridge entrances to Skyline Wilderness Park is more than adequate for current use. The additional visitors anticipated to result from the proposed project will be accommodated by this existing parking.
- g. The project does not conflict with any existing policies or plans and would have minimal impact on existing facilities

Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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XVII. TRIBAL CULTURAL RESOURCES. Would the project:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) 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 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. 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. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

On September 17, 2009, the State of California Native American Heritage Commission (NAHC) was asked to review the Sacred Lands file for information on Native American cultural resources on the project site. A response was received on September 29, 2009 indicating that the search of the sacred lands file failed to indicate the presence of Native American cultural resources in the immediate area. The NAHC provided a list of Native American organizations/individuals for further consultation. These individuals were contacted by letter on October 1, 2009 and again by email on November 11, 2009. None of the organizations indicated an interest in the project. A notice regarding this project was provided to The Mishewal Wappo Tribe of Alexander Valley, Middletown Rancheria, and Yoche Dehe Winton Nation on December 10, 2019. Should they respond to that notice, their concerns will be incorporated into the project design where feasible.

- a-b. As discussed in Section V (Cultural Resources) the Cultural Resources Study prepared for the Suscol Mountain Vineyard ECP did not identify any historic or archaeological resources onsite. As such, no resources listed or eligible for the California Register of Historical Resources (CRHR) are present and impacts to archaeological resources as a result of the proposed project are considered to be less than significant. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated onsite. The Cultural Resources protections noted in the project descriptions will avoid and reduce potential impacts to unknown resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of a new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of a new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

- a.-e. The project will not require any new or expanded public sewage or water system. No new public water use is proposed. There will be no increase in storm water runoff, and no need for new storm water conveyance or treatment facilities.
- f.-g. The project is intended to be a zero waste facility to the greatest practical extent, and the public will be advised to pack out what they pack in. Any new recycling or trash containers resulting from the project would be limited.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

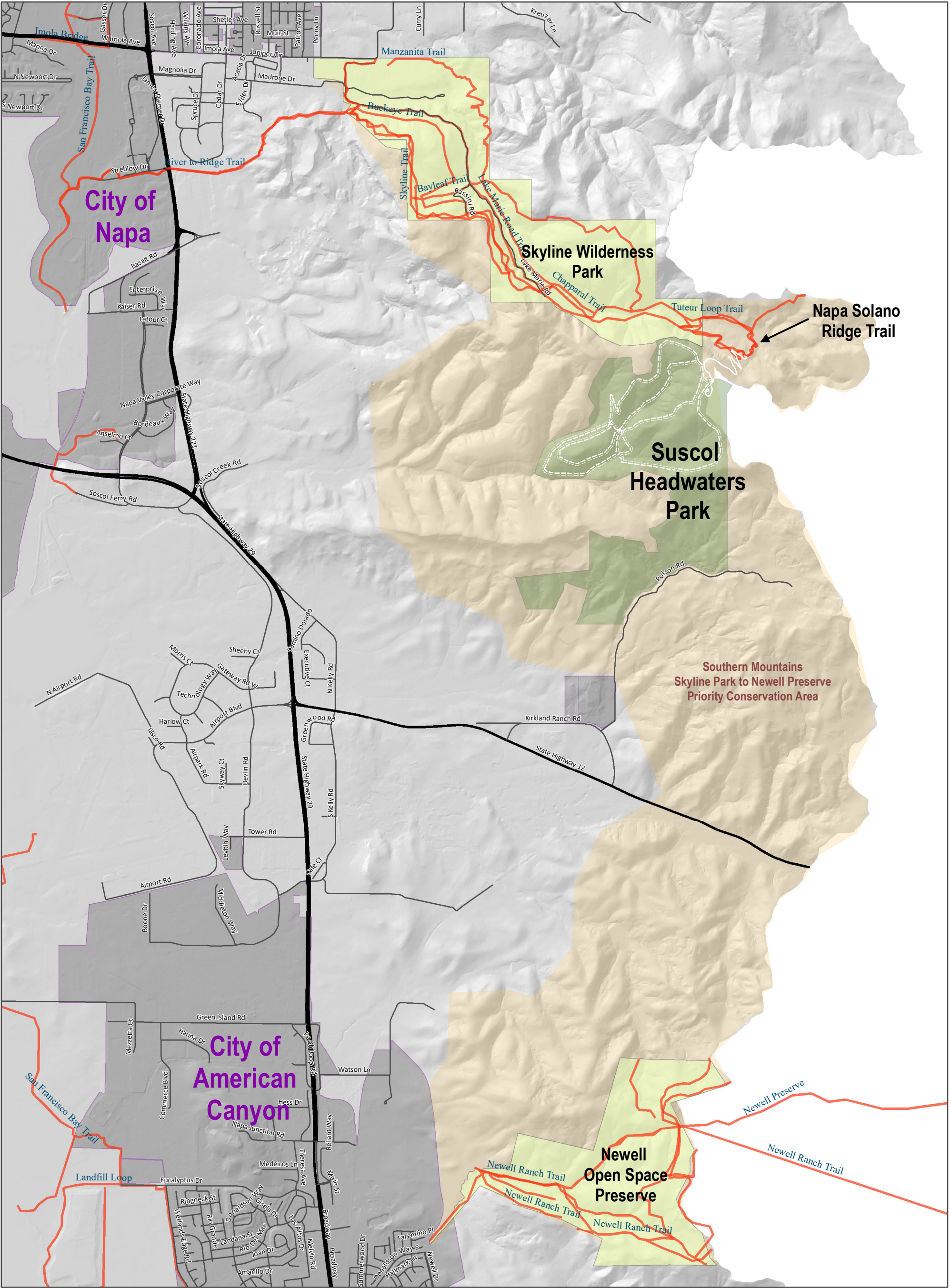
Discussion:

- a. As designed, the project will have a less than significant adverse impact on wildlife resources, and in many ways will actually improve wildlife habitat (particularly for the California Red-legged frog). The project will not result in a significant loss of native trees, native vegetation, or important examples of California's history or pre-history. In addition, because the property is in public ownership, with only light, nature-based recreational usage, significant natural plant and animal communities will be permanently protected.
- b. The proposed project does not have impacts that are individually limited but cumulatively considerable.
- c. There are no environmental effects caused by this project that would result in substantial adverse effects on human beings, whether directly or indirectly. No significant hazardous conditions resulting from this project have been identified. The project would not have any environmental effects that would result in significant impacts.

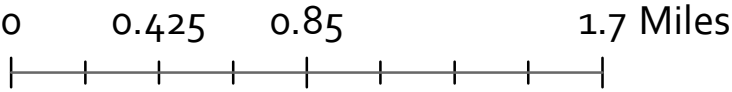
Attachments

1. Project Location Map
2. Park Plan
3. Plant Survey and Analysis

Napa Open Space District



Location Map Suscol Headwaters Park



Legend

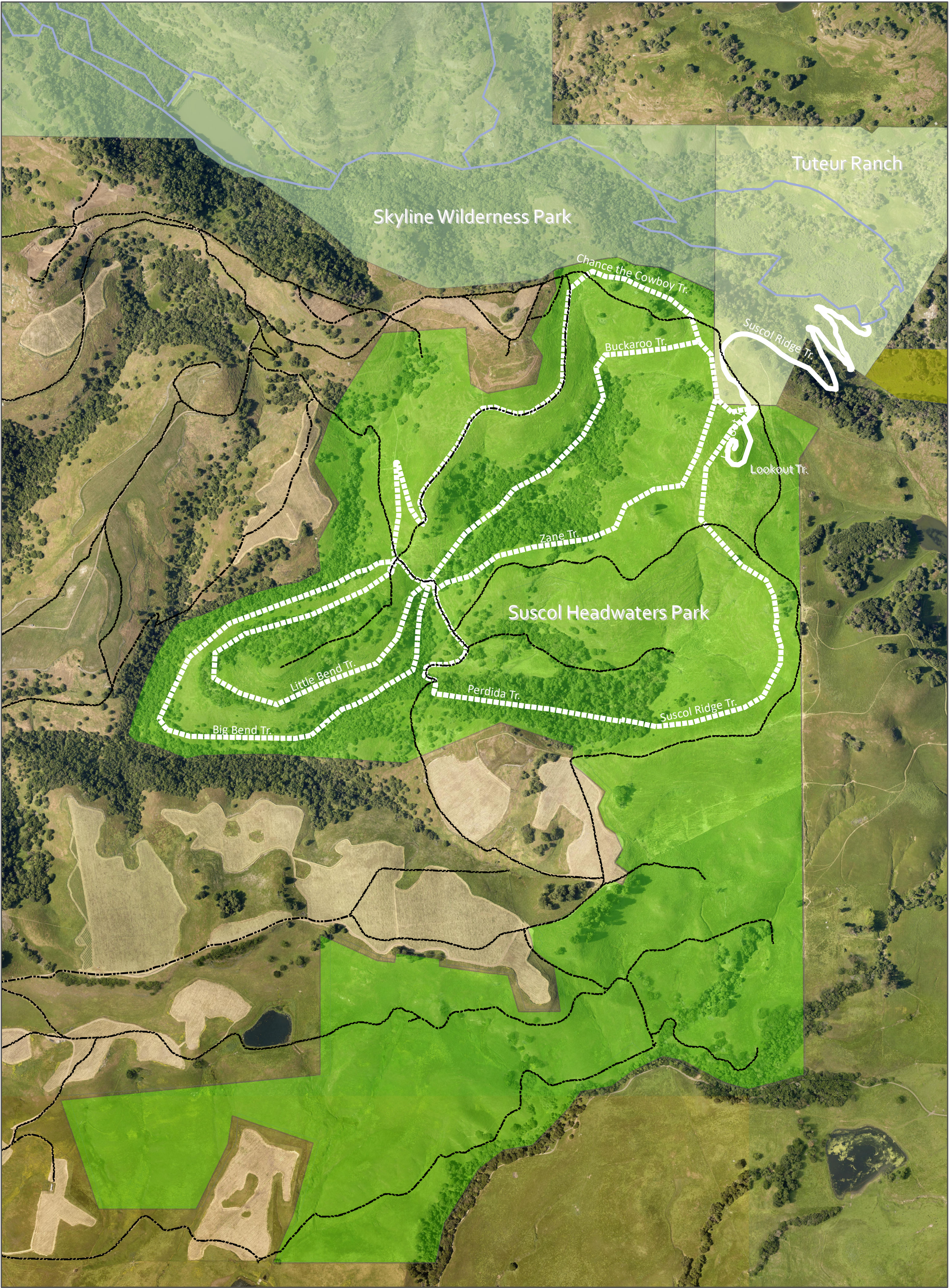
Trails

Status

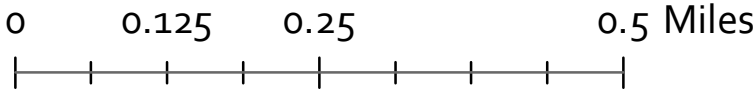
Existing Trail



Napa Open Space District



Draft Park Development Plan Suscol Headwaters Park



Legend

- Suscol Headwaters
- Ranch Roads
- Skyline Trails
- Project Trails**
- Proposed
- Existing

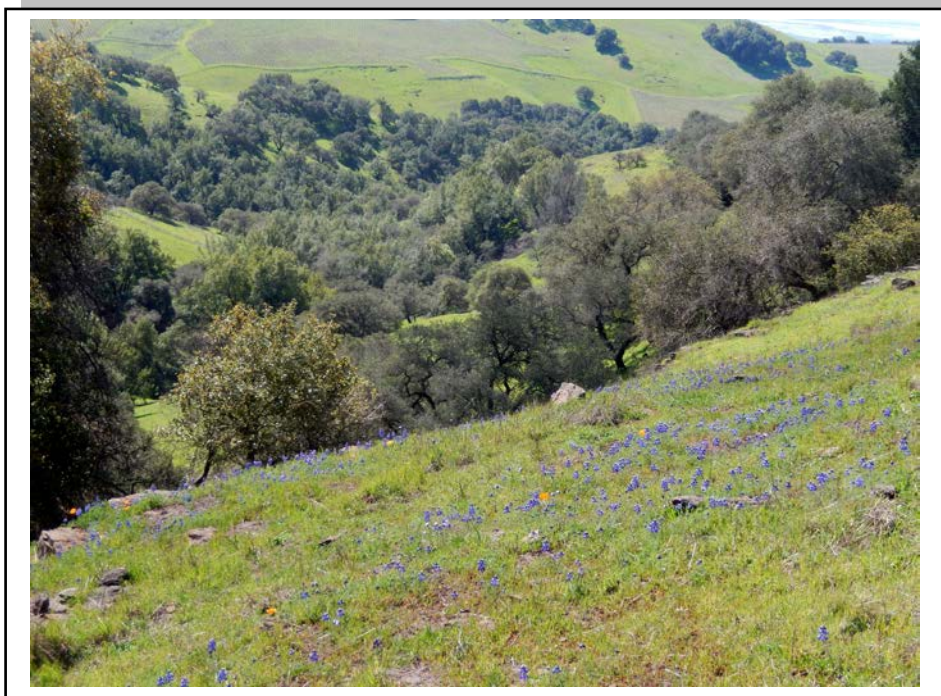


Suscol Headwaters

Botanical Resource Study

Suscol Creek Road

September 2019



Prepared for:

Napa County Regional Park and Open Space District

1195 Third Street, Room 210

Napa, CA 94559

By

Napa Botanical Survey Services

3549 Willis Drive

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Introduction

A portion of the Suscol Headwaters property was acquired by the Napa County Regional Park and Open Space District (NCRPSD) as surplus land to a vineyard development company. An additional 298 acres was acquired with mitigation money for endangered Red Legged Frog. The 709 acre property is located about 4 miles southeast of the city of Napa along the eastern boundary of the county. It is contiguous to Skyline Park Wilderness along its northern boundary. The property preserves open space while also providing an opportunity to extend the Bay Area Ridge Trail across public property from the Tuteur Ranch and Skyline Park into Jameson Canyon. It also preserves Critical Habitat Area for California Red-legged Frog (*Rana draytonii*). To that end, the District wishes to develop a small reservoir in the eastern part of the Headwaters property to provide breeding habitat for the Red-legged Frog.

The eastern boundary of the property borders undeveloped rangeland in Solano County, currently used to graze cattle (approximately 40 acres of *Headwaters* lies in Solano County). Lands to the west have been developed to premium grapes to the extent permitted but broad undeveloped habitat corridors remain adjacent to Suscol Creek. This permits wildlife mobility from the Headwaters property to the Napa River.

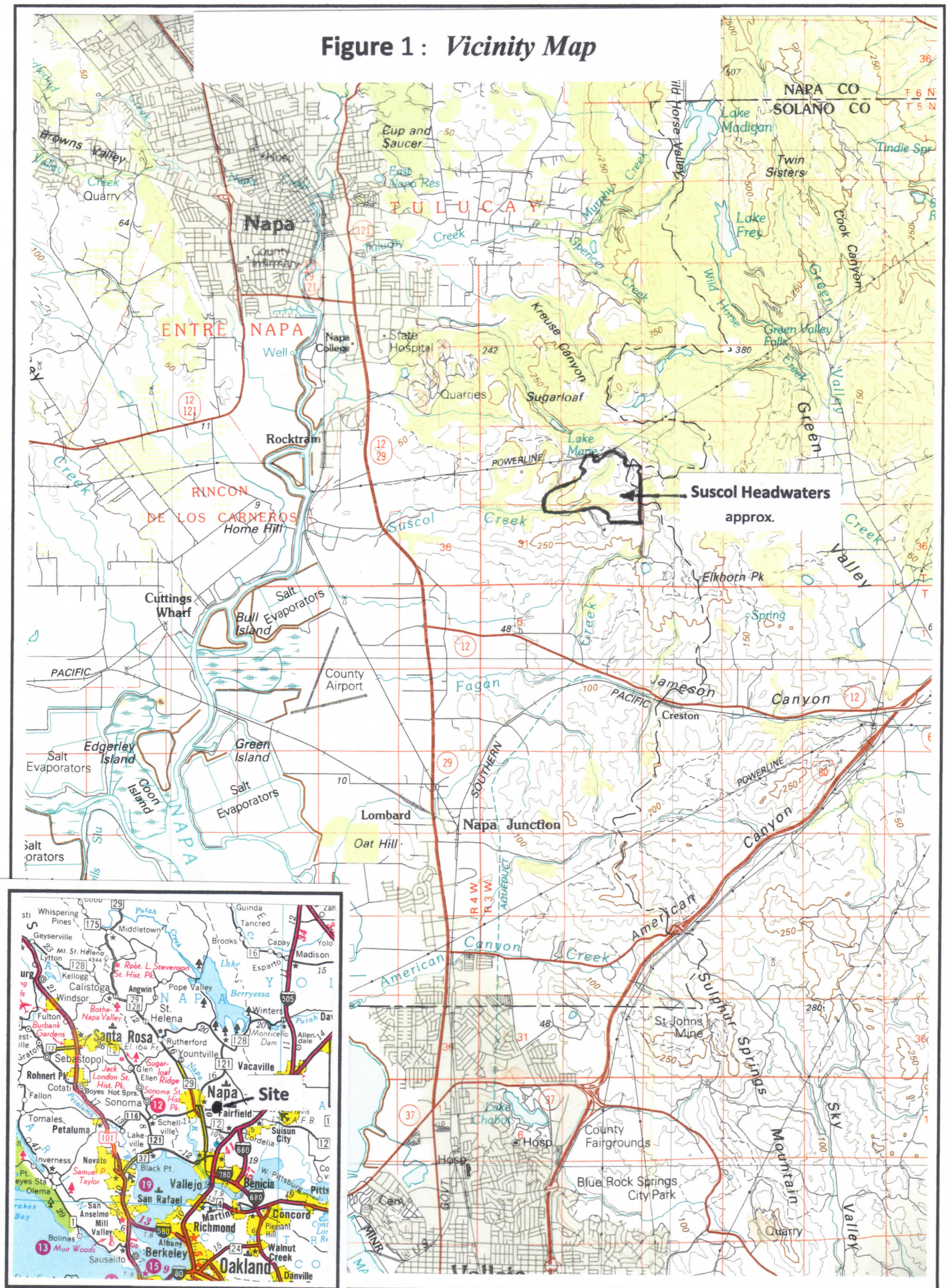
Botanical Surveys were conducted by *LSA Associates* between 2007 and 2009 with the results published in the *Biological Survey Report for the Suscol Mountain Property, Napa County, California* in 2010. Those surveys covered a much more extensive portion of the 2,123 acre property but they focused on lands that were deemed developable. Remaining lands were given a lower level of scrutiny. Under California Department of Fish and Wildlife regulations, study results are no longer considered applicable after 5 years.

Elevation ranges from 470 to 1505 ft in elevation. The terrain is generally steep with the exception of gradual slopes along ridgelines and stream corridors. Access to the site is through Silverado Properties via Anderson Road or Suscol Creek Road. Jeep roads extend along the ridgeline and are indicated on USGS, Cordelia 7.5 Minute topographic map. An old jeep road also extends along a portion of Suscol Creek to the headwaters of the stream. The property is currently grazed during a portion of the year under a Resource Management Plan that was prepared by a Certified Range land Manager. Cattle often congregate near water in the headwaters “bowl” area and near springs to the west. A portion of the project area was excluded from grazing by electrical fencing in 2019.

Soils on the property originated, in large part, from the decomposition and weathering of parent rock from the *Sonoma Volcanics*. These include soils of the Hambright Series (mapping code 152), with 30-75% slopes, occurring on ridgelines and canyon slopes. The dark brown to grayish brown stony loam soils are well drained and basic igneous rock is expected at about 12 inches (other soil series may be intermingled). These soils support annual grassland. Soils derived from sandstone and shale of the Fagan Series (m.c. 134) occur closer to and along the slopes adjacent to Suscol Creek. In this area, slopes range between 30 and 50% slope. Erosion potential is high and these soils are subject to landslip. They are slightly acidic and up to 46 inches in depth (other soils may be intermingled). This soil type supports forest on north slopes and woodlands on south slopes. A knoll near the western edge of the

Figure 1

Figure 1: Vicinity Map



property is classified as Rock Outcrop (m.c. 175) with moderate to steep slopes that experience very rapid runoff. Exposed volcanic rock is prominent in this thin rocky soil that is generally less than 6 inches in depth. Soils here support brushlands. (*A Soil Survey of Napa County, California, 1978*).

A number of springs emanate from the steep slopes above Suscol Creek. At least 7 springs were observed feeding into and supporting the perennial flow of Suscol Creek. Waters drain westward into the Napa River near the historic site of town of Suscol. Along this corridor, steelhead habitat is currently undergoing restoration. Historically, this stream also supported Chinook and Coho Salmon. A limited area, on the east side of the property drains into Green Valley Creek in Solano County.

Precipitation is not recorded on the property but the American Canyon Airport reports about 22 inches annual rainfall. The summers are warm and dry and moderated by maritime breezes. Typical summer temperatures are in the 70s to long 90's °F. Frost is limited in this part of the county and soil moisture retention generally sustains annual grassland until mid-May.

The Suscol Headwaters property has been utilized as rangeland for many decades. It is currently farmed under a lease agreement. Suppression of the growth of herbaceous species due by grazing was moderate during the study. Invasive plant species are prominent in grassland habitats, especially near water sources. The site supports indigenous wildlife but it also supports a growing population of feral pigs. It is currently inaccessible for public recreational use.

The purpose of this botanical study was to:

- Develop a list of potentially occurring rare plant species. Record special status plant species observations on a hand-held GPS unit.
- Assimilate an inventory of vascular plant species observed on the property with all state, federal, CNPS and locally-rare taxa highlighted.
- Provide brief descriptions of observed vegetation alliances/associations.
- Provide a report of findings including a map of special status plant species observed during 2019.
- Provide a discussion of changes since 2010 LSA Report with respect to habitat quality and sensitive habitat.
- Assess potential impact of the development of a pond (for CRLF) and a trail to access it.

Field Survey Methodology

Field surveys were completed during spring and summer of 2019 including March 21, 28, May 7, 22, June 25 and September 24 with a total of 22.5 hours spent in the field. Chris Cahill of Napa County Regional Parks and Open Space District provided orientation to the property on March 21. Field surveys covered the blooming period of most species observed. Rainfall during the 2018-19 season, leading into and through the field study, was about 60% above normal. Wet weather was a hindrance during a portion of spring field survey work.

The study area included Phase 1 - Napa County Open Space District fee title lands and Phase 2 Option Area – Preserve Expansion (now under fee title). Surveys encompassed the maximum extent of

landscape possible. Jeep roads and trails and deer trails were generally used to access the various vegetation types within the study area but surveys also included off-trail exploratory transects into forest and chaparral communities. All vascular plants observed during the surveys were identified in the field or collected for precise identification in the home office. A complete list of species is included at the conclusion of this report. Taxonomy follows *The Jepson Manual, Vascular Plants of California*, Baldwin et al., 2012 with a few exceptions (i.e. *Lolium*, *Zauschneria*).

Survey Findings

A portion of the survey area was open to cattle grazing during the study muting the phenology of some herbaceous plant species. This was most noticeable during the May surveys. Grazing also suppressed the growth of perennial species in the forest understory. About 223 species of vascular plants were observed in 2019. Of these, 162 are native and 61 are not native. What follows is a description of findings regarding diversity of vegetation types and significant plant species.

Vegetation Types Observed on the Suscol Headwaters Property

The following described vegetation types are based on a preliminary classification and definitions from 2002 data collected by a research team including UC Davis –Information for the Environment (ICE), NatureServe, California Department of Fish and Game, The California Native Plant Society, and Aerial Information Systems (AIS). The definitions are under study and may undergo expansion and further partition following additional studies that were conducted in 2018. The descriptions that follow were collected during the 2019 field surveys.

Most of the property was burned by the October 2018, *Atlas Fire* that devastated about 51,600 acres of land as well as 100s of structures. Trees in forested and wooded areas on *Headwaters* were lightly to severely damaged and numerous tree trunks are lying on the ground.

At least 7 vegetation types were observed, including forest, woodland, brushland and grassland habitats. Vegetation titles were adapted from *A Vegetation Map and Classification* (Thorne, Kennedy, Quinn and McCoy; 2003). A brief descriptive title was assigned by this botanist followed by the formal title assigned by ICE and their classification code indicated in bold. (An asterisk following a botanical name in text below indicates a species that is not native.)

Forest

Mixed Hardwood Forest

California Bay – Madrone-Coast Live Oak (Black Oak-Big-leaf Maple) NFD Super Alliance **1101**

Occurring on north and northeast facing slopes, this vegetation type is dominated by California Bay (*Umbellularia californica*, 70-80% of canopy), with Coast Live Oak (*Quercus agrifolia* ssp. *agrifolia*, 5%), an important associate and with a few scattered California Buckeye (*Aesculus californica*, < 1%). Many trees damaged by the fire were on the ground creating localized brushy thickets. The understory is generally sparse where the dense canopy permits little light to penetrate. Native perennials are prevalent including California Wood Fern (*Dryopteris arguta*), Mountain Sweet Cicely (*Osmorhiza berteroi*), California Blackberry (*Rubus ursinus*), California Star Solomon's Seal (*Maianthemum stellatum*), Rough-leaved Aster (*Eurybia radulina*), Ground Rose (*Rosa spithamea*), Rigid Hedge Nettle (*Stachys rigida*), Giant White Wakerobin (*Trillium albidum*), Stinging Nettle (*Urtica dioica* ssp. *holsericea*), and Sword Fern (*Polystichum minutum*). Scattered patches of annuals occur where more light penetrates including Miner's Lettuce (*Claytonia perfoliata*) and Cleavers (*Galium aparine*). Non-native annuals such as Common Chickweed (*Stellaria media*) are sparse. A significant number of Wild Lettuce (*Lactuca virosa*) plants were evident during March surveys but these were suppressed by herbivory/grazing.



Mixed Hardwood Riparian Forest

White Alder (Mixed Willow – California Bay – Big Leaf Maple) Riparian Forest NFD Association **3201**

This vegetation association is similar to Mixed Harwood Forest as described above but includes a number of hydrophytic perennials and shrubs. It occurs along perennial watercourses but is obscured by intergradation with the Mixed Forest Alliance on the south side (north facing slopes). Species that

characterize the channel margins of this vegetation type include Giant Chain Fern (*Woodwardia fimbriata*), Sword Fern (*Polystichum minutum*), Lady Fern (*Athyrium felix-femina*), Water Hemlock (*Cicuta douglasii*), Flowering Currant (*Ribes sanguineum* ssp. *glutinosum*), Common Snowberry (*Symphoricarpos albus* ssp. *laevigatus*), and California Blackberry (*Rubus ursinus*). The riparian forest transitions to woodland and grassland on south facing slopes. Willow and maple are not players in this community in the upper watershed and White Alder is limited in presence in the western extent.



Woodlands

Coast Live Oak Woodland

Coast Live Oak Alliance 1221

This vegetation type occurs in narrow bands on south facing slopes and hill tops and grades into grassland or chaparral in places. *Quercus agrifolia* ssp. *agrifolia* is dominant with California Bay (*Umbellularia californica*) a regular associate. Shrubs such as Poison Oak (*Toxicodendron diversilobum*), California Sagebrush (*Artemisia californica*) and Redberry (*Rhamnus crocea*) are scattered. Italian Thistle (*Carduus pycnocephalus*) is common in the herb layer while native California Rye (*Elymus glaucus* ssp. *glaucus*) is patchy.



Brushlands

Chamise Chaparral

Chamise Alliance 4321

Dominated by Chamise (*Adenostoma fasciculatum*, 60-70% of canopy), this community is in recovery from the 2018 fire. Chamise is capable of resprouting from basal buds after burning and the extent of re-growth stood at about 2-3 ft height in 2019. California Sagebrush (*Artemisia californica*) is an important associate in this community and is likewise a successful stump sprouter. Scattered Poison Oak (*Toxicodendron diversilobum*) and a few Holly-leaf Cherry (*Prunus ilicifolia*) were also observed. This community forms an open stand on shallow rocky soil on south slopes. Non-native annuals including Field Mustard (*Brassica campestris*) and Rose Clover (*Trifolium hirtum*) were common in the early season while native Rosin Weed (*Calycadenia truncata*) and (Wire Lettuce (*Stephanomeria virgata* ssp. *pleurocarpa*) were observed in patchy distribution in summer. California Mustard (*Caulanthus lasiophyllus*), was locally numerous in response to the fire (“post-fire annual”) in spring.



Coastal Scrub

Coyote Brush-California Sagebrush – (Lupine spp.) NFD Super Alliance 4501

This vegetation type is highly restricted to small stands in Napa County, mostly on the south end of the Napa and Hood Mtn. Ranges. Grazing may further restrict the size and expression of these communities. A few small patches of less than ½ acre each occur within grassland on steep south slopes and along seeps at Headwaters. Associated species include Coyote Brush (*Baccharis pilularis* ssp. *consanguinea*), California Sagebrush (*Artemisia californica*), Douglas’ Mugwort (*A. douglasiana*), Sticky Monkeyflower (*Mimulus aurantiacus*), Oregon Grape (*Berberis pinnata* ssp. *pinnata*; one dense patch), Indian Soap (*Chlorogalum pomeridianum*), White Everlasting (*Pseudognaphalium microcephalum*), and California Fuchsia (*Zauschneria californica*).



Coastal Scrub



Grasslands

Annual Grassland

California Annual Grasslands Alliance 7120

This is the most widespread vegetation type on the property, covering south and east facing slopes. Annual forbs and grasses are dominant while perennials and shrubs are sparse. This is a species rich community despite the intense competition from non-native species. Native annuals include Common Fiddleneck (*Amsinkia intermedia*), Rusty Popcornflower (*Plagiobothrys nothofulvus*), Sky Lupine (*Lupinus nanus*), Purple Owl's Clover (*Castilleja exserta*) and California Goldfields (*Lasthenia californica*) found on thin soils around rock outcroppings. Native perennials include Indian Soap (*Chlorogalum pomeridianum*), California Poppy (*Eschscholzia californica*), Purple Needlegrass (*Stipa pulchra*), and Western Morning Glory (*Calystegia occidentalis*). Non-native annual species that are abundant include Redstem Filaree (*Erodium cicutarium*), Wild Oats (*Avena barbata*), Italian Rye (*Lolium multiflorum* = *Festuca perennis*), Soft Cheat (*Bromus hordeaceus*) and Italian Thistle (*Carduus pycnocephalus* ssp. *pycno.*). A few species such as Streamside Daisy (*Erigeron bioletti*), California Fuchsia (*Zauschneria californica*), and Live Forever (*Dudleya cymosa* ssp. *cymosa*) occur on rock outcrops in this vegetation type.

In one portion of a north slope, this grassland shows a strong concentration of perennial forbs. This herb/scrub vegetation association does not fall within any of the herbaceous categories currently assigned to Napa County by ICE. It is included here because it is encircled by Annual Grassland but it is likely that this community warrants recognition as a distinct vegetation alliance or association. Common species include Poison Oak (*Toxicodendron diversilobum*), Trailing Snowberry (*Symphoricarpus mollis*), California Manroot (*Marah fabacea*), Bracken Fern (*Pteridium aquilinum*), Rough-leaved Aster (*Eurybia radulina*), California Poppy (*Eschscholzia californica*), California Brome (*Bromus carinatus* ssp. *carinatus*), Rigid Hedge Nettle (*Stachys rigida* ssp. *quercetorum*), American Vetch (*Vicia americana*), Leafy Fleabane (*Erigeron foliosus* var. *franciscanus*), and Summer Lupine (*Lupinus formosus*). Annuals include Chinese Houses (*Collinsia heterophylla*), Baby Blue Eyes (*Nemophila menziesii* ssp. *menziesii*), Notched Clover (*Trifolium bifidum*), and Wine-cup Clarkia (*Clarkia purpurea* ssp. *quadrivulnera*).



North slope perennial
(unnamed) plant community



Perennial Wetland

Carex spp.-Juncus spp.- Wet Meadow Grasses) NFD Super Alliance - 6403

This highly localized vegetation type is a product of scattered perennial seeps and springs that are emitted from the volcanic bedrock. These occur on steep to gradual slopes and often travel across exposed bedrock at *Headwaters*. Dominant species include Pacific Bog Rush (*Juncus effusus* var. *pacificus*), and Water Cress (*Nasturtium aquaticum*), but often include Seep-spring Monkeyflower (*Mimulus guttatus*), Rabbit's Foot Grass (*Polypogon monspeliensis* *), Knot-grass (*Paspalum*

polystichum), Giant Chain Fern (*Woodwardia fimbriata*), Duckweed (*Lemna minuta*), Pacific Oenanthe (*Oenanthe sarmentosa*), Himalayan Blackberry (*Rubus armeniacus* *) and Pennyroyal (*Mentha pulegium* *) as common associates. Western Azalea (*Rhodendron occidentale*) occurs as an overstory at one location. (GPS locations: N38°14'24.4"/W122°12'42.2"; N38°14'26.8"/W122°12'53.5"; N38°14'34.8"/W122°13'48.4"; N38°14'38.5"/W122°13'36.1"; N38°14'42.4"/W122°12'49.0"; N38°14'34.1"/W122°13'00.8")



Western Azalea with Monkeyflower and Giant Chain Fern



Pacific Bog Rush and Blackberry

Perennial Wetlands

Potentially Occurring Special Status Plant Species

A review of the Suscol Mountain Vineyard Report (2010) was conducted to determine the list of potentially occurring special status species. Only Streamside Daisy (*Erigeron bioletti*) was confirmed during 2007-2009 surveys. For that reason, a detailed list is not provided here. Please refer to pages 28-32 of that report for questions regarding the focus of previous surveys. The following refined list includes those species with the highest potential to occur on the property based on vegetation and substrates known to occur on the property and the focus of additional surveys.

Narrow-anthered Brodiaea (*Brodiaea leptandra*) – Occurs in wooded and brushy places on volcanic substrates. Recorded at in Skyline Park about 1.5 miles north of the site. CNPS List 1B.2

Small-flowered Calycadenia (*Calycadenia micrantha*) – Occurs in Chamise Chaparral on volcanic soil. Recorded near Staggs Leap about 18 miles north of the site. CNPS List 1B.2

Hollyleaf Ceanothus (*Ceanothus purpureus*) – Associated with chamise chaparral on volcanic substrate. Has been recorded in Skyline Park and on the Tuteur Ranch, 1 mile north of the site. CNPS List 1B.2

American Dogwood (*Cornus sericea* ssp. *sericea*) – This species occurs along perennial streams on volcanic substrates. It is known to occur at Sarco Creek about 7 miles north of the site and is considered rare by Napa County.

Streamside Daisy (*Erigeron bioletti*) – This species prefers rocky places on a variety of substrates. It has been recorded near Marie Creek about 1 mile north of the site and in Jameson Canyon about 2.5 miles south of the site. It was also confirmed at the Headwaters site during 2007-2009 surveys. CNPS List 3

Narrow-leaved Daisy (*Erigeron greenei*) – This species prefers rock outcrops on volcanic and serpentine substrates. It occurs on Mt. George, about 6 miles north of the site. CNPS List 1B.2

Nodding Harmonia (*Harmonia nutans*) – This species grows around rock outcrops on a variety of substrates and has been recorded on the Green Valley Ranch about 2 miles NE of the site. CNPS List 4.3

Green Coyote Mint (*Monardella viridis*) – This is a widespread species in Napa County occurring in brushy to forested habitats. It occurs in Skyline Park about 1 mile north of the site.

Gairdner's Yampah (*Perideridia gairdneri* ssp. *gairdneri*) – This species prefers seasonally wet places on gradual slopes or flats. It has been found on the east side of Mt. George, about 6 miles north of the site. A species of Yampah was reported and mapped in the *Suscol Mountain Report* but identification was undetermined at that time. CNPS List 4.2

Yellow-eyed Grass (*Sisyrinchium californicum*) – This species grows in perennial springs and has been recorded on Mt. George about 6 miles north of the site. It is considered Rare in Napa County according to Napa County.

Oval-leaved Viburnum (*Viburnum ellipticum*) – There are two records for Napa County, both in Hardwood Forest. A location at Skyline Park is about 0.6 mile north of the site. CNPS List 2.3

Status Codes: CNPS lists - 1B = Rare and Endangered in California and elsewhere, 2 = Rare and Endangered in California but more common elsewhere, 3 = Taxonomy or distribution needs further study, 4 = Limited Distribution – A Watch List. Additional coding was added to the status of most species by CNPS in 2006, applying greater focus to rarity and threats to each species. A code of 1B.1 indicates the highest level of threat while 4.3 indicates the lowest.

Special Status Plant Species Observed at Suscol Headwaters

Only one species listed above was observed during 2019 surveys. A *Perideridia* species was reported by LSA following 2007-09 surveys and is indicated on Figure 4 of the 2010 report. This species was looked for but no species of *Perideridia* could be located during 2019 surveys. This is perhaps due to grazing suppression but a mid season and late season survey was unable to locate this species. Based on

site conditions, it is expected that the previous report was likely assignable to *P. kelloggii*. This is a widespread and common species.

Streamside Daisy (*Erigeron bioletti*) was the only special status species discovered by LSA surveys and 5 locations were mapped (Figure 4 LSA, 2010) – This species was found during 2019 surveys. This species has no state or federal listing status. It is currently on List 3 of the California Native Plant Society and subject to CEQA (California Environmental Quality Act). Eight locations were recorded during 2019 surveys in addition to a mitigation site for this species that is located at the entrance to the Headwaters Preserve. This mitigation site was established as compensation for 0.61 acres (40%) of habitat converted during establishment of Suscol Mountain Vineyards. (GPS Locations: N38°14'59.8"/W122°12'44.8", N38°14'58.5"/W122°12'43.8", N38°15'02.5"/W122°12'43.3", N38°15'12.7"/W122°12'50.1", N38°14'42.3"/W122°13'35.7", N38°15'09.3"/W122°12'50.9", N38°14'49.1"/W122°12'43.6")

Other Noteworthy Species

A few additional species found in the study area are noteworthy due to a highly restricted occurrence in Napa County. These species have less than five known locations each in the county.

Douglas' Water Hemlock (*Cicuta douglasii*) – In Napa County this species is restricted to perennial streams south of Mt. George and has also been reported from the Mt. Veeder area. It was found along the western segment of Suscol Creek.

Caraway-leaved Lomatium (*Lomatium caruifolium* var. *denticulatum*) – In Napa County this species has been reported from few locations from the east side of Mt. George to Skyline Park. It was observed near the eastern boundary of the *Headwaters* property. Seed production is strongly suppressed by grazing.

Winter Current (*Ribes sanguineum* var. *glutinsum*) – In Napa County, this taxon is restricted to a few canyons south of Mt. George. It was observed along the stream corridor of the main stem of Suscol Creek as scattered individuals or in small clusters.

Discussion

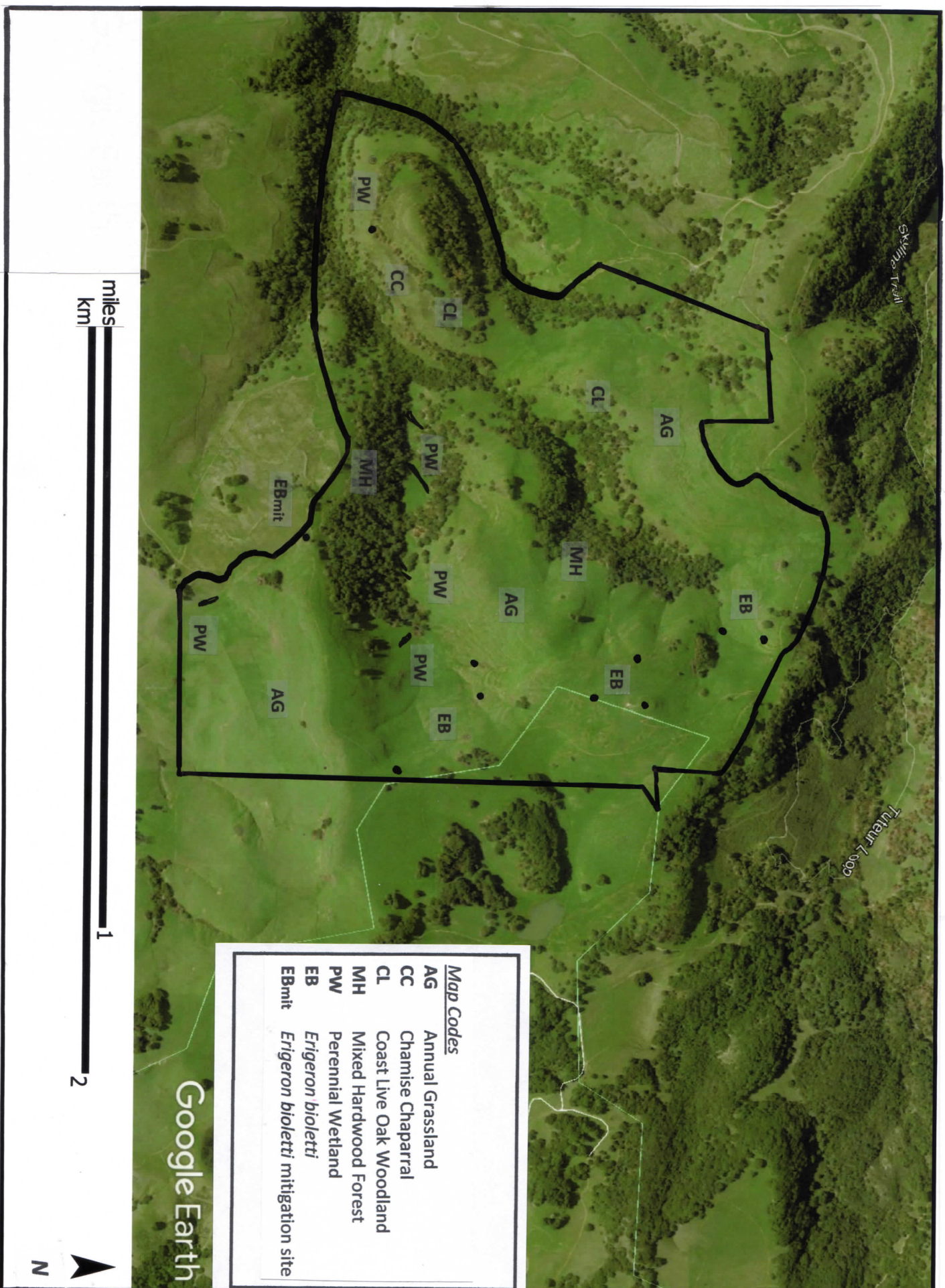
The 2017 wildfire prompted regeneration of chaparral and woodland communities. It is expected that 3 to 10 years of re-growth will restore conditions of these communities to maturity. Fire scars will remain for decades. Grassland communities have rapidly recovered.

A few noxious weeds appear to be new to the property since 2007-2009 surveys. Most notably is the introduction of Stinkwort (*Dittrichia graveolens*), a highly invasive species in disturbed habitats and Wild Lettuce (*Lactuca virosa*), a potentially invasive species in forest habitat.

Streamside Daisy has persisted since previous surveys and fire appears to have had no impact on its occurrence.

Figure 2

Figure 2: Suscol Headwaters - *Vegetation and Rare Plant Locations*



The establishment of a habitat pond in the Headwaters eastern bowl area is likely to have little impact on native species or habitat. Common species here include non-native annuals – Italian Rye, Rip-gut grass, yellow star Thistle, Italian Thistle and non-native non-native Pennyroyal and Sheep Sorrel. There are scattered native plant species including Common Hareleaf, Dove Mullein and Canada Horseweed and Water Smartweed but habitat loss to these species is not significant.

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Vascular Plants of Suscol Headwaters Preserve		
Scientific Name	Common Name	Life Form
FERNS & ALLIES		
<i>Adiantum jordanii</i>	Maidenhair Fern	perennial
<i>Athyrium felix-femina</i>	Lady Fern	perennial
<i>Dryopteris arguta</i>	Wood Fern	perennial
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Giant Horsetail	perennial
<i>Pentagramma triangularis</i>	Gold Back Fern	perennial
<i>Polypodium calirhiza</i>	California Polypody	perennial
<i>Polystichum imbricans</i> ssp. <i>imbricans</i>	Imbricate Fern	perennial
<i>Polystichum minutum</i>	Sword Fern	perennial
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Bracken Fern	perennial
<i>Woodwardia fimbriata</i>	Giant Chain Fern	perennial
<u>Flowering Plants -Dicots</u>		
ANACARDIACEAE	Sumac Family	
<i>Toxicodendron diversilobum</i>	Poison Oak	shrub
APIACEAE	Carrot Family	
<i>Cicuta douglasii</i>	Water Hemlock	perennial
<i>Heracleum maximum</i>	Cow Parsnip	perennial
<i>Lomatium caruifolium</i> var. <i>denticulatum</i>	Caraway-leaved Lomatium	perennial
<i>Lomatium utriculatum</i>	Foothill Lomatium	perennial
<i>Oenanthe sarmentosa</i>	Oenanthe	perennial
<i>Osmorhiza berteroi</i>	Mountain Sweet Cicely	perennial
<i>Sanicula bipinnatifida</i>	Purple Sanicle	perennial
<i>Sanicula crassicaulis</i>	Pacific Snakeroot	perennial
APOCYNACEAE	Dogbane Family	
<i>Asclepias fascicularis</i>	Narrow-leaved Milkweed	perennial
ASTERACEAE	Sunflower Family	
<i>Achillea millefolium</i>	Common Yarrow	perennial
<i>Artemisia californica</i>	California Sagebrush	shrub
<i>Artemisia douglasiana</i>	Douglas' Mugwort	perennial
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	Coyote Brush	shrub
<i>Calycadenia truncata</i>	Rosin Weed	annual
<i>Carduus pycnocephalus</i> ssp. <i>pycno.</i>	Italian Thistle *	annual
<i>Centaurea calcitrapa</i>	Purple Star Thistle *	annual
<i>Centaurea melitensis</i>	Maltese Thistle *	annual
<i>Centaurea solstitialis</i>	Yellow Star Thistle *	annual
<i>Cirsium vulgare</i>	Bull Thistle *	biennial
<i>Erigeron bioletti</i>	Streamside Daisy	perennial
<i>Erigeron canadensis</i>	Common Horseweed	perennial
<i>Erigeron foliosus</i> var. <i>franciscanis</i>	San Francisco Leafy Daisy	perennial

Scientific Name	Common Name	Life Form
<i>Eurybia radulina</i>	Rough-leaved Aster	perennial
<i>Gamochaeta ustulata</i>	Purple Everlasting	annual
<i>Hypochaeris radicata</i>	Hairy Cat's Ear *	annual
<i>Lactuca saligna</i>	Willow Lettuce *	annual
<i>Lactuca virosa</i>	Wild Lettuce *	annual
<i>Lagophylla ramosissima</i>	Common Hareleaf	annual
<i>Lasthenia californica</i> ssp. <i>californica</i>	California Goldfields	annual
<i>Madia anomala</i> ?	Plump-seeded Tarweed	annual
<i>Madia gracilis</i>	Slender Tarweed	annual
<i>Micropus californicus</i> var. <i>californicus</i>	Q-tips	annual
<i>Pseudognaphalium californicum</i>	California Cudweed	perennial
<i>Pseudognaphalium microcephalum</i>	White Everlasting	perennial
<i>Pseudognaphalium luteo-album</i>	Weedy Cudweed *	biennial
<i>Senecio vulgaris</i>	Common Grounzel *	annual
<i>Silybum marianum</i>	Milk Thistle *	annual
<i>Sonchus oleraceus</i>	Sow Thistle *	annual
<i>Stephanomeria virgata</i> ssp. <i>pleurocarpa</i>	Tall Wire Lettuce	annual
<i>Taraxacum officinale</i>	Dandelion *	perennial
<i>Wyethia angustifolia</i>	Narrow-leaved Mule Ears	perennial
<i>Wyethia glabra</i>	Coast Range Mule Ears	perennial
<i>Xanthium spinosum</i>	Spiny Clotbur	annual
BERBERIDACEAE	<i>Barberry Family</i>	
<i>Berberis pinnata</i> ssp. <i>pinnata</i>	Oregon Grape	shrub
BETULACEAE	<i>Birch Family</i>	
<i>Alnus rhombifolia</i>	White Alder	tree
<i>Corylus cornuta</i> var. <i>californica</i>	California Hazelnut	shrub
BORAGINACEAE	<i>Borage Family</i>	
<i>Amsinckia intermedia</i>	Common Fiddleneck	annual
<i>Cynoglossum grande</i>	Grand Hound's Tongue	perennial
<i>Nemophila heterophylla</i>	Woodland Nemophila	annual
<i>Nemophila menziesii</i> var. <i>menziesii</i>	Baby Blue Eyes	annual
<i>Phacelia distans</i>	Common Phacelia	annual
<i>Phacelia imbricata</i>	Imbricate Phacelia	perennial
<i>Plagiobothrys nothofulvus</i>	Rusty Pocomflower	annual
BRASSICACEAE	<i>Mustard Family</i>	
<i>Brassica campestris</i>	Field Mustard *	annual
<i>Cardamine californica</i>	California Milkmaids	perennial
<i>Cardamine oligosperma</i>	Bittercress	annual
<i>Caulanthus lasiophyllus</i>	California Mustard	annual
<i>Hirshfeldia incana</i>	Mediterranean Barley *	annual
<i>Lepidium nitidum</i>	Shining Peppergrass	annual
<i>Nasturtium officinale</i>	Water Cress	perennial

Scientific Name	Common Name	Life Form
<i>Sinapsis arvensis</i>	Charlock *	annual
<i>Sisymbrium officinale</i>	Hedge Mustard *	annual
CAPRIFOLIACEAE	<i>Honeysuckle Family</i>	
<i>Lonicera hispidula</i>	Hairy Honeysuckle	vine
<i>Symphoricarpus albus</i> ssp. <i>laevigatus</i>	Common Snowberry	shrub
<i>Symphoricarpus mollis</i>	Trailing Snowberry	shrub
CARYOPHYLLACEAE	<i>Pink Family</i>	
<i>Cerastium glomeratum</i>	Mouse-eared Chickweed *	annual
<i>Minuartia douglasii</i>	Douglas' Sandwort	annual
<i>Petrorhagia dubia</i>	Wild Carnation *	annual
<i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i>	Four-seeded Polycarp *	annual
<i>Silene gallica</i>	Windmill Pink *	annual
<i>Silene laciniata</i> ssp. <i>californica</i>	California Indian Pink	perennial
<i>Stellaria media</i>	Common Chickweed *	annual
CONVOLVULACEAE	<i>Morning Glory Family</i>	
<i>Calystegia occidentalis</i> ssp. <i>occidentalis</i>	Western Morning Glory	perennial
CRASSULACEAE	<i>Stonecrop Family</i>	
<i>Crassula connata</i>	Sand Pygmy Weed	annual
<i>Dudleya cymosa</i>	Live Forever	perennial
CUCURBITACEAE	<i>Gourd Family</i>	
<i>Marah fabacea</i>	California Manroot	vine
ERICACEAE	<i>Heath Family</i>	
<i>Rhododendron occidentale</i>	Western Azalea	shrub
EUPHORBIACEAE	<i>Spurge Family</i>	
<i>Croton setigerus</i>	Turkey Mullein	annual
FABACEAE	<i>Pea Family</i>	
<i>Acmispon brachycarpus</i>	Hillside Trefoil	annual
<i>Acmispon glaber</i> ssp. <i>glaber</i>	Deerweed	perennial
<i>Acmispon parviflorus</i>	Miniature Bird's Foot Lotus	annual
<i>Astagalus gambelianus</i>	Gambel's locoweed	annual
<i>Hoita macrostachya</i>	Leather Root	perennial
<i>Lathyrus jepsonii</i> var. <i>californicus</i> ?	Jepson's Pea	perennial
<i>Lathyrus vestitus</i>	Pacific Pea	perennial
<i>Lupinus albifrons</i> var. <i>collinus</i>	Silver Lupine	shrub
<i>Lupinus bicolor</i>	Miniature Lupine	annual
<i>Lupinus formosus</i> var. <i>formosus</i>	Summer Lupine	perennial
<i>Lupinus nanus</i>	Sky Lupine	annual
<i>Trifolium bifidum</i> var. <i>decipiens</i>	Notch-leaved Clover	annual

Scientific Name	Common Name	Life Form
<i>Trifolium depauperatum</i> var. <i>depauperatum</i>	Balloon Clover	annual
<i>Trifolium glomeratum</i>	Clustered Clover *	annual
<i>Trifolium hirtum</i>	Rose Clover *	annual
<i>Trifolium incarnatum</i>	Crimson Clover *	annual
<i>Trifolium microcephalum</i>	Maiden Clover	annual
<i>Trifolium microdon</i>	Thimble Clover	annual
<i>Trifolium subterraneanum</i>	Subterranean Clover *	perennial
<i>Trifolium wildenovii</i>	Tomcat Clover *	annual
<i>Vicia americana</i>	American Vetch	perennial
FAGACEAE	<i>Oak Family</i>	
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast Live Oak	tree
GENTIANACEAE	<i>Gentian Family</i>	
<i>Zeltnera muehlenbergii</i>	June Centaury	annual
GERANIACEAE	<i>Geranium Family</i>	
<i>Erodium botrys</i>	Long-beaked Filaree *	annual
<i>Erodium cicutarium</i>	Redstem Filaree *	annual
<i>Erodium moschatum</i>	White-stem Filaree *	annual
<i>Geranium molle</i>	Dove Mullein *	annual
<i>Geranium purpureum</i>	Purple Geranium *	annual
GROSSULARIACEAE	<i>Currant Family</i>	
<i>Ribes sanguineum</i> ssp. <i>glutinosum</i>	Winter Currant	shrub
HYPERICACEAE	<i>St. John's Wort Family</i>	
<i>Hypericum anagalloides</i>	Tinker's Penny	perennial
LAMIACEAE	<i>Mint Family</i>	
<i>Mentha pulegium</i>	Pennyroyal*	perennial
<i>Stachys rigida</i> var. <i>quercetorum</i>	Rigid Hedge Nettle	perennial
LAURACEAE	<i>Laurel Family</i>	
<i>Umbellularia californica</i>	California Bay	tree
MALVACEAE		
<i>Malva parviflora</i>	Cheese-weed *	annual
MONTIACEAE	<i>Miner's Lettuce Family</i>	
<i>Calandrinia ciliata</i>	Red Maids	annual
<i>Claytonia perfoliata</i> ssp. <i>mexicana</i>	California Miner's Lettuce	annual
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	Common Miner's Lettuce	annual
<i>Montia fontana</i>	Water Montia	annual
MYRSINACEAE	<i>Myrsine Family</i>	

Scientific Name	Common Name	Life Form
<i>Trientalis latifolia</i>	Pacific Starflower	perennial
ONAGRACEAE	<i>Evening Primrose Family</i>	
<i>Clarkia gracilis</i> ssp. <i>gracilis</i>	Slender Clarkia	annual
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Wine-cup Clarkia	annual
<i>Epilobium brachycarpum</i>	Paniced Willow Herb	annual
<i>Epilobium ciliatum</i>	Northern Willowherb	perennial
<i>Zauschneria californica</i>	California Fuchsia	perennial
OROBANCHACEAE	<i>Broomrape Family</i>	
<i>Castilleja exserta</i> ssp. <i>exserta</i>	Purple Owl's Clover	annual
<i>Parentucellia viscosa</i>	Glandweed *	annual
PAPAVERACEAE	<i>Poppy Family</i>	
<i>Eschscholzia californica</i>	California Poppy	perennial
PHRYMACEAE	<i>Lopseed Family</i>	
<i>Mimulus aurantiacus</i>	Sticky Monkeyflower	shrub
<i>Mimulus cardinalis</i>	Scarlet Monkeyflower	perennial
<i>Mimulus guttatus</i>	Seep-spring Monkeyflower	annual
PLANTAGINACEAE	<i>Plantain Family</i>	
<i>Collinsia sparsiflora</i> var. <i>sparsiflora</i>	Blue-eyed Mary	annual
<i>Collinsia heterophylla</i>	Chinese Houses	annual
<i>Plantago erecta</i>	Dwarf Plantain	annual
<i>Plantago major</i>	Common Plantain *	perennial
<i>Veronica americana</i>	American Brooklime	perennial
POLEMONIACEAE	<i>Phlox Family</i>	
<i>Gilia tricolor</i> ssp. <i>tricolor</i>	Bird's Eye Gilia	annual
POLYGONACEAE	<i>Buckwheat Family</i>	
<i>Eriogonum nudum</i> var.	Nudestem Buckwheat	perennial
<i>Persicaria punctata</i>	Water Smart Weed	annual
<i>Polygonum aviculare</i> ssp. <i>depressum</i>	Common Knotweed *	annual
<i>Pterostegia drymarioides</i>	Valentine Plant	annual
<i>Rumex acetosella</i>	Sheep Sorrel *	perennial
<i>Rumex crispus</i>	Curly Dock *	perennial
<i>Rumex pulcher</i>	Fiddle Dock *	perennial
RANUNCULACEAE	<i>Buttercup Family</i>	
<i>Anemone grayi</i>	Western Wood Anemone	perennial
<i>Ranunculus californicus</i>	California Buttercup	perennial
<i>Ranunculus muricatus</i>	Prickly Buttercup *	annual
RHAMNACEAE	<i>Buckthorn Family Family</i>	
<i>Frangula californica</i> ssp. <i>californica</i>	California Coffeeberry	perennial

Scientific Name	Common Name	Life Form
<i>Rhamnus crocea</i>	Redberry	shrub
ROSACEAE	<i>Rose Family</i>	
<i>Adenostoma fasciculatum</i>	Chamise	shrub
<i>Aphanes occidentalis</i>	Western Dew Cup	annual
<i>Fragaria vesca</i>	Woodland Strawberry	perennial
<i>Holodiscus discolor</i>	Ocean Spray	perennial
<i>Prunus ilicifolia</i>	Holy-leaf Cherry	shrub
<i>Rosa gymnocarpa</i>	Woodland Rose	shrub
<i>Rosa spithamea</i>	Ground Rose	shrub
<i>Rubus armeniacus</i>	Himalayan Blackberry *	perennial
<i>Rubus parviflorus</i>	Thimbleberry	shrub
<i>Rubus ursinus</i>	California Blackberry	vine
RUBIACEAE	<i>Madder Family</i>	
<i>Galium aparine</i>	Cleavers	annual
<i>Galium californicum</i>	California Bedstraw	perennial
<i>Galium porrigens</i> var. <i>porrigens</i>	Climbing Bedstraw	perennial
SALICACEAE	<i>Willow Family</i>	
<i>Salix lasiolepis</i>	Arroyo Willow	shrub
SAPINDACEAE	<i>Soapberry Family</i>	
<i>Aesculus californica</i>	California Buckeye	tree
SAXIFRAGACEAE	<i>Saxifrage Family</i>	
<i>Lithophragma hetrophyllum</i>	Hill Star	perennial
SCROPHULARIACEAE	<i>Figwort Family</i>	
<i>Scrophularia californica</i>	California Figwort	perennial
SOLANACEAE	<i>Nightshade Family</i>	
<i>Solanum americanum</i>	American Nightshade	biennial
URTICACEAE	<i>Nettle Family</i>	
<i>Hesperocnide tenella</i>	California Nettle	annual
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Stinging Nettle	perennial
VIOLACEAE	<i>Violet Family</i>	
<i>Viola pedunculata</i>	Johnny Jump-ups	perennial
<u>Flowering Plants - Monocots</u>		
AGAVACEAE	<i>Century Plant Family</i>	
<i>Chlorogalum pomeridianum</i> var. <i>pom.</i>	Indian Soap	perennial
ARACEAE	<i>Arum Family</i>	
<i>Lemna minuta</i>	Least Duckweed	annual

Scientific Name	Common Name	Life Form
<i>Lemna valdiviana</i> ?	Valdiviana Duckweed	annual
CYPERACEAE	<i>Sedge Family</i>	
<i>Carex barbarae</i>	Santa Barbara Sedge	perennial
<i>Carex gracilior</i>	Slender Sedge	perennial
<i>Carex leptopoda</i>	Shorty-scaled Sedge	perennial
<i>Cyperus eragrostis</i>	Nutsedge	annual
<i>Cyperus niger</i>	Shining Umbrella Sedge	annual
<i>Eleocharis radicans</i>	Rooted Spikerush	perennial
IRIDACEAE	<i>Iris Family</i>	
<i>Iris macrosiphon</i>	Bowl-tubed Iris	perennial
JUNCACEAE	<i>Rush Family</i>	
<i>Juncus bufonius</i>	Toad Rush	annual
<i>Juncus effusus</i> var. <i>pacificus</i>	Pacific Bog Rush	perennial
LILIACEAE	<i>Lily Family</i>	
<i>Fritillaria affinis</i>	Mission Bells	perennial
<i>Prosartes hookeri</i>	Hooker's Fairy Bells	perennial
MELANTHIACEAE	<i>False Hellebore Family</i>	
<i>Trillium albidum</i>	Giant Wakerobin	perennial
ORCHIDACEAE	<i>Orchid Family</i>	
<i>Epipactis helleborine</i>	Broadleaf Helleborine	perennial
POACEAE	<i>Grass Family</i>	
<i>Agrostis hallii</i>	Hall's Bentgrass	perennial
<i>Agrostis pallens</i>	Leafy Bentgrass	perennial
<i>Agrostis exarata</i>	Western Bentgrass	perennial
<i>Avena barbata</i>	Wild Oats *	annual
<i>Bromus hordeaceus</i>	Sofy Chess *	annual
<i>Bromus carinatus</i> var. <i>carinatus</i>	California Brome	perennial
<i>Bromus diandrus</i>	Rip-gut Grass *	annual
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Foxtail *	annual
<i>Bromus tectorum</i>	Downy Brome *	annual
<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian Thistle *	annual
<i>Cynosurus echinatus</i>	Dog-tail Grass *	annual
<i>Deschampsia elongata</i>	Slender Hairgrass	perennial
<i>Digitaria sanguinalis</i>	Hairy Crabgrass *	
<i>Echinochloa crus-galli</i>	Barnyard Grass *	
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	Western Bent Grass	perennial
<i>Gastridium phleoides</i>	Nit Grass *	annual
<i>Glyceria leptostachya</i>	Davy's Manna Grass	perennial
<i>Holcus lanatus</i>	Velvet Grass *	perennial

Scientific Name	Common Name	Life Form
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Mediterranean Barley *	annual
<i>Lamarckia aurea</i>	Lamarck's Grass *	annual
<i>Lolium multiflorum</i>	Italian Rye *	annual
<i>Paspalum distichum</i>	Knot-grass	perennial
<i>Poa annua</i>	Annual Bluegrass *	annual
<i>Polypogon interruptus</i>	Beard Grass *	annual
<i>Polypogon monspeliensis</i>	Rabbit's Foot *	annual
<i>Polypogon viridis</i>	Water Beard Grass *	annual
<i>Stipa pulchra</i>	Purple Needlegrass	perennial
RUSCACEAE	<i>Butcher's Broom Family</i>	
<i>Maianthemum stellatum</i>	California Star Solomon's Seal	perennial
THEMIDACEAE	<i>Brodiaea Family</i>	
<i>Brodiaea elegans</i> ssp. <i>elegans</i>	Harvest Brodiaea	perennial
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Blue Dicks	perennial
<i>Dichelostemma congestum</i>	Ookow	perennial
*non-native		