COUNTY OF LAKE
COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
Courthouse - 255 N. Forbes Street
Lakeport, California 95453
Telephone 707/263-2221 FAX 707/263-2225

July 14, 2020

CALIFORNIA ENVIRONMENTAL QUALITY ACT INITIAL STUDY (IS 17-31) ENVIRONMENTAL CHECKLIST FORM

1. Project Title:	Brand Family General Plan Amendment, Rezone and Tentative Parcel Map
2. Permits:	Initial Study, IS 17-31 for the following: • General Plan Amendment (GPAP 17-01) • Rezone (RZ 17-01) • Parcel Map (PM 17-01)
3. Lead Agency Name and Address:	County of Lake Community Development Department Courthouse – 255 North Forbes Street Lakeport, California 95453
4. Supervisor District:	District One (1)
5. Contact Person/Phone Number:	Mark Roberts - Principal Planner (707) 263-2221
6. Project Location:	23987 (013-028-81) & 24073 (013-028-82) State Highway 29, Middletown, CA 95461
7. Parcel Numbers & Size:	013-028-81 (Approximately 30 acres in size) 013-028-82 (Approximately 45 acres in size)
8. Project Sponsor's Name/Address:	Richard & Whitney Brand PO BOX 741 Middletown, CA 95461
9. General Plan Designation:	Rural Lands – Rural Residential – Resource Conservation
10. Zoning:	"RL-RR-WW-SC" – Rural Lands – Rural Residential – Waterway – Scenic Combing Overlay District (013-028-81). "RL-RR-WW" – Rural Lands – Rural Residential – Waterway (013-028-82)

ATTACHMENT 9

11. Flood Zone: "X" – Areas determined to be outside the 0.2% annual chance (500-year) flood plain.

12. Natural Hazards: Project area is within the State Responsibility Area (High Fire).

13. Waterways: Existing reservoir/pond and Bullion Creek (located in the northern portion of project area and runs the entire length of the parcels.

14. Fire District: South Lake Fire Protection District/Calfire

15. School District: Middletown Unified School District

16. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary).

The applicant is requesting a Rezone, General Plan Amendment and Tentative Parcel map to subdivide APN 013-028-81 into four parcels. Currently, the parcels are split zoned and the applicant seeks to rezone APN 013-028-81 to be completely within the RR-Rural Residential zoning district and rezone APN 013-028-82 to be completely within the RL-Rural Lands zoning district as shown below. The parcels are located approximately 3.5 miles south of Middletown and are developed with single family homes and a vineyard. The proposed parcels are/will be accessed from existing unimproved roadways. The applicant shall obtain all necessary permits from the California Department of Transportation (Caltrans) and/or the Lake County Department of Public Works for any work and/or improvements within the right-of-way. The applicant wishes to construct single family homes as allowed within the RR and RL zoning districts through a ministerial Building Permit process in the future. However, no development details are known at this time. The project description and associated maps and figures are included as **Attachment 1:**

REZONE REQUEST:

Parcel Number	Current Zoning Designation	Proposed Zoning Designation
013-028-81	"RR-RL-WW-SC" *(Rural Residential – Rural Lands – Waterway and Scenic Combining)*	"RR-SC-WW" *(Rural Residential — Waterway and Scenic Combining)*
013-028-82	"RR-RL-WW" *(Rural Residential – Rural Lands – Waterway)*	"RL-WW" *(Rural Lands – Waterway)*

GENERAL PLAN AMENDMENT REQUEST:

Parcel Number	Current General Plan Designation	Proposed General Plan Designation
013-028-81	"RL-RR-RC" *(Rural Lands – Rural Residential -Resource Conservation)*	"RR-RC" *(Rural Residential – Resource Conservation)*
013-028-82	"RL-RR-RC" *(Rural Lands – Rural Residential -Resource Conservation)*	"RL-RC" *(Rural Lands – Resource Conservation)*

Tentative Parcel Map for Assessor Parcel Number: 013-028-81

According to the applicant Tentative Parcel map, the above parcel number would be subdivided into four (4) parcels:

- Parcels One (1): Is proposed to be approximately +/- 8.90 acres in size
- Parcel Two (2): Is proposed to be approximately +/- 5.00 acres in size
- Parcel Three (3): Is proposed to be approximately +/- 9.52 acres in size
- Parcel Four (4): Is proposed to be approximately +/- 5.93 acres in size

Existing Access:

- The project parcels would be assessable through the existing gated access located off of State Highway 29. The existing access/roadway would be improved to meet all Federal, State and local agency requirements.

Existing Development:

The two existing parcels are currently developed with single family dwellings and agricultural uses. Uses on the proposed parcels would be as follows:

- Proposed Parcels One (1) and Two (2) are developed with single-family dwellings which are served by an existing onsite well(s) and waste management systems (septic).
- Proposed Parcel Three (3) is partial developed with existing agricultural uses (vineyard) and a reservoir/pond.
- Proposed Parcel Four (4) would remain undeveloped/vacant at this time.
- There is an existing PG&E Pole Line Easement that crosses the proposed Parcel Three (3) and a Portion of Parcel Two (2).

17. Surrounding Land Uses and Setting: Briefly describe the project's surroundings:

- *North:* Parcel to the North are zoned "RR" Rural Residential, "RL" Rural Lands and "SR" Suburban Reserve. The parcels range in size from approximately 0.50 to greater than 50 acres in size.
- *South*: Parcels to the south are zoned "RL" Rural Lands and "SR" Suburban Reserve. The parcels range in size from approximately 0.50 to greater than 100 acres in size.
- *West:* Parcels to the west are zoned "RR" Rural Residential and "RL" Rural Lands. The parcels range in size from approximately 4.00 to greater than 140 acres in size.
- *East:* Parcels to the east are zoned "SR" Suburban Reserve and "RL" Rural Lands. The parcels range in size from approximately 0.50 to greater than 100 acres in size.

18. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

- Lake County Community Development Department
- Lake County Department of Public Works - Road Division
- Lake County Department of Public Works – Surveyor
- Lake County Air Quality Management District
- Lake County Water Resources Department
- Lake County Public Services
- Lake County Department of Environmental Health
- South Lake Fire Protection District

- California Department of Forestry and Fire Protection (Calfire)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife
- Regional Water Quality Control Board
- U.S. Army Corps of Engineers

19. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

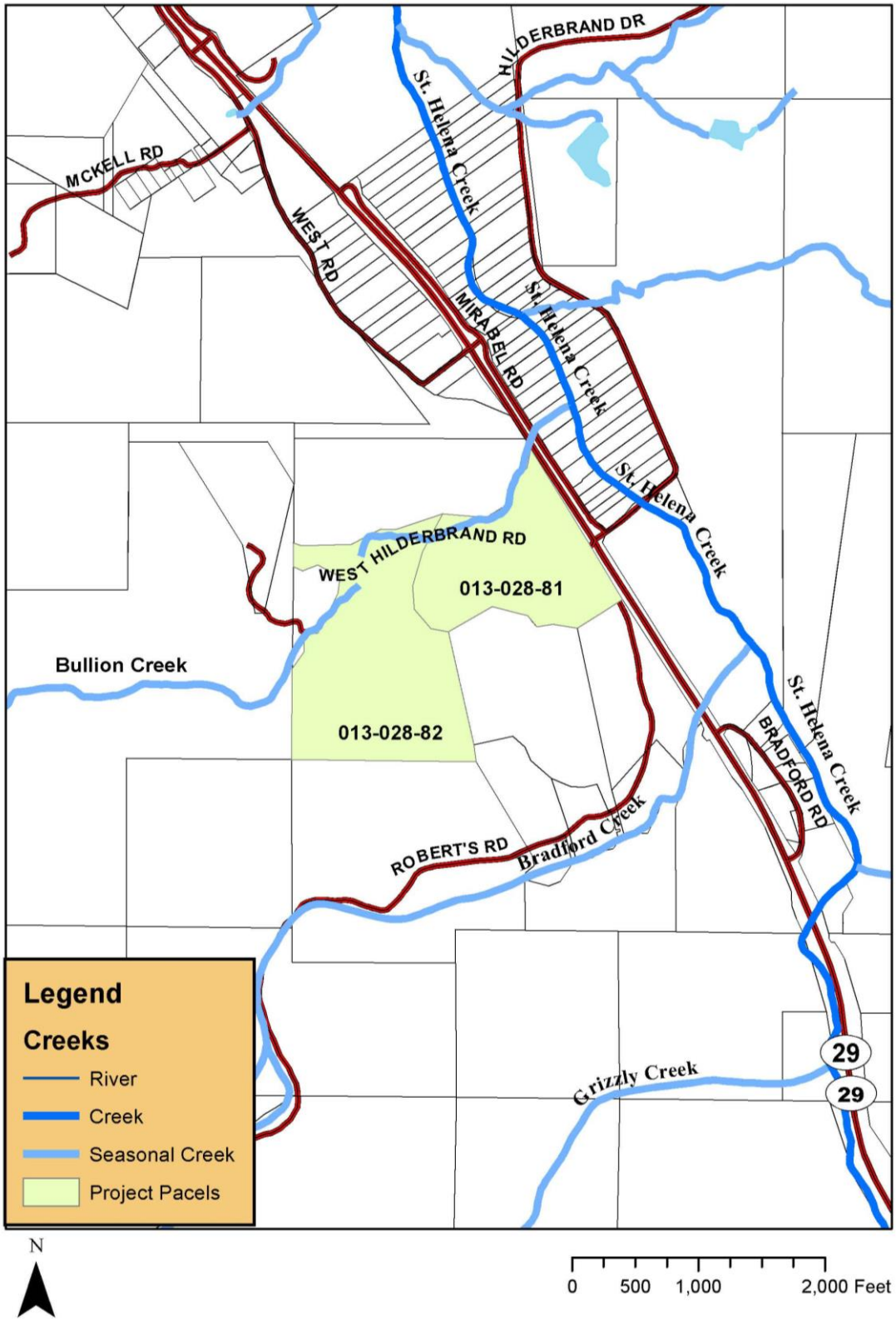
Notification of the project was sent to local tribes for the required review period *(AB 52 and SB 18).* No ground disturbance is proposed at this time for the proposed General Plan Amendment, Rezone and Parcel Map. The Community Development received the following tribal agency concerns/comments:

- Koi Nation – According to comments dated January 25, 2018 their agency has no interest in the project.
- Middletown Rancheria – According to comments dated January 27th, 2018, the Middletown Rancheria has requested the applicant engage with the Middletown Rancheria if any commercial development occurs onsite. No ground disturbance/commercial development is proposed at this time.
- Elem Colony – According to comments dated January 29, 2018 they have no concerns regarding the proposed project.
- Yocha Dehe – According to comments dated May 8, 2018 their agency declines to comment on the project.
- The Community Development did not receive comments and/or concerns from the following tribal agencies.
    - *Scotts band of Pomo Indians.*
    - *Upper Lake Habemtolel.*
    - *Big Valley Rancheria.*
    - *Robinson Rancheria.*
    - *Redwood Valley.*

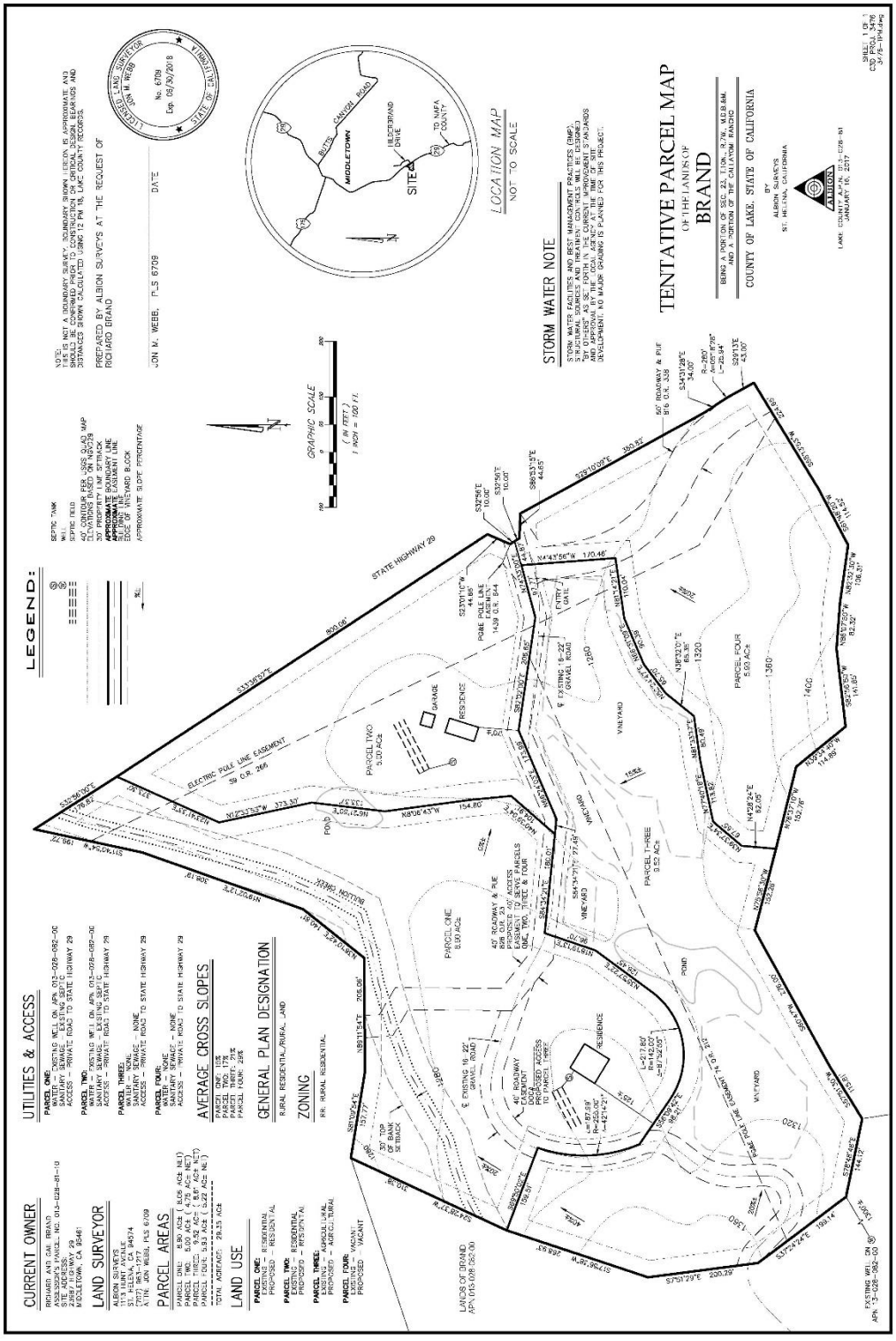
ATTACHMENTS

Attachment 1-Project Description and Associated Maps and Figures
Attachment 2-Biological Resource Assessment with Botanical Survey and Delineation of Wastes of the U.S., prepared by Northwest Biosurvey, dated November 8, 2018
Attachment 3- Mitigation Monitoring Reporting Program

VICINITY MAP



PROPOSED PARCEL MAP



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION: (To be completed by the lead Agency) - 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.

Initial Study prepared by:
Mark Roberts, Principal Planner

Date: 7/14/2020

SIGNATURE

Scott DeLeon, Interim Director
Community Development Department

SECTION 1

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, and then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

KEY: 1 = POTENTIALLY SIGNIFICANT IMPACT
2 = LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION
3 = LESS THAN SIGNIFICANT IMPACT
4 = NO IMPACT

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
I. AESTHETICS *Except as provided in Public Resources Code Section 21099, would the project:*						
a) Have a substantial adverse effect on a scenic vista?			X		Parcel 013-028-81 is located within the Scenic Combing (SC) District which is intended to protect and enhance views of scenic areas from the County's scenic highways (State Highway 29 in this case) and roadways for the benefit of local residential and resort development, the motoring public, and the recreation based economy of the County. The proposed Rezone, General Plan Amendment and Parcel Map would not have a substantial adverse effect on a scenic vista and proposed development (no development is proposed at this time) in the future would be required to adhere to development standards established for the SC District (Article 34 of the Lake County Zoning Ordinance). Impacts to scenic vistas would be **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 20
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X		See discussion I(a) above. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 20
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X		The proposed project would not substantially degrade the existing visual character and/or quality of the public views from State Highway 29. The excat location and details of future development of single family homes is unknown at this time but would be consistent with the development in the area. In addition, the site is largely shielded by trees and topography. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 20
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X		No lighting is proposed as a part of the project. All future lighting shall be directed downwards onto the project site and not onto adjacent roads or properties. Lighting equipment shall be consistent with that which is recommended on the website: www.darksky.org and provisions of section 21.41.8 of the Zoning Ordinance. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 20
II. AGRICULTURE AND FORESTRY RESOURCES *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board. Would the project:*						

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X		According to the Farmland Mapping and Monitoring Program, the project site is designated as "Other Lands which is classified Lands which do not qualify as Prime Farmland/ Farmland of Statewide Importance or Unique Farmland. A portion of the project area is developed with an existing agricultural use (vineyards), however the proposed project will not convert and/or impact the existing agricultural uses. **Less Than Significant Impact**	1, 2, 3, 4, 5, 12, 13, 14, 19, 42
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X		The proposed project is not zoned agricultural and does not contain a Williamson Act contract. The project would not conflict with existing zoning for agricultural uses. **Less Than Significant Impact**	1, 2, 3, 4, 5, 12, 13, 14, 19, 42
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X	The proposed project is consistent with the Lake County General Plan, Middletown Area Plan and the Lake County Zoning Ordinance. The proposed project would not result in the rezone of forest land, timber land, or Timberland Production lands. **No Impact**	1, 2, 3, 4, 5, 12, 13, 14, 19, 42
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X	The project would not result in the loss or conversion of forest land to a non-forest use. **No Impact**	1, 2, 3, 4, 5, 12, 13, 14, 19, 42
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X	The project would not induce changes to existing farmland that would result in its conversion to non-agricultural use. **No Impact**	1, 2, 3, 4, 5, 12, 13, 14, 19, 42
III. AIR QUALITY *Where available, the significance criteria established by the applicable air quality management district 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?		X			The proposed project would not conflict with and/or obstruct implementation of the applicable an Air Quality Plan. Dust and fumes may be released as a result of potential development activities. Additionally, the import and export of vehicle traffic on roadways may create fugitive dust and impact air quality. Any potential future development may have the potential to result in short- and long-term air quality impacts. However, all future development would be subject to environmental review and air quality regulations and mitigations, as applicable. With incorporated mitigation measures, any potential air quality impacts would be reduced to less than significant. **Less Than Significant with Mitigation Incorporated** **Mitigation Measures:** **AQ-1: Work practices shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving**	1, 2, 3, 4, 5, 6,7, 8, 9, 15, 19, 20, 23, 24, 28, 39, 42

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles. **AQ-2: Vehicles and equipment shall be well maintained and in compliance with State emission requirements. The permit holder shall obtain all necessary for any diesel generators or diesel engines installed as operating, support, or emergency backup equipment for the Lake County Air Quality Management District.** **AQ-3: Vegetation that is removed for any development must be properly disposed. The permit holder shall chip vegetation and spread the material for erosion control.** **AQ-4: All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.** **AQ-5: According to County Records, parcel number 013-028-82 may have known Serpentine soils. Therefore, prior to any ground disturbance and/or future development the applicant shall contact the Lake County Air Quality Management District as a Dust Mitigation Plan may be required.** **AQ-6: Work practices and/or future development shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles.** **AQ-7: All vegetative waste from development activities shall be composted and/or chipped as a means of disposal. All vegetation removed shall be chipped and spread for ground cover and erosion control. Site development and vegetation disposal shall not create a nuisance odors, smoke or dust.** **AQ-8: Burning of vegetative material is discourage, but if not alternative material is available, a Smoke Management Plan shall be submitted to the Lake County Air Quality Management District and the local fire protection District for review and approval.**	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under and applicable federal or state ambient air quality standard?			X		The Lake County Air Basin is designated as an attainment area. No criteria pollutants for the project region have been exceeded.	1, 2, 3, 4, 5, 6,7, 8, 9, 15, 19, 20, 23, 24, 28, 39, 42
c) Expose sensitive receptors to substantial pollutant concentrations?			X		The County of Lake is in attainment of state and federal ambient air quality standards.	1, 2, 3, 4, 5, 6,7, 8, 9, 15, 19, 20, 23, 24, 28, 39, 42
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		X			The emission identified in Section See Section III (a) are not expected to create objectable odors. Therefore, with the incorporation of Mitigation Measures AQ-1 through AQ-8, all potential environmental impacts have been reduced to less than significant. **Less Than Significant with Mitigation Incorporated**	1, 2, 3, 4, 5, 6,7, 8, 9, 15, 19, 20, 23, 24, 28, 39, 42

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
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?		X			On November 8, 2018, a Biological Resource Assessment with Botanical Survey and Delineation of Wastes of the U.S was prepared by Northwest Biosurvey (**Attachment 2**). According to the surveys the following exists on-site. ***Vegetation Types:*** According to the Biological Assessment, the site contains eleven (11) plant communities and/or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) - A Manual of California Vegetation. These vegetation types and other cover types are listed below: • *Douglas fir forest* • *Ponderosa pine forest* • *Knobcone pine forest* • *California black oak forest* • *Mixed oak woodland* • *Blue oak woodland* • *Red willow thicket* • *Manzanita shrub alliance* • *Narrow-leaf cattail marsh* • *Pale spike rush marsh* • *Wild oat grassland* • *Vineyard* • *Olive Orchard* • *Open Water* • *Ruderal (disturbed area, including but not limited to roads, structures parking areas, etc.)* ***Wildlife Assessment:*** According to the Biological Assessment pre-survey research conducted for this study, a total of 17 sensitive wildlife species need to be accounted for within the project area. Fourteen are identified as present within the Detert Reservoir quadrangle by the CNDDB. Additional three species – white-tailed kite, yellow warbler, and yellow-breasted chat – are added based on the presence of potential habitat. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site. According to the Biological Assessment of the 17 sensitive species, the following may be present in the project area: • *Foothill Yellow-Legged Frog* • *Western Pond Turtle* • *Purple Martin* • *White-Tailed Kite* • *Pallid Bat* • *Silver-Haired Bat* ***Water of the U.S:*** According to the Biological Assessment approximately 0.6875 acre of possible waters of the U.S occur on the project parcels, as a mix of ephemeral streams and ponds. According to the Biological Assessment the proposed Rezone, General Plan Amendment and Parcel Map would not have a direct adverse impact on biological resources, but the size and location of future development has the potential to impact biological resources. **Therefore, the following mitigation measures are recommended for future development. With the Mitigation Measures**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					incorporated below, all potential environmental impacts would be reduced to less than significant. **<u>Mitigation Measures:</u>** **BIO 1: All residential development and its access shall be emphasized within the central, valley portions of the project parcels and be accessed by existing ranch roads.** **BIO-2: Development within the Douglas Fir Forest in the southern portions of the property shall be restricted to the margins of this habitat and/or to adjacent mixed oak woodlands along the eastern edge of the property within the 2.1 ace area on parcel four delineated as "Development Area, 2.1 Acres on final map.** **BIO-3: The use of fencing shall be restricted to residential yards and existing vineyard development.** **BIO-4: In order to avoid potential impacts to the Yellow Legged Frog, any development within the active channel of the creek extending along the northern property boundary, shall occur prior to April 1 or after June 15, by which time frog larvae and young are mobile and independent. Disturbance of the channel structure shall be limited to the immediate construction site. Alternatively, work may occur when the channel is naturally dry.** • ***In the event that work must occur within the active channel when water is present between April 1 and June 15, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.*** • ***Any foothill yellow-legged adult or larval frogs within the work area shall be captured and transferred to an adjacent, unaffected stream segment.*** • ***In the event that eggs of this species are found during these surveys, in-channel activities shall be delayed for one week (eggs usually hatch within 5 days) and the site re-inspected to determine if eggs have hatched. If not, an additional delay shall be required until the eggs have hatched.*** **BIO-5: In order to avoid potential impacts to the Western Pond Turtle, all work within the channel of the creek extending along the northern edge of the property, or within ponds should occur after August 15 but before the onset of winter rains and the end of the grading season (October 15). Downed trees, stumps and other basking sites and refuges within these aquatic habitats shall remain undisturbed.** • ***In the event that work must occur within the active channel between April 1 and June 15, or within a pond, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.*** • ***In the event that western pond turtles are identified, a qualified biologist with a valid California Department of Fish and Wildlife***	

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					collecting permit should be present during all construction activities at the crossing site. **BIO-6: To avoid any potential impacts to the White-tailed kites and/or Purple Martins any vineyard development, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31).** • ***If construction during the nesting season cannot be avoided, any required vegetation removal shall be the minimal amount necessary for development and shall be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a Construction buffer shall be established in consultation with California Department of Fish and Wildlife staff. Said buffer shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.*** **BIO-7: To avoid potential impacts to the Pallid Bat, any tress to be removed (outside of the dates listed below), that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen (14) days prior to tree removal. Suitable trees include those with hollows and/or shedding bark.** • ***If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.*** **BIO-8: Placement of any fill and/or any project improvements/ development that results in the discharge of dredged and/or fill material into potential jurisdictional areas on the project sites shall require authorization from the following agencies, which included but is not limited to the following:** • ***U.S Army Corps of Engineers Nationwide Permit.*** • ***Regional Water Quality Control Board pursuant to Sections 404 and 401 of the Clean Water Act*** • ***California Department of Fish and Wildlife – 1601/1604 Stream Alteration Agreement.*** **BIO-9: Any development shall maintain a minimum of a thirty (30) foot or greater setback from top of bank for all waterways located on project parcels.** **BIO-10: Prior to any work occurring in and/or near any waterway, the applicant shall submit Erosion and Sediment Control Plans and a Storm Water Management Plan to the Community Development Department for review and approval. Said Plans shall protect the local watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. [*Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required]***	

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					BIO-11: All manzanita Shrub Areas shown on the final parcel map may contain Jepson Navarretia and a survey of the area in question shall be performed by a qualified Botanist prior to development.	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			Removal of riparian and/or any other vegetation is not proposed as part of this project. Any future development shall adhere to Mitigation Measures BIO-1 through BIO-11. **Less Than Significant Impact with Mitigation Incorporated**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X			According to the Biological Assessment there is approximately 0.523 acres of possible of Waters of the U.S. The proposed project would not impact these features, but future development has the potential to. Implementation of Mitigation Measures BIO -1 through BIO-11, GEO-1 through GEO-3 and HAZ-1 through HAZ-9 would reduce any potential impact to less than significant. **Less Than Significant Impact with Mitigation Incorporated**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43
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?			X		There are no recorded wildlife corridors or native wildlife nursery sites on the project property and the project would not substantially interfere with movement of native species. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X		The project would not conflict with any local policies or ordinances. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43
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?				X	The project would not conflict with any established conservation plan. **No Impact**	1, 2, 3, 4, 5, 6, 7, 8, 16, 17, 19, 34, 37, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
V. CULTURAL RESOURCES *Would the project:*						
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?		X			A Cultural Resource Survey was performed by Jay M. Flaherty of "Flaherty Cultural Resource Services (dated) April 3, 2016 (omitted for confidentially). The survey found there were no archaeological sites discovered as a result of the reconnaissance/surface inspection(s). However, the possibility of buried and/or obscured cultural resources does exist. Additionally, the report indicates it is unlikely that human remains will be discovered during project development and/or construction. However, if any artifacts, archaeological features or human remains are encountered during grading or excavation, the mitigation measures below should be implemented. Therefore, with the Mitigations Measures incorporated below, all potential environmental impacts would be reduced to less than significant. **Less Than Significant with Mitigation Incorporated** **Mitigation Measures:** **CUL -1: Should any archaeological, paleontological, or cultural materials be discovered during development, all activity shall be halted in the vicinity of the find(s), the local overseeing tribes shall be notified, and a qualified archaeologist shall be retained to evaluate the find(s) and recommend mitigation procedures, if necessary, subject to the approval of the Community Development Director. Additionally, if human remains are discovered, Section 15064.5 of the California Environmental Quality Act (CEQA) shall be reviewed.** **CUL – 2: All employees shall be trained in recognizing potentially significant artifacts that may be discovered during ground disturbance. If any artifacts or remains are found, the local overseeing Tribe shall immediately be notified; a licensed archaeologist shall be notified, and the Lake County Community Development Director shall be notified of such finds.**	1, 2, 3, 4, 5, 6, 7, 18, 42
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?		X			**See response to Section V (a). Less Than Significant with Mitigation Incorporated**	1, 2, 3, 4, 5, 6,7, 18, 42
c) Disturb any human remains, including those interred outside of formal cemeteries?		X			**See response to Section V (a). Less Than Significant with Mitigation Incorporated**	1, 2, 3, 4, 5, 6,7, 18, 42
VI. ENERGY *Would the project:*						
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X		The proposed project would not consume excessive amounts of energy. All existing and future development shall adhere to all Federal, State and local agencies requirements regarding energy consumptions. **Less Than Significant Impact**	1, 2, 3, 5, 7. 42
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X	The proposed project would not conflict with or obstruct an energy plan. **No Impact**	1, 2, 3, 5, 7. 42

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
VII. GEOLOGY AND SOILS *Would the project:*						
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist- Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?			X		Earthquake Faults The project site is not within an Earthquake Fault Zone as established by the California Geological Survey in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. The proposed project would not expose people or structures to substantial adverse effects due to earthquakes. Seismic Ground Shaking and Seismic–Related Ground Failure, including liquefaction: Lake County contains numerous known active faults. Future seismic events in the Northern California region can be expected to produce seismic ground shaking at the site. However, risks related to ground shaking, ground failure, and liquefaction would not be increased as a result of this project. Landslides: According to the Lawrence Livermore landslide map series for Lake County, 1979, the area is considered generally stable with a marginal landslide risk. The proposed project would not result in an increased risk of landslides at this area. Any future development would be developed in compliance with all applicable Uniform Building Code regulations designed to ensure seismic safety. Therefore, impacts would be less than significant. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43
b) Result in substantial soil erosion or the loss of topsoil?		X			The proposed project would not result in a substantial soil erosion and/or the loss of topsoil. Any future developed and/or grading may have the potential to result in substantial erosion and/or loss of topsoil. According to the soil survey of Lake County, prepared by the U.S.D.A, the soil within the project is as follows: Bressa - Millsholm Loams, 15-30% slopes (soil unit 120): This soil type is very deep and well-drained. The permeability is moderately slow and the surface runoff is medium. The hazard of erosion is moderate and the water capacity is approximately 1.5 to 7.5 inches Henneke - Montara-Rock Outcrop Complex, 15 to 50% slope (soil unit 142): This type is shallow and somewhat excessively drained to well drained. The permeability is moderately slow and the surface runoff is rapid. The hazard of erosion is severe and the water capacity is approximately 1 to 4 inches. Jafa loam, 5-15% slopes (soil unit 145): This is very deep, well-drained soil. The permeability is moderately slow and the surface runoff is medium. The hazard of erosion is moderate and the water capacity is approximately 4 to 8.5 inches. Speaker-Maymen-Millsholm Association, 30-50% slopes (soil unit 227): This soil type is moderately deep and well-drained. The permeability is moderate and the surface runoff is medium. The hazard of erosion is severe and the water capacity is approximately 1 to 6 inches. According to County Records, parcel number 013-028-82 may have known Serpentine soils. Therefore, prior to any ground disturbance and/or future development the applicant shall contact the Lake County Air Quality Management District as a Dust Mitigation Plan may be required (see Mitigation Measure AQ-5).	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					If greater than fifty (50) cubic yards of soils are moved as part of any future development, a Grading Permit shall be required. The project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the County storm drainage system. BMPs typically include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance with Chapters 29 and 30 of the Lake County Code. If development/grading activities include greater than one (1) acre of new development, the project shall require coverage under a Construction General Permit for Storm Water Management, including a Storm water Pollution Prevention Plan (SWPPP). Said plans shall be submitted to the Community Development Department and the Lake County Department of Water Resources for review and approval, prior to the issuance of any permits. The applicant shall contact the Central Valley Regional Water Quality Control Board at (916) 464-4812 for further information. **Therefore, with the Mitigation Measure AQ-5 and the measures incorporated below, all potential environmental impacts have been reduced to less than significant.** **<u>Mitigation Measures</u>:** **GEO-1: Prior to any ground disturbance, the permitted shall submit *<u>Erosion Control and Sediment Plans</u>* to the Community Development Department for review and approval. Said Erosion Control and Sediment Plans shall protect the local watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. All BMP's shall be maintained for life of the project.** **GEO-2: Prior to any ground disturbance, (if applicable), the permit holder shall submit and obtain a Grading Permit from the Community Development. The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage Regulations to the maximum extent practicable. The project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the County storm drainage system. BMPs typically include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance with Chapters 29 and 30 of the Lake County Code.** **GEO-3: Excavation, filling, vegetation clearing or other disturbance of the soil shall not occur between October 15 and April 15 unless authorized by the Community Development Director. The actual dates of this defined grading period may be adjusted according to weather and soil conditions at the discretion of the Community Development Director.** **GEO-4: The permit holder shall monitor the site during the rainy season (October 15 -May 15), including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed.**	

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
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-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		According to the soil survey of Lake County, prepared by the U.S.D.A., the soil at the site is considered "generally stable" and there is a less than significant chance of landslide, subsidence, liquefaction or collapse as a result of the project. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X		According to the soil survey of Lake County, prepared by the U.S.D.A., the soil at the site is considered "generally stable". The shrink-swell potential for the project soils is moderate. With incorporation of all Building Code safety standards, the chance of landslide, subsidence, liquefaction or collapse as a result of the project would be minimal. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?			X		The project parcels are served by onsite well(s) and onsite waste management systems (septic). All development shall adhere to all Federal, State and local agencies requirements regarding the use of onsite wells and onsite waste management systems. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X		No ground disturbance is proposed at this time. No impact to paleontological resources or geologic features is expected. Future development would adhere to all regulations associated with ground disturbance. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 22, 33, 41, 42, 43
VIII. GREENHOUSE GAS EMISSIONS *Would the project:*						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		X			In general, GHG emissions from construction activities include the use of construction equipment, grading landscaping, haul trucks, worker commute vehicles, and stationary equipment (such as generators, if any). The project would does not propose construction at this time. Greenhouse gas emissions resulting from the temporary use of standard equipment for potential future development/construction and/or grading equipment would likely be negligible and would not result in a significant impact to the environment with incorporation of Mitigation Measures AIR-1 through AIR-8. **Less Than Significant With Mitigation Incorporated**	1, 2, 3, 4, 5, 6, 7, 8, 42, 43
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		See VIII(a) above. The proposed project would not conflict with any adopted plans or policies for the reduction of greenhouse gas emissions. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 42, 43
IX. 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?		X			The proposed project would not create a significant hazard to the public or the environment. Routine construction materials and all materials associated with development, including agricultural uses and/or any future development shall be transported and disposed of properly in accordance with all applicable Federal, State and local regulations. In addition, the project will comply with Section 41.7 of the Lake	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
					County Zoning Ordinance that specifies that all uses involving the use or storage of combustible, explosive, caustic or otherwise hazardous materials shall comply with all applicable local, state and federal safety standards and shall be provided with adequate safety devices against the hazard of fire and explosion, and adequate firefighting and fire suppression equipment. With the standard Mitigation Measures HAZ 1 through HAZ-5 incorporated, impacts would be reduced to less than significant. **Less Than Significant with Mitigation Incorporated** **Mitigation Measures:** **HAZ-1: All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material.** **HAZ-2: The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak onto the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials.** **HAZ-3: Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.** **HAZ- 4: The storage of hazardous materials equal to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.** **HAZ-5: The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage regulations to prevent or reduce discharge of all construction or post-construction pollutants and hazardous materials offsite or into the creek. The site shall be monitored during the rainy season (October 15-April 15) and erosion controls maintained.**	
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?		X			See Response to Section VIII (a) and IV(a). **With the Mitigation Measures AQ-5, GEO-1 through GEO-4 and HAZ-1 through HAZ-5 incorporated impacts would be reduced to less than significant**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X	The proposed project is not located within one-quarter mile of known and/or existing school. **No Impact**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43
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?				X	The property is not listed as a site containing hazardous materials in the database maintained by the Environmental Protection Agency. **No Impact**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43
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 or excessive noise for people residing or working in the project area?				X	The project is not located within an airport land use plan. **No Impact.**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X		The project would not impair or interfere with an adopted emergency response or evacuation plan. The project has been reviewed by the Department of Public Works, CalFIRE, and other agencies and departments for safety and access concerns. The applicant shall adhere to all applicable Federal, State and local emergency access requirements. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X		The project site is located within a Wildland High Fire Area (SRA – State Responsibility Area). The project will not increase the public's risk to wildland fire. Future development will be reviewed for wildfire risk. The applicant will adhere to all local, state and federal fire requirements regarding wildland fire hazards. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 9, 23, 24, 25, 28, 29, 30, 39, 41, 42, 43
X. HYDROLOGY AND WATER QUALITY *Would the project:*						
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X			Bullion Creek runs through the project site (see Vicinity Map). The proposed project would not violate any water quality or waste discharge requirements or otherwise substantially degrade surface or ground water quality. However, as discussed in Geology/Soils and Biological Resources, future development may require additional permits and mitigation to ensure development does not degrade water quality. Mitigation Measures BIO-9, BIO-10, GEO-1 through GEO-4, HAZ-3 and HAZ-5 would reduce impacts to Less Than Significant. **Less Than Significant with Mitigation Incorporated**	1, 2, 3, 4, 5, 6, 7, 8, 19, 28, 29, 34, 37, 38, 40, 41, 42, 43
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X		As proposed, the project would not substantially deplete ground water supplies or interfere substantially with groundwater recharge. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 28, 29, 34, 37, 38, 40, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i) result in substantial erosion or siltation on-site or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?		X			The project has the potential to impact water features on-site if development occurs near them. However, implementation of Mitigation Measures BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5would reduce impacts to Less than Significant. In addition, all existing and future development shall use Best Management Practices (BMPs) in accordance with the Grading Ordinance. Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. All BMP's shall be maintained for life of the project. **Less Than Significant with Mitigation Incorporated**	1, 2, 3, 4, 5, 6, 7, 8, 19, 28, 29, 34, 37, 38, 40, 41, 42, 43
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X	The project site is not located in an area of potential inundation by seiche or tsunami.	1, 2, 3, 4, 5, 6, 7, 8, 19, 28, 29, 34, 37, 38, 40, 41, 42, 43
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X	The project would not conflict with or obstruct water quality or management plans. **No Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 28, 29, 34, 37, 38, 40, 41, 42, 43
XI. LAND USE AND PLANNING *Would the project:*						
a) Physically divide an established community?			X		The parcels are developed with single family homes and a vineyard in an area with similar development. The proposed parcel map would create additional parcels but would not divide an established community. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X		The project is located within the Middletown Area Plan and designated Rural Lands – Rural Residential – Resource Conservation in the Lake County General Plan. Currently, the parcels are split zoned "RL-RR-WW-SC" – Rural Lands – Rural Residential – Waterway – Scenic Combing Overlay District (013-028-81) and "RL-RR-WW" – Rural Lands – Rural Residential – Waterway (013-028-82). The applicant seeks to rezone APN 013-028-81 to be completely within the RR-Rural Residential zoning district and rezone APN 013-028-82 to be completely within the RL-Rural Lands zoning district, as described in the project description. The proposed Rezone would require a General Plan Amendment, in compliance with the Lake County Zoning Ordinance. The proposed Parcel Map is consistent with all applicable development standards in the Zoning Ordinance and Subdivision Map Act. With approval of these entitlements, the project would not conflict with the General Plan, Middletown Area Plan or Zoning Ordinance. All future development will have to adhere to requirements within the aforementioned plans and codes. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 41, 42, 43
XII. 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?				X	The Lake County Aggregate Resource Management Plan does not identify a source of minerals at this site. **No Impact**	1, 2, 3, 4, 5, 6, 7, 33
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?				X	The County of Lake's General Plan, the Middletown Area Plan, nor the Lake County Aggregate Resource Management Plan designates the project site as being a locally important mineral resource recovery site. **No Impact**	1, 2, 3, 4, 5, 6, 7, 33
XIII. NOISE *Would the project result in:*						
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X		Future development and/or improvements may increase short-term and/or long term increases in ambient noises depending on the type of development. The permit holder shall adhere to all requirements and/or standards outlines in the Lake County Zoning Ordinance. • The maximum non-construction related sounds levels shall not exceed levels of 55 dBA between the hours of 7:00AM to 10:00PM and 10:00PM to 7:00AM within residential areas at the property lines • In Addition, all construction activities including engine warm-up shall be limited Monday Through Friday, between the hours of 7:00am and 7:00pm to minimize noise impacts on nearby residents. Back-up beepers shall be adjusted to the lowest allowable levels. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 42, 43
b) Generation of excessive groundborne vibration or groundborne noise levels?			X		The project is not expected to create unusual groundborne vibration due to future site development, but will be required to adhere to all local requirements related to construction and noise levels. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X	The project is not located within an airport land use plan or within two (2) miles of a public airport or private airstrip. **No Impact**	1, 2, 3, 4, 5, 6, 7, 42, 43
XIV. POPULATION AND HOUSING *Would the project:*						
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X		Future low density development of the parcels would not create a significant increase in population growth to the area that was not already accounted for in the General Plan and Middletown Area Plan. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X	No people or housing would be displaced as a result of the project. **No Impact**	1, 2, 3, 4, 5, 6, 7
XV. PUBLIC SERVICES *Would the project:*						
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection? Police Protection? Schools? Parks? Other Public Facilities?			X		The proposed project does not necessitate the need for new or altered government facilities. Emergency services are already available to the site(s) through the Lake County Sheriff's Department, South Lake Fire Protection District and the California Department of Forestry and Fire Protections (Calfire). Future development will be reviewed by public services agencies to ensure adequate services are available. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 41, 42, 43
XVI. 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?			X		The proposed project will not have any significant impacts on existing parks or other recreational facilities. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
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?				X	The proposed project does not include recreational facilities nor require the construction or expansion of recreational facilities. **No Impact**	1, 2, 3, 4, 5, 6, 7, 41, 42, 43
XVII. TRANSPORTATION *Would the project:*						
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X		The proposed parcels will be accessed from existing unimproved roadways, The applicant shall obtain all necessary permits from the California Department of Transportation (Caltrans) and/or the Lake County Department of Public Works for any work and/or improvements within the right-of-way. The proposed project would not have or create any conflicts with a program plan, ordinance or policy addressing the circulation system, including but not limited to transit, roadway, bicycle and/or pedestrian facilities. The project has been reviewed by the Department of Public Works, CalFIRE and other departments for access concerns. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 26, 31, 35, 36, 41, 42, 43
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X		The proposed project would not be in conflict and/or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Future potential low-intensity development is not expected to create a large number of traffic trips but will be reviewed separately. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 26, 31, 35, 36, 41, 42, 43
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X		The proposed project does not include modification to the existing roadways or design features that would increase hazards. Future development will adhere to all design and safety standards related to access. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 26, 31, 35, 36, 41, 42, 43
d) Result in inadequate emergency access?			X		See XVII(a) above, . **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 19, 26, 31, 35, 36, 41, 42, 43
XVIII. 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		X			See Response to Section V. **Less Than Significant With Mitigation Incorporated (MMs CUL-1 and CUL-2)**	1, 2, 3, 4, 5, 6,7, 18, 42

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
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 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X			See Response to Section XVIII(b). **Less Than Significant With Mitigation Incorporated (MMs CUL-1 and CUL-2)**	1, 2, 3, 4, 5, 6,7, 18, 42
XIX. UTILITIES AND SERVICE SYSTEMS *Would the project:*						
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X		The proposed project does not require the relocation and/or construction of new infrastructure. All future development shall adhere to all Federal, State and local agency requirements regarding the use of onsite well(s) and onsite waste management systems (septic). **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 41, 42, 43
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X		The project parcels have sufficient water supply through the use of an existing onsite well(s) and shall continue to adhere to all Federal, State and local agency regulations regarding such use. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 41, 42, 43
c) 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?			X		The project parcels are not served by a local wastewater treatment provider. The projects parcels are served by onsite waste management systems (septic) and onsite well(s) and shall adhere to all Federal, State and local agency requirements regarding such uses. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 41, 42, 43
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X		. The project parcels are served through existing onsite waste management systems (septic's) and shall continue to comply with all Federal, State and local agency requirement regarding such use. Future development would be required to adhere to all local, state and regulations regarding solid waste. **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 41, 42, 43
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X		See XIX(d). **Less Than Significant Impact**	1, 2, 3, 4, 5, 6, 7, 8, 41, 42, 43

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
XX. WILDFIRE *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*						
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X		The project would not impair any emergency plans. The project site is located in high severity fire zone/State Responsibility Area. The project has been reviewed by the Department of Public Works, CalFIRE, and other agencies and departments for safety and access concerns. Future development will adhere to all Federal, State and local fire requirements/regulations, including Chapter 13 of the Lake County Code. **Less Than Significant Impact**	1, 2, 3, 5, 6, 7, 8, 9, 23, 27, 29, 39, 41, 42, 43
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X		The project would not increase wildfire risks. Future development will adhere to all Federal, State and local fire requirements/regulations, including safety setbacks and other requirements of Chapter 13 of the Lake County Code. **Less Than Significant Impact**	1, 2, 3, 5, 6, 7, 8, 9, 23, 27, 29, 39, 41, 42, 43
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X		The proposed project shall improve and/or maintain all existing access roads per County and CalFIRE requirements identified through the Building Permit process. All improvements shall adhere to all Federal, State and local agencies requirements and will be reviewed by the Fire Marshal and CalFIRE. **Less Than Significant Impact**	1, 2, 3, 5, 6, 7, 8, 9, 23, 27, 29, 39, 41, 42, 43
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X		The proposed project is not located within a known flood zone classification. All existing and future development shall adhere to all Federal, State and local agency requirements. **Less Than Significant Impact**	1, 2, 3, 5, 6, 7, 8, 9, 23, 27, 29, 39, 41, 42, 43
XXI. MANDATORY FINDINGS OF SIGNIFICANCE						
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X			The proposed Rezone, General Plan Amendment and Parcel Map would not result in any impacts to the environment. However, future development of the parcels (details unknown at this time) has the potential to impact Air Quality, Biological Resources, Cultural/Tribal Cultural Resources, Geology/Soils, Hazards, Hydrology/Water Quality. However, with incorporation of mitigation measures identified the proposed project is not anticipated to significantly impact and/or substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.	ALL

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number**
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)?		X			Potentially significant impacts have been identified related to Air Quality, Biological Resources, Cultural/Tribal Cultural Resources, Geology/Soils, Hazards, Hydrology/Water Quality. These impacts in combination with the impacts of other past, present and reasonably foreseeable future projects could cumulatively contribute to significant effects on the environment. However, implementation of and compliance with mitigation measures identified in each section as well as project conditions of approval would avoid or reduce potential impacts to less than significant levels and would not result in cumulatively considerable environmental impacts.	ALL
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X			The proposed mitigation measures would ensure that there would be less than significant direct and indirect impacts.	ALL

* Impact Categories defined by CEQA

****Sources List**

1. Lake County General Plan
2. Lake County Zoning Ordinance
3. Middletown Area Plan
4. Chapter 17 (Subdivision Regulations) of the Lake County Code.
5. Chapter 13 (Hazardous Vegetation and/or Combustible Material) of the Lake County Code
6. Chapter 25 (Flood Plain Management) of the Lake County Code
7. General Plan Amendment, Rezone and Tentative Parcel Map Application dated 9/26/17.
8. Title 14 – Natural Resources; Division 1.5 Department of Forestry – Chapter 7 Fire Protection, Subchapter 2 SRA Fire Safe Regulations (Public Resource Code 4290/4291).
9. Landslide Hazards in the Eastern Clear Lake Area, Lake County, California, Landslide Hazard Identification Map No. 16, California Department of Conservation, Division of Mines
10. U.S.G.S. Topographic Maps
11. California Department of Transportation's Scenic Highway Mapping Program http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm
12. U.S.D.A. Lake County Soil Survey
13. Lake County Important Farmland Map, California Department of Conservation Farmland Mapping and Monitoring Program https://maps.conservation.ca.gov/dlrp/ciff/
14. Important Farmland Categories http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx
15. Lake County Serpentine Soil Mapping
16. California Department of Fish and Wildlife California Natural Diversity Database https://www.wildlife.ca.gov/Data/CNDDB
17. U.S. Fish and Wildlife Service National Wetlands Inventory https://www.fws.gov/wetlands/Data/Mapper.html
18. A Cultural Resources Evaluation, performed by Jay M. Flaherty dated April 3, 2018.
19. County of Lake Parcel Viewer http://gispublic.co.lake.ca.us/portal/home/
20. U.S.G.S. Geologic Map and Structure Sections of the Clear Lake Volcanics Northern California, Miscellaneous Investigation Series, 1995
21. Official Alquist-Priolo Earthquake Fault Zone Maps for Lake County
22. Lawrence Livermore Landslide Map series for Lake County, 1979
23. Lake County Emergency Management Plan

24. California Department of Toxic Substances Control Database http://www.envirostor.dtsc.ca.gov/public/
25. Environmental Protection Agency Superfund - Sites Mapped Search https://www.epa.gov/superfund/search-superfund-sites-where-you-live
26. Lake County Airport Land Use Compatibility Plan, adopted 1992
27. California Department of Forestry and Fire Protection, Fire Hazard Mapping
28. National Pollution Discharge Elimination System (NPDES)
29. Federal Emergency Management Agency (FEMA) - Flood Hazard Maps https://msc.fema.gov/portal/home
30. Hazardous Waste and Substances Sites List: www.envirostor.dtsc.ca.gov/public
31. 2010 Lake County Regional Transportation Plan, Dow & Associates, October 2010
32. Lake County Countywide Integrated Waste Management Plan and Siting Element, 1996
33. Lake County Aggregate Resource Management Plan
34. Biological Resource Assessment with Botanical Survey and Delineation of Wastes of the U.S was prepared by Northwest Biosurvey dated November 8, 2018.
35. Lake County Draft Regional Transportation Plan 2017 - http://www.lakeapc.org/docs/2017%20RTP-Draft.pdf
36. California Department of Transportation
37. California Department of Fish and Wildlife (DFW)
38. U.S Army Core of Engineers
39. Lake County Natural Hazard Database
40. California Resource Water Quality Control Board
41. Lake County Community Development Department
42. Agencies Comments/Concerns
43. Site Visit – 1/10/2018

RECEIVED

SEP 26 2017

LAKE COUNTY COMMUNITY
DEVELOPMENT DEPT.

STATEMENT OF ZONING DISTRICT CHANGE

This Rezone application seeks to Rezone two parcels which are currently split zone, both parcels being split by Rural Land (RL) and Rural Residential (RR) Zoning Districts. Currently APN 013-028-81 contains 10.85 acres of RR zoning and 18.50 acres of RL zoning. APN 013-028-82 contains 3.81 acres of RR zoning and 41.45 acres of RL zoning.

The applicant wishes to Rezone APN 013-028-81, 29.35 acres, to be completely within the RR zoning district and Rezone APN 013-028-82, 45.26 acres, to be completely within the RL zoning district.

APN 013-028-81 is compatible with existing land uses and the Development Standards allowed under the RR zoning. Rezoning this property to RR would not be "spot" zoning because many of the adjoining properties are either Zoned RR or have been developed in a consistency with the RR zoning. The property is gently sloping rural parcel containing two residences and a family vineyard. The property can be further divided into 3 or 4 parcels while adhering to the RR standards, thus promoting rural residential development consistent with General Plan Policy LU-3.2.

The property abuts Highway 29 and because of the existing development on the property, the fuel loading on the property is minimal. The adjoining properties to the north and east are zoned RR with similar development. The adjoining properties to the south are zoned RL but have been developed in a way consistent with the RR zoning. This property is one of the only parcels south of Middletown with split zoning, abuts Highway 29 and contains the physical attributes of properties in the RR zoning district.

APN 013-028-82 is compatible with existing land uses and the Development Standards allowed under the RL zoning. Rezoning this property to RL would not be "spot" zoning because the property development is consistent with the adjoining properties also zoned RL. The property is mountainous, heavily wooded and brushy and consistent with the RL zoning district development standards and the General Plan.

ATTACHMENT 1

CURRENT OWNER

RICHARD AND GAIL BRAND
ASSESSOR'S PARCEL NO. 013-028-81-10
SITE ADDRESS:
23987 HIGHWAY 29
MIDDLETOWN, CA 95461

LAND SURVEYOR

ALBION SURVEYS
1113 HUNT AVENUE
ST. HELENA, CA 94574
(707) 963-1217
ATTN: JON WEBB, PLS 6709

PARCEL AREAS

PARCEL ONE: 8.90 AC± (8.06 AC± NET)
PARCEL TWO: 5.00 AC± (4.75 AC± NET)
PARCEL THREE: 9.52 AC± (8.61 AC± NET)
PARCEL FOUR: 5.93 AC± (5.22 AC± NET)
==========
TOTAL ACREAGE: 29.35 AC±

LAND USE

PARCEL ONE:
EXISTING – RESIDENTIAL
PROPOSED – RESIDENTIAL

PARCEL TWO:
EXISTING – RESIDENTIAL
PROPOSED – RESIDENTIAL

PARCEL THREE:
EXISTING – AGRICULTURAL
PROPOSED – AGRICULTURAL

PARCEL FOUR:
EXISTING – VACANT
PROPOSED – VACANT

UTILITIES & ACCESS

PARCEL ONE:
WATER – EXISTING WELL ON APN 013-028-082-00
SANITARY SEWAGE – EXISTING SEPTIC
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL TWO:
WATER – EXISTING WELL ON APN 013-028-082-00
SANITARY SEWAGE – EXISTING SEPTIC
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL THREE:
WATER – NONE
SANITARY SEWAGE – NONE
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL FOUR:
WATER – NONE
SANITARY SEWAGE – NONE
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

AVERAGE CROSS SLOPES

PARCEL ONE: 15%
PARCEL TWO: 17%
PARCEL THREE: 21%
PARCEL FOUR: 29%

GENERAL PLAN DESIGNATION

RURAL RESIDENTIAL/RURAL LAND

ZONING

RR: RURAL RESIDENTIAL

LEGEND:

SEPTIC TANK
WELL
SEPTIC FIELD
40' CONTOUR PER USGS QUAD MAP ELEVATIONS BASED ON NGVD29
30' PROPERTY LINE SETBACK
APPROXIMATE BOUNDARY LINE
APPROXIMATE EASEMENT LINE
BUILDING LINE
EDGE OF VINEYARD BLOCK
APPROXIMATE SLOPE PERCENTAGE

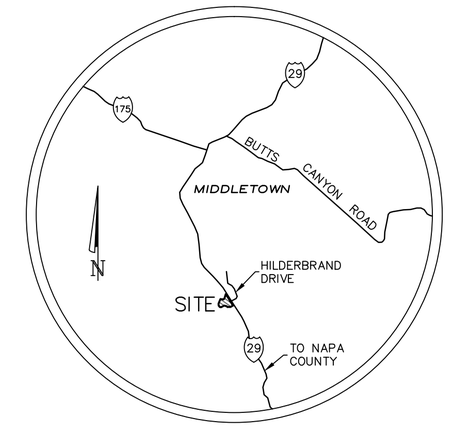
NOTE:
THIS IS NOT A BOUNDARY SURVEY. BOUNDARY SHOWN HEREON IS APPROXIMATE AND SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION OR CRITICAL DESIGN. BEARINGS AND DISTANCES SHOWN CALCULATED USING 12 PM 18, LAKE COUNTY RECORDS.

PREPARED BY ALBION SURVEYS AT THE REQUEST OF RICHARD BRAND

JON M. WEBB, PLS 6709 DATE

LICENSED LAND SURVEYOR
JON M. WEBB
No. 6709
Exp. 06/30/2018
STATE OF CALIFORNIA

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 INCH = 100 FT.



LOCATION MAP
NOT TO SCALE

STORM WATER NOTE

STORM WATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP). STRUCTURAL SOURCES AND TREATMENT CONTROLS WILL BE DESIGNED "BY OTHERS" AS SET FORTH IN THE CURRENT IMPROVEMENT STANDARDS AND APPROVAL BY THE LOCAL AGENCY AT THE TIME OF SITE DEVELOPMENT. NO MAJOR GRADING IS PLANNED FOR THIS PROJECT.

TENTATIVE PARCEL MAP

OF THE LANDS OF

BRAND

BEING A PORTION OF SEC. 23, T.10N., R.7W., M.D.B.&M.
AND A PORTION OF THE CALLAYOMI RANCHO

COUNTY OF LAKE, STATE OF CALIFORNIA

BY
ALBION SURVEYS
ST. HELENA, CALIFORNIA

ALBION

LAKE COUNTY A.P.N. 013-028-81
JANUARY 16, 2017

SHEET 1 OF 1
C3D PROJ. 3476
3476-TPM.dwg

ZONING MAP

OF THE LANDS OF

BRAND

COUNTY OF LAKE, STATE OF CALIFORNIA

BY
ALBION SURVEYS, INC.
ST. HELENA, CALIFORNIA

JUNE 19, 2014

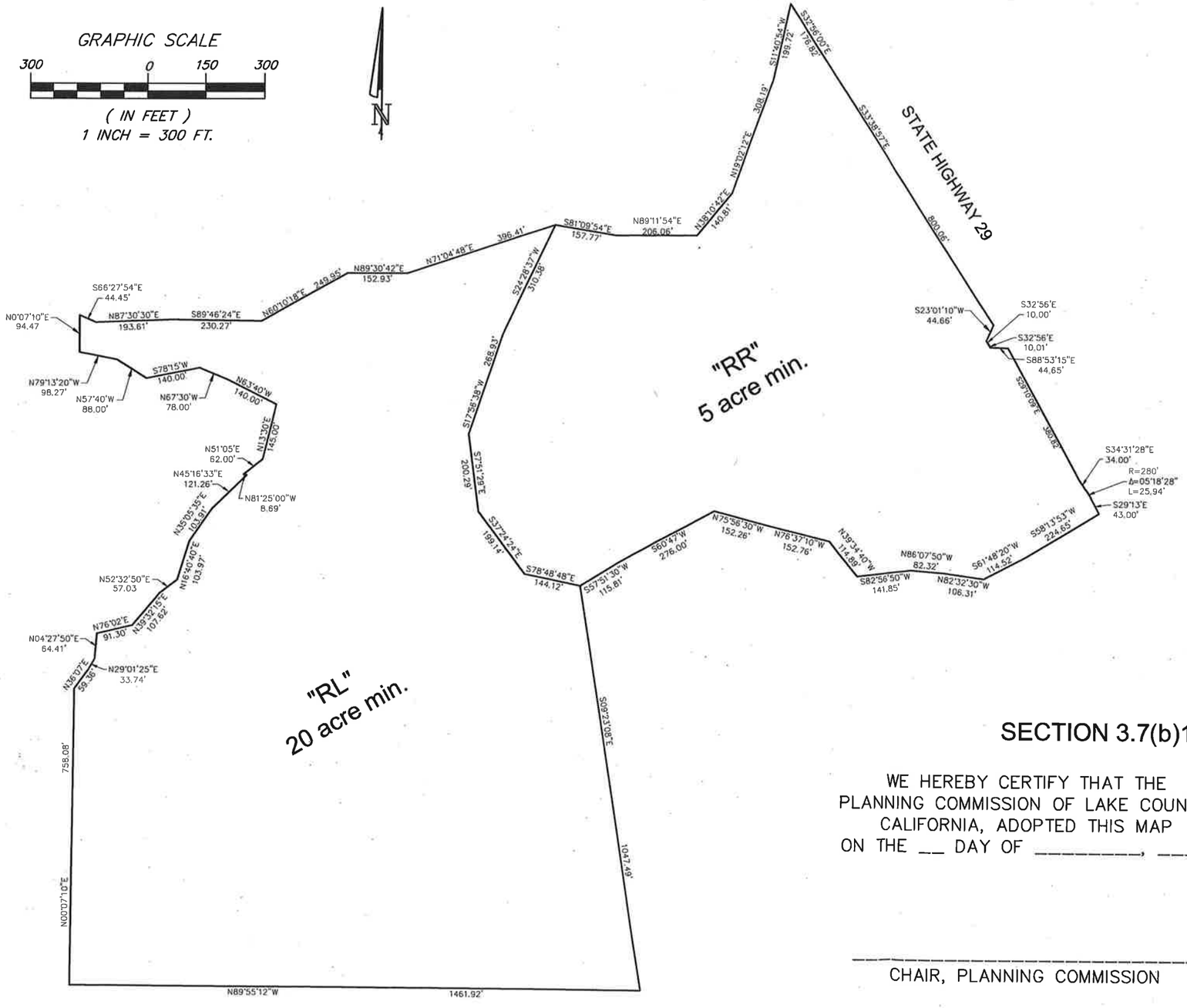


EXHIBIT "A"
SECTION 3.7(b)1. , OF ORDINANCE 6012

WE HEREBY CERTIFY THAT THE PLANNING COMMISSION OF LAKE COUNTY, CALIFORNIA, ADOPTED THIS MAP ON THE __ DAY OF _____, _____

_____
CHAIR, PLANNING COMMISSION

WE HEREBY CERTIFY THAT THIS MAP CONSTITUTES SECTION 3.7(b)1. , OF ORDINANCE 1602 OF LAKE COUNTY, CALIFORNIA AND THAT SECTION WAS ADOPTED BY ORDINANCE _____, PASSED ON THE __ DAY OF _____, _____

_____
CHAIR, BOARD OF SUPERVISORS

BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEY AND DELINEATION OF WATERS OF THE U.S.

for the

BRAND PROPERTY

APN 013-028-81

Lake County, California

November 8, 2018

Prepared by

Northwest Biosurvey

ATTACHMENT 2

BIOLOGICAL RESOURCE ASSESSMENT
WITH BOTANICAL SURVEY AND
DELINEATION OF WATERS OF THE U.S.
for the
BRAND PROPERTY
APN 013-028-81
Lake County, California

November 8, 2018

Prepared for: Whitney Brand
whitneybrand@gmail.com

Jon M Webb, PLS 6709
Albion Surveys, Inc.
1113 Hunt Avenue
Saint Helena, CA 94574
jwebb@albionsurveys.com

Prepared by: Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 95451
nwbio98@gmail.com

CONTENTS

FIGURES AND TABLES

1.0 PROJECT DESCRIPTION

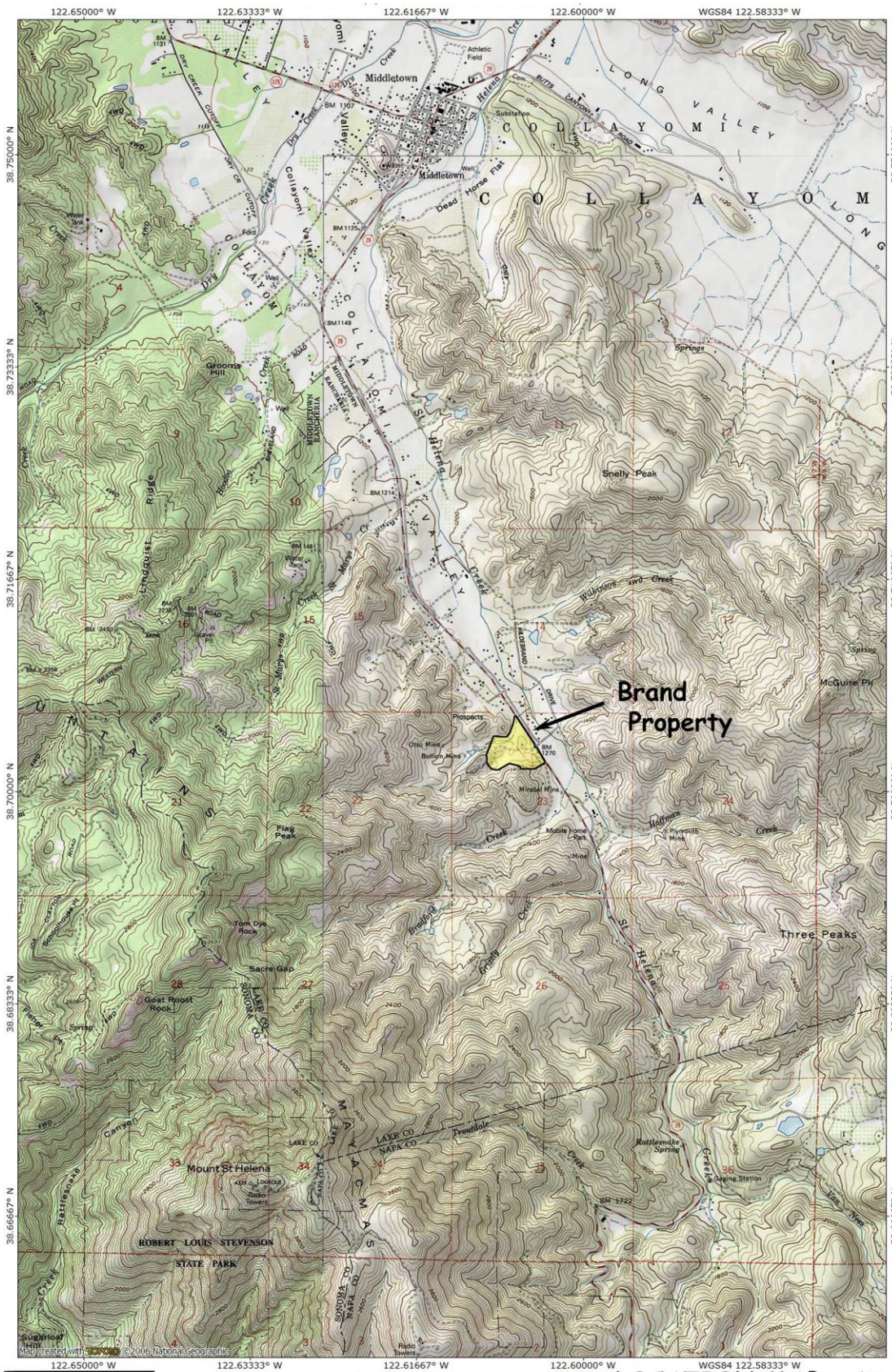
1.1 Proposed Project: This survey covers a parcel 29.35 acres in size, located on Highway 29 south of Middletown in Lake County. The property is currently developed with vineyards, residential structures, and agricultural structures. The property owner is proposing to subdivide the parcel. The local permitting agency is requesting completion of a botanical survey and assessment of biological resources on the property as part of the California Environmental Quality Act (CEQA) review required for this project.

The initial phase of this assessment evaluates the potential of the property to contain sensitive plant and wildlife habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa[1]. The biological resource assessment will determine whether the property contains sensitive plants or potentially contains sensitive wildlife requiring mitigation under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".

A delineation of waters of the U.S. was conducted due to the presence of drainages and wetlands within the project area. Due to the fact that wetland delineations are prepared with a standard format for U.S. Army Corps of Engineers review, the delineation is provided separately in Appendix C.

1.2 Location: The project site is located at 23087 Highway 29, Middletown, California (APN 013-028-81; Sec. 23, T10N R06W, Detert Reservoir, Calif. 7½' Topographic Map). A location map is provided in **Figure 1**.

[1] Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.



Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

LOCATION MAP
Figure 1

TN 14½° MN
11/07/18

2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of species present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database (CNDDB)*; RareFind 5, 2018
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (2018 edition)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHR)*, Version 9.0

The CNDDB and RareFind 5 databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The CNPS database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species.

The CWHR database operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

2.1 Botanical Survey Methods: An in-season botanical survey was conducted for the project site. The CNDDB report and maps for the Detert Reservoir quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens, 2009), and mapped on a 1"=100' aerial photo. Vegetation type names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual, Higher Plants of California,* 2012. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types at the site is provided in **Figure 2.**

2.2 Delineation Methods: The delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual,* January 1987 and the *Arid West 2008 Supplement*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement*, 1973, and Mason's *Flora of the Marshes of California,* 1957, were used as supplemental texts. The survey included use of lidar mapped overlays and an extensive foot survey.

2.3 Survey Dates: Site visits for the plant surveys, vegetation mapping, and the delineation were conducted on May 28 and June 15, 2018.

2.4 Biological Assessment Staff: The field surveys, plant taxonomy, vegetation mapping, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. He has over 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

Database review and report preparation were conducted by Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has 15 years of experience as a planner in local government and the private sector and 16 years in field biology. She has a Bachelor of Arts Degree and has completed all course work toward an M.A. Degree in Rural and Town Planning from Chico State University. Prior to joining Northwest Biosurvey in 2002, Ms. Zalusky was a senior planner for the Lake County Community Development Department.

3.0 SITE CHARACTERISTICS

3.1 Site Topography and Drainage: The Brand property occupies an eastern spur of Flag Peak in the Mayacamas Mountains. Along its northern, western, and southern edges, the property rises onto adjacent slopes while the center of the parcel opens into the southern end of the Collayomi Valley along St. Helena Creek. Along its western and southern boundaries, the property rises to an elevation of 1,400 feet msl (mean sea level) while the open eastern boundary drops to the elevation of the Valley at 1,280 feet msl.

The parcel drains north to an unnamed tributary of St. Helena Creek which in turn drains east across the narrow valley to St. Helena Creek. The area topography is shown in **Figure 1**.

3.2 Soils: Based on the *Soil Survey of Lake County, California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

- **Bressa-Millsholm loams, 15-30% slopes (soil unit 120):**

  This unit is on hills and consists of 45% Bressa loam and 35% Millsholm loam. Vegetation is mainly annual grasses and oaks. The Bressa soil is moderately deep and well-drained, and formed in material weathered from sandstone. The upper 12 inches is typically light brown or grey loam, above 14 inches of clay loam. Fractured sandstone occurs at a depth of 26 inches. Permeability is moderately slow, runoff is rapid, and erosion hazard is severe. The Millsholm soil is shallow and well-drained and formed from sandstone or shale. The surface area is brown loam 3 inches thick over pale brown clay loam 8 inches thick. Fractured sandstone is at 11 inches. Permeability is moderate, runoff is rapid and hazard of erosion is severe. This soil type occurs in the center of the parcel.

- **Jafa loam, 5-15% slopes (soil unit 145):**

  This very deep, well-drained soil is on terraces and fans. It formed in alluvium derived from mixed rock sources. The upper part of the surface layer is typically pale brown loam for 8 inches over 8 inches of light brown loam. The upper 16 inches of the subsoil is brown clay loam over 8 inches of reddish yellow clay loam. Permeability is moderately slow. Surface runoff is medium and the hazard of erosion is moderate. Vegetation on this unit includes tree species such as ponderosa pine, Douglas fir, and California black oak. The understory typically consists of brush, grass, and forbs, including manzanita, buckbrush, soft chess, blue wildrye, and poison oak. The east portion of the parcel near Highway 29 contains this soil type.

- **Speaker-Maymen-Millsholm association, 30-50% slopes (soil unit 227):**

  This map unit is on hills and mountains. This soil unit is about 40% Speaker loam, 25% Maymen gravelly loam, and 15% Millsholm loam. The Speaker soil is on north- and east-facing slopes, and the Maymen and Millsholm soils are on south- and west-facing slopes and on ridges. The Speaker soil is moderately deep and well drained. It formed in material weathered from sandstone or shale. Permeability is moderately slow. Runoff is rapid and the hazard of erosion is severe. The Maymen soil is shallow and somewhat excessively drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid and the hazard from erosion is severe. The Millsholm soil is shallow and well drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid, and the hazard of erosion is severe. Vegetation is mostly conifers and hardwoods on the Speaker soil, including Douglas fir, ponderosa pine, and black oak. Brush and hardwoods occur on the Maymen soil, and oaks and annual grasses on the Millsholm soil. This soil type is found in the steeper areas in the west and southern parts of the property.

3.3 Vegetation Types: This site contains eleven plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and other cover types are listed below in **Table 1**. They are described below the table and shown in the vegetation map provided in **Figure 2**.

TABLE 1. AREAS OF VEGETATION TYPES

VEGETATION TYPE	ACRES	PERCENT OF TOTAL
Douglas fir forest	4.12	14.04
Ponderosa pine forest	2.32	7.90
Knobcone pine forest	0.36	1.23
California black oak forest	0.98	3.34
Mixed oak woodland	5.09	17.34
Blue oak woodland	1.22	4.16
Red willow thicket	0.06	0.20
Manzanita shrub alliance	1.67	5.69
Narrow-leaf cattail marsh	0.04	0.14
Pale spike rush marsh	0.05	0.17
Wild oat grassland	4.16	14.17

VEGETATION TYPE	ACRES	PERCENT OF TOTAL
Vineyard	4.22	14.38
Olive orchard	0.08	0.27
Open water	0.32	1.09
Ruderal (disturbed areas)	4.66	15.88
Total	**29.35**	**100.0%**

- **Douglas fir forest:**

  This shaded forest occupies a north-facing slope along the southern edge of the property. The upper canopy is dominated by Douglas fir (*Pseudotsuga menziesii var. menziesii*) with scattered ponderosa pine (*Pinus ponderosa*). This conifer forest rises above a subcanopy of California black oak forest which occurs in slightly less-shaded areas and forms the upper tree canopy due to the lack of the taller conifers.

- **Ponderosa pine forest:**

  This community supports a nearly homogenous upper canopy of ponderosa pine with a canopy cover ranging from 60-80%. These trees are relatively small, ranging from 6-8 inches DBH (diameter at breast height); however, there are larger trees (18-20" DBH) scattered among them or occurring as isolated older stands. This is a relatively young forest seeded by trees that survived a past clearing event (fire, etc., within the past 50 years).

  The shrub layer is poison oak (*Toxicodendron diversilobum*), birch-leaf mountain mahogany (*Cercocarpus betuloides var. betuloides*), and common manzanita (*Arctostaphylos manzanita ssp. manzanita*). This shrub layer is the remnant of an earlier post-fire seral stage that will be shaded out as the forest matures. The ground cover is primarily duff with an thin to moderate cover of woodland forbs and grasses including California tule pea (*Lathyrus jepsonii var. californicus*), grand hound's tongue (*Cynoglossum grande*), fork-toothed ookow (*Dichelostemma congestum*), Diogenes lantern (*Calochortus amabilis*), bowl-tubed iris (*Iris macrosiphon*), and woodland brome (*Bromus laevipes*).

- **Knobcone pine forest:**

  Knobcone pine (*Pinus attenuata*) occurs as a small "island" between the mixed oak and California black oak woodlands along the eastern property boundary. It supports a dense canopy of knobcone pine with scattered young ponderosa

pine. The shrub layer and ground cover consist of the more xeric members of the mixed oak woodland community.

- **California black oak forest:**

  This dense forest community occupies two small areas along the eastern and southern edges of the property. It contains a nearly-identical species palate to the Douglas fir forest; the difference being a significant shift in dominance from Douglas fir to California black oak (*Quercus kelloggii*), which provides more than 50% of the upper canopy cover. The remainder of the tree canopy is Pacific madrone (*Arbutus menziesii*) and California bay (*Umbellularia californica*). Douglas fir and ponderosa pine remain present as scattered trees throughout the community.

  The density and species mix within the shrub layer varies depending on location. The more exposed northern community shares a number of more xeric (dry soil) shrubs with the adjacent mixed oak woodland, including toyon (*Heteromeles arbutifolia*) and birch-leaf mountain mahogany, while the more shaded community to the south includes more mesic (moist soil) shrubs such as deerbrush (*Ceanothus integerrimus*), common manzanita, and California tea (*Rupertia physodes*).

  The ground cover includes a mix of woodland forbs and grasses including: field hedge parsley (*Torilis arvensis*), woodland brome, ookow, bowl-tubed iris, hedgehog dogtail (*Cynosurus echinatus*), and Queen Anne's lace (*Daucus carota*).

- **Mixed oak woodland:**

  This is the most extensive woodland on the property and occupies the level terrain along the eastern edge of the property and the south-facing slope along the northern property boundary. It is essentially an ecotone (intergrade) between the black oak and more xeric blue oak woodlands. The community includes a codominant mix of California black oak, mature interior live oak (*Quercus wislizeni*), and blue oak (*Quercus douglasii*). The most shaded sites include scattered Douglas fir and ponderosa pine while the more xeric sites include a heavier concentration of blue oak.

  The shrub layer is relatively dense and includes birch-leaf mountain mahogany, toyon, poison oak, Scotch broom (*Cytisus scoparius*), and deerbrush. The ground cover includes a mix of xeric and mesic grasses and forbs depending on the amount of shading. These include slender wild oat (*Avena barbata*), rattail sixweeks grass (*Festuca myuros*), blue wild rye (*Elymus glaucus ssp. glaucus*),

woodland brome, winter vetch (*Vicia villosa ssp. villosa*), common woolly sunflower (*Eriophyllum lanatum var. arachnoideum*), bowl-tubed iris, hedgehog dogtail, climbing bedstraw (*Galium porrigens var. porrigens*), and English plantain (*Plantago lanceolata*).

- **Blue oak woodland:**

  This is an open woodland of the flat terrain in the middle of the property. It is dominated by blue oak but includes subdominant ghost pine (*Pinus sabiniana*). The shrub layer is thin but includes common manzanita, poison oak, and birch-leaf mountain mahogany. The ground cover is wild oat grassland which is described below.

- **Red willow thicket:**

  This dense, shrubby community occurs as a narrow band along the eastern bank of the small pond in the northern half of the property. It also occurs along segments of the nearby waterway. It is heavily dominated by red willow with scattered patches of Himalayan blackberry (*Rubus armeniacus*). It gives way to narrow-leaf cattail (*Typha angustifolia*), pale spikerush (*Eleocharis macrostachya*), and open water on its pondward side, and to wild oat grassland along its upland boundary. Along the stream course, the channel is primarily exposed cobbles and gravel with patches of torrent sedge (*Carex nudata*), seep monkeyflower (*Mimulus guttatus*), and cobwebby hedge nettle (*Stachys albens*) indicating perennial flows or, at least, long-duration saturated conditions.

- **Manzanita shrub alliance:**

  This dense, xeric shrub community consists of a mix of common and hoary manzanita (*Arctostaphylos canescens ssp. canescens*) with scattered California juniper (*Juniperus californica*), knobcone pine, and blue oak. The ground cover is primarily leaf litter due to the dense shrub canopy, but community edges and small openings support wild oat grassland and wavy-leaf soap plant (*Chlorogalum pomeridianum*).

- **Narrow-leaf cattail marsh:**

  This small marsh community occupies the shallow western extension of the reservoir in the southern half of the property. It consists of an homogenous cover of narrow-leaf cattail.

- **Pale spikerush marsh:**

  Pale spikerush occurs as a narrow, homogenous band around the shallow perimeters of the two reservoirs on the property. It is present as a mappable-sized community along the western half of the small northern reservoir.

- **Wild oat grassland:**

  This grassland is the dominant ground cover through all of the open upland habitats of the property. The species palate varies depending on location (soil moisture and aspect) but is generally dominated by slender wild oat, soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), annual agoseris (*Agoseris heterophylla var. heterophylla*), four-spot (*Clarkia purpurea ssp. quadrivulnera*), hedgehog dogtail, field hedge parsley, big quaking grass (*Briza maxima*), and Queen Anne's lace.

- **Vineyard:**

  Established vineyards occupy the flatter terrain in the center of the property.

- **Olive Orchard:**

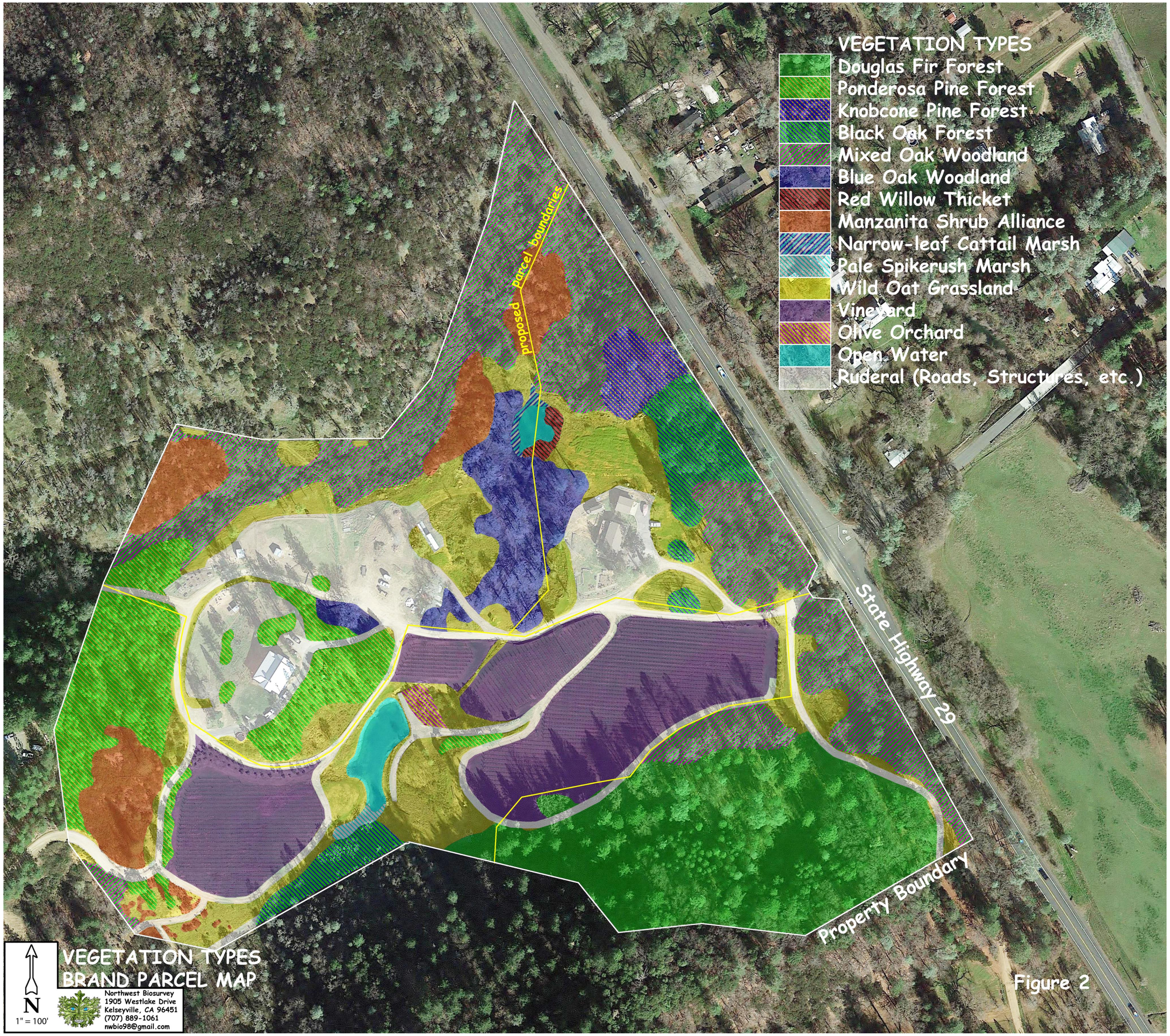
  A young olive orchard is located east of the southern reservoir.

- **Open water:**

  The deeper portions of both reservoirs support open water habitat throughout all or most of the year, depending on water use within the vineyards.

- **Ruderal:**

  This term refers to the roads, residential structures, and parking areas on the property.


VEGETATION TYPES
Douglas Fir Forest
Ponderosa Pine Forest
Knobcone Pine Forest
Black Oak Forest
Mixed Oak Woodland
Blue Oak Woodland
Red Willow Thicket
Manzanita Shrub Alliance
Narrow-leaf Cattail Marsh
Pale Spikerush Marsh
Wild Oat Grassland
Vineyard
Olive Orchard
Open Water
Ruderal (Roads, Structures, etc.)
proposed parcel boundaries
State Highway 29
Property Boundary
N
1" = 100'
VEGETATION TYPES
BRAND PARCEL MAP
Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com
Figure 2

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 <u>CNPS On-Line Electronic Inventory Analysis</u>: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of the county occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel (including serpentine soil and vernal pool species). The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

<u>Note</u>: *The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa. Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 <u>California Natural Diversity Database</u>: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Detert Reservoir 7½' quadrangle were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name

Brand Project

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	1B.2	None	None	Apr-Jul	Broadleafed upland forest (openings), Chaparral, Cismontane woodland
Antirrhinum virga	twig-like snapdragon	Plantaginaceae	perennial herb	4.3	None	None	Jun-Jul	Chaparral, Lower montane coniferous forest
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Asclepias solanoana	serpentine milkweed	Apocynaceae	perennial herb	4.2	None	None	May-Jul(Aug)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Astragalus clevelandii	Cleveland's milk-vetch	Fabaceae	perennial herb	4.3	None	None	Jun-Sep	Chaparral, Cismontane woodland, Riparian forest
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Fabaceae	annual herb	1B.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	1B.2	None	None	May-Jul	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland
Calyptridium quadripetalum	four-petaled pussypaws	Montiaceae	annual herb	4.3	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Ceanothus sonomensis	Sonoma ceanothus	Rhamnaceae	perennial evergreen shrub	1B.2	None	None	Feb-Apr	Chaparral (sandy, serpentinite or volcanic)
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland
Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	4.3	None	None	Jul-Aug	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Delphinium uliginosum	swamp larkspur	Ranunculaceae	perennial herb	4.2	None	None	May-Jun	Chaparral, Valley and foothill grassland
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	1B.2	None	None	May-Sep	Chaparral (serpentinite or volcanic)
Eriogonum umbellatum var. bahiiforme	bay buckwheat	Polygonaceae	perennial herb	4.2	None	None	Jul-Sep	Cismontane woodland, Lower montane coniferous forest
Erythronium helenae	St. Helena fawn lily	Liliaceae	perennial bulbiferous herb	4.2	None	None	Mar-May	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland
Harmonia hallii	Hall's harmonia	Asteraceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Harmonia nutans	nodding harmonia	Asteraceae	annual herb	4.3	None	None	Mar-May	Chaparral, Cismontane woodland
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (serpentinite)

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	1B.2	None	None	Mar-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	annual herb	4.2	None	None	Mar-May(Jun)	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	1B.2	None	None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
Navarretia myersii ssp. deminuta	small pincushion navarretia	Polemoniaceae	annual herb	1B.1	None	None	Apr-May	Vernal pools (clay loam)
Navarretia paradoxinota	Porter's navarretia	Polemoniaceae	annual herb	1B.3	None	None	May-Jun(Jul)	Meadows and seeps
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	perennial herb	1B.3	None	None	Apr-Aug	Chaparral (rocky)
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	perennial herb	1B.2	None	None	(Jun)Jul-Aug	Meadows and seeps, Riparian forest
Streptanthus batrachopus	Tamalpais jewelflower	Brassicaceae	annual herb	1B.3	None	None	Apr-Jul	Closed-cone coniferous forest, Chaparral
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland
Streptanthus morrisonii ssp. elatus	Three Peaks jewelflower	Brassicaceae	perennial herb	1B.2	None	None	Jun-Sep	Chaparral (serpentinite)

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Streptanthus vernalis	early jewelflower	Brassicaceae	annual herb	1B.2	None	None	Mar-May	Closed-cone coniferous forest, Chaparral
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	1B.2	None	None	Jun-Oct	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools

KEY FOR TABLE 2:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere; moderately threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A = Presumed extinct in California, but extant elsewhere
2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; moderately threatened in Calif.
2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
3 = Plants about which we need more information (Review List)
3.1 = Plants about which we need more information (Review List); seriously threatened in California
3.2 = Plants about which we need more information (Review List); moderately threatened in California
3.3 = Plants about which we need more information (Review List); not very threatened in California

CNPS Rare Plant-Threat Rank Definitions:

4.1 = Plants of limited distribution (watch list); seriously threatened in California
4.2 = Plants of limited distribution (watch list); moderately threatened in California
4.3 = Plants of limited distribution (watch list); not very threatened in California

State and Federal Status:

CESA = California Endangered Species Act
FESA = Federal Endangered Species Act

SR = State. Rare
ST = State. Threatened
SSC = CDFW Species of Special Concern
WL = CDFW Watch List
FT = Federal Threatened
SE = State Endangered.
SD = State Delisted
FP = CDFW Fully Protected
FE = Federal Endangered
FD = Federal Delisted

TABLE 3. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE DETERT RESERVOIR, CALIF. 7½' QUAD.

Habitat Type	Habitat Present
Northern vernal pool	No

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amorpha californica var. napensis	Napa false indigo	Broadleaved upland forest (openings), chaparral, cismontane woodland; --/--/1B.2	April-July decid. shrub	Habitat present
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic; --/--/1B.3	March-May everg. shrub	Habitat not present
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Chaparral, cismontane woodland, valley & foothill grassland/often serpentinite; --/--/1B.2	April-June ann. herb	Poor habitat present
Brodiaea leptandra	narrow-anthered brodiaea	Broadleaved upland forest, chaparral, lower montane conif. forest; --/--/1B.2	May-July per. herb	Habitat not present
Ceanothus confusus	Rincon Ridge ceanothus	Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1	Feb.-April everg. shrub	Habitat not present
Ceanothus divergens	Calistoga ceanothus	Chaparral, cismontane woodland/serpentine, volcanic, rocky;--/--/1B.2	Feb.-March everg. shrub	Habitat not present
Ceanothus purpureus	holly-leaved ceanothus	Chaparral, cismontane woodland/volcanic, rocky; --/--/1B.2	Feb.-June everg. shrub	Habitat not present
Ceanothus sonomensis	Sonoma ceanothus	Chaparral/sandy, serpentine or volcanic; --/--/1B.2	Feb.-April everg. shrub	Habitat not present
Cryptantha dissita	serpentine cryptantha	Chaparral/serpentine outcrops; --/--/1B.2	April-June ann. herb	Habitat not present
Erigeron greenei	Greene's narrow-leaved daisy	Chaparral/serpentine and volcanic, generally in shrubby vegetation; --/--/1B.2	May-Sept. per. herb	Habitat not present
Harmonia hallii	Hall's harmonia	Open rocky areas in chaparral/serpentine barrens, hills & ridges; --/--/1B.2	April-June ann. herb	Habitat not present
Hesperolinon bicarpellatum	two-carpellate western flax	Chaparral/serpentine barrens at edge of chaparral; --/--/1B.2	May-July ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Hesperolinon sharsmithiae	Sharsmith's western flax	Chaparral, serpentinite; --/--/1B.2	May-July ann. herb	Habitat not present
Juncus luciensis	Santa Lucia dwarf rush	Chaparral, Great Basin scrub, lower montane coniferous forest; meadows & seeps, vernal pools; --/--/1B.2	April-July annual herb	Habitat not present
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine; --/--/1B.2	April-May, ann. herb	Poor habitat present
Leptosiphon jepsonii	Jepson's leptisiphon	Chaparral, cismontane woodland, grassy slopes/volcanic or serpentine edge; --/--/1B.2	Apr-May ann. herb	Habitat not present
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Chaparral, cismontane woodland, valley & foothill grassland, vernal pools/vernally mesic; --/--/4.2	March-May (June) ann. herb	Habitat not present
Lupinus sericatus	Cobb Mountain lupine	Broadleaved upland forest, chaparral, cismontane woodland, lower montane conif. forest; --/--/1B.2	March-June per. herb	Habitat present
Navarretia myersii ssp. deminuta	small pincushion navarretia**	Vernal pools (clay loam); --/--/1B.1	April-May ann. herb	Habitat not present
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Chaparral/crevices in rock outcrops and talus slopes; --/--/1B.3	April-Aug. per. herb	Habitat not present
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewel-flower	Closed cone conif. forest, chaparral: serpentine; --/--/1B.2	May-June per. herb	Habitat not present
Streptanthus hesperidis	green jewel flower	Chaparral or cismontane woodland (openings)/ serpentine, rocky; --/--/1B.2	May-July ann. herb	Habitat not present
Streptanthus morrisonii ssp. elatus	Three Peaks jewel flower	Chaparral/serpentine barrens, outcrops, and talus; --/--/1B.2	June-Sept. per. herb	Habitat not present
Streptanthus vernalis	early jewel-flower	Closed-cone coniferous forest, chaparral/ serpentinite; --/--/1B.2	March-May ann. herb	Habitat not present
Trichostema ruygtii	Napa bluecurls	Chaparral, cismontane woodland, lower montane conif. forest, valley & foothill grassland, vernal pools; --/--/1B.2	June-Oct. ann. herb	Poor habitat present

* See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
*Hydrochara ricksecker*i	Ricksecker's water scavenger beetle	Aquatic beetle that lives in slow-flowing streams, shallow open water, springs, stagnant ponds, & vernal pools; G2/S2	year-round	Habitat not present
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	Habitat not present
Trachykele hartmani	serpentine cypress wood-boring beetle	Breeds and develops in Sargent cypress in Lake, Napa, and Colusa Counties, and in Cupressus goveniana in coastal counties of Central California; G1/S1	year-round	Habitat not present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SCT/SSC/G3/S2S3	year-round	Habitat present
Emys marmorata	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3/S3	year-round	Habitat present
Dicamptodon ensatus	California giant salamander	Cool, moist forest habitats associated with rocky streams; SSC/G3/SNR	year-round	Habitat not present
Progne subis	purple martin	Open woodland near water. Nests in old woodpecker cavities in isolated trees, sometimes in human-made structures; SSC/G5/S3	migratory in winter	Moderate habitat present
Falco peregrinus anatum	American peregrine falcon	Volcanic cliffs, steep slopes covered by chaparral with open grassy areas; nesting sites on ledges; FD/SD/CFP/G4/S3S4	year-round	Habitat not present
Falco mexicanus	prairie falcon	Dry open terrain, with cliff nesting sites; WL/G5/S4	year-round	Habitat not present
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland (marshes) with cattails, tules, sedges; SE/SSC/G2G3/S2	year-round	Habitat present
Lasionycteris noctivagans	silver-haired bat	Coastal & montane forest, feeds over streams, ponds and brushy areas. Roosts in hollow trees; G5/S3S4	year-round	Habitat present
Lasiurus cinereus	hoary bat	Open habitats with access to trees and water; G5/S4	migratory- spring & fall	Habitat present
Corynorhinus townsendii	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SC/SSC/G3/S2	year-round	Habitat not present

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Antrozous pallidus	pallid bat	Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance; SSC/G5/S3	local migrant	Habitat present

Key for Table 3:

SE/ST/SD = State Endangered/Threatened/Delisted
SSC = CDFW Species of Special Concern
WL = CDFW Watch List
FE/FT/FD=Federal Endangered/Threatened/Delisted
Threat = Threatened
Cand = Candidate
SC/SCD = State Candidate for Listing/Delisting
SFP = State Fully Protected
FC = Federal Candidate
FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting
End = Endangered
Prop = Proposed

NatureServe Conservation Status:
G1/S1 = Global/State Critically Imperiled
G2/S2 = Global/State Imperiled
G3/S3 = Global/State Vulnerable
G4/S4 = Global/State Apparently Secure
G5/S5 = Global/State Secure
SNR = Not yet assessed

4.3 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists numerous native species with both sensitive and non-sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.4 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 17 sensitive wildlife species need to be accounted for within the project area. Fourteen are identified as present within the Detert Reservoir quadrangle by the CNDDB. Three species – white-tailed kite, yellow warbler, and yellow-breasted chat – are added based on the presence of potential habitat. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

- **Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*):**

  This species is known from accounts in the San Francisco Bay Area. It occupies ponds and shallow waters of streams, lakes, or marshes. This species is listed here because it was identified in Long Valley in vernal pools. There is no appropriate habitat for this species in or near the project area.

- **Obscure bumble bee (*Bombus oliginosus*):**

  This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat, and does not thrive in developed urban or agricultural areas. Its food sources include plant genera *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia*. This property lacks suitable habitat.

- **Serpentine cypress wood-boring beetle (*Trachykele hartmani*)**:

  This beetle breeds and develops in Sargent cypress in Lake, Colusa, and Sonoma Counties, and has been identified in the CNDDB as occurring within the Pope Valley. One CNDDB occurrence from the 1980s lists the species in a cypress along St. Helena Creek approximately one mile north of the Napa County line. There are no Sargent cypress within the survey area and this species would not be present.

- **Foothill yellow-legged frog (*Rana boylii*):**

  Based on previous surveys conducted in the region by Northwest Biosurvey, the species is relatively common in shaded pool/riffle headwater streams in the region. They are heavily dependent on the presence of perennial water and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral streams unsuitable as breeding sites. The ephemeral streams on the property may support foothill yellow-

legged frogs, at least seasonally. The frogs have been found in St. Helena Creek, to which this property eventually drains.

- **Western pond turtle (*Emys marmorata*):**

  These turtles prefer slow or ponded water but will range widely through less suitable habitat in search of these sites. Stream channels are often used as movement corridors between waterways or ponds. Eggs are laid on land in sheltered nests. Young overwinter in the nest and emerge the following spring in Northern California. Food includes aquatic insects, crustaceans, fish, and riparian vegetation. When present, pond turtles are readily observed basking along shorelines or on logs in shallow water. There are two ponds on the property, one of which is contiguous with a stream, and this species may be present on the site, although none were seen during the site visits.

- **California giant salamander (*Dicamptodon ensatus)*:**

  This species is found in damp forests in cool, rocky streams, and occasionally in ponds and lakes. It prefers humid coastal forests, including Douglas fir, redwood, montane and valley-foothill riparian habitats. Cold flowing water is necessary for egg-laying and maturing. Larvae and adults in their aquatic state hide between rocks in streambeds; on land they may be found under litter or underground. Food is snails, slugs, small rodents and mammals, fish, and other amphibians. The salamanders are mostly nocturnal. There is no suitable habitat on the property for this species.

- **Purple martin (*Progne subis*):**

  These migratory passerine (perching) birds prefer open, old growth, multilayered woodland with nearby water. Much is known about habitat preference in this species due to recent research. They are commonly found in riparian habitat, or valley foothill with montane hardwood or montane-hardwood-conifer habitats near water. Up to 70-percent of nests are in fire-killed firs and pines. On the coast, preferred habitat is redwood forest. These birds may nest as pairs in old woodpecker cavities or in colonies in large hollow snags; nests are also sometimes found in residential areas or in manmade structures. Most tree nest sites are located in the upper slopes of hilly and mountainous terrain and Northwest Biosurvey staff has found this species in habitat meeting these requirements in the Geysers area of Lake and Napa Counties. There is some possible habitat within the fir forests on the property.

- **American peregrine falcon (*Falco peregrinus anatum*)**:

  The falcons prefer woodland and forest habitats near water for breeding, and will remain year-long in riparian areas. In addition to water, the species requires protective cliffs and ledges in canyons for nesting and cover. Population decline has been mostly due to pesticide use. The protected status of this species is applied to active nest sites. There are documented occurrences of this species in the vicinity of this site and falcons may hunt in the area, but there are no suitable isolated nesting sites on the property.

- **Prairie falcon (*Falco mexicanus*):**

  This species does not currently have sensitive species status, but it is on the state watch list. This raptor prefers dry, open terrain and nests in cliffs or rock outcrops. The falcon hunts in open country and ranges widely while foraging. It is associated mostly with perennial grasslands, savannahs, rangeland, and some types of agricultural lands. While this species may forage occasionally in the area, there is no suitable nesting habitat in the project area.

- **White-tailed kite (*Elanus leucurus*):**

  Usually found near agricultural areas, the kite prefers open areas near woodlands and water. These raptors hunt over open country and feed mostly on small diurnal mammals, but will sometimes eat birds, insects, amphibians, and reptiles. They prefer large, deciduous trees surrounded by open land such as grassland, meadows, farmland, and wetlands for nesting and roosting sites and dense woodlands for cover. The survey area contains patches of grassland with adjacent mature trees, which makes it ideal kite habitat. The California Fully Protected status of these raptors pertains to nesting pairs with an emphasis on protecting nesting habitat. This species is also protected under the Migratory Bird Treaty Act.

- **Tricolored blackbird (*Agelaius tricolor*):**

  These blackbirds are typically colony nesters in fresh emergent wetland habitat (tule or cattail marsh), but may also occur in dense blackberry or willow shrub communities adjacent to water. The species is usually readily observed and heard when present, and has a distinctive cat-like call unlike other blackbird species. One occurrence is noted in the CNDDB within a cattail marsh near Detert Reservoir. While some areas adjacent to the ponds may provide potential habitat, the patch size of this habitat may be too small to provide good nesting sites. No tricolored blackbirds were seen or heard during the site visits.

- **Yellow warbler (*Dendroica petechia brewsteri*):**

  These warblers require riparian woodland with a dense shrubby understory for nesting and cover. They arrive in these areas in April and are typically gone by October. Fledging is usually completed by August. Nests are constructed in shrubs and small trees in the lower canopy of the woodland. They forage for insects in the upper canopy.

- **Yellow-breasted chat (*Icteria virens*):**

  The habitat requirements for this warbler are very similar to those for the yellow warbler. They require dense willow thickets near streams for nesting and cover, arriving at this habitat for the breeding season in April and leaving by late September. The nesting season extends from May to August. They are omnivorous, eating insects and spiders as well as fruit. The narrow stream channels and small patch sizes of suitable habitat on the property are unlikely to provide suitable nesting habitat for this species.

- **Silver-haired bat (*Lasionycteris noctivagans*):**

  This species occurs throughout most of North America and is associated mainly with coastal and montane forest habitats. The species is primarily a tree roosting bat, roosting during the day behind loose tree bark, in hollow trees, and in abandoned woodpecker holes. Occasionally individuals roost in man-made structures. This species has also been known to hibernate in mines, caves, trees, and buildings in colder portions of their range. The silver-haired bat takes a wide variety of prey, including moths, flies, beetles, ants, and termites, and is adept at exploiting large swarms of insects. Foraging typically occurs over streams, ponds, and open brushy areas and is believed to occur when other bat species are not present. The CNDDB lists one occurrence from the 1930s in Long Valley. The site may provide habitat for this species. This species does not have sensitive status.

- **Hoary Bat *(Lasiurus cinereus)*:**

  The hoary bat roosts in open habitats in woodlands or forest in the branches of deciduous and coniferous trees. Males are solitary and females roost in dense foliage in medium to large trees with their young; they do not form maternity colonies. The primary prey of the hoary bat is moths but include beetles and dragonflies. The hoary bat hunts above canopy level, over open areas and water. This species will sometimes set up foraging territories at bright lights where insects congregate. They are not attracted to human structures such as houses but are sometimes found in large trees in suburban areas. This species is migratory to warmer climates during the winter, sometimes moving with flocks of birds. Jays are a threat to this species. As with the silver-haired bat, the CNDDB lists one occurrence from the 1930s in Long Valley. The project area near the larger pond

contains moderate habitat for this species. This species does not have sensitive status.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**

  The most restrictive resource required by this species is daytime roosting habitat, and this bat is extremely sensitive to disturbance of roosting sites. This relatively sedentary species will use mines, caves, tunnels, or other human-made structures for roosting, and may share roosting sites with other species. They may use separate roosting sites for day and night, and prefer open roosting sites with complete darkness. They require cold sites for hibernation and warm sites for maternity roosts. These bats typically prefer relatively mesic (moist) habitat such as riparian. They feed mostly on moths and may forage with other species. Townsend's big-eared bats appear to prefer buildings and mines and have been identified in the CNDDB in old mines in the vicinity of this property. However, the lack of abandoned structures on the site make it unlikely that this species roosts here.

- **Pallid bat (*Antrozous pallidus*):**

  Optimal habitat for these bats consists of open, dry habitats with rocky areas, but it may be found in open forest and woodlands with access to open habitats for feeding. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites but may also use buildings and hollow trees. Foraging occurs over open country. These bats have a home range of 1 to 3 miles and, like the Townsend's bat, are known to roost with other bat species. Also similar to the Townsend's bat, this species is extremely sensitive to human disturbance of roosting sites. This species is identified in the CNDDB near Mirabel Mine in 1919, south of this site. The site may provide moderate potential roosting and feeding habitat in the forests and oak woodlands on the parcel.

5.0 FIELD SURVEY RESULTS

5.1 <u>Botanical Field Survey Results</u>: Table 4 presents the results of the botanical survey for the project. Each of the sensitive plant species potentially occurring at the site and listed in Tables 2 and 3 was specifically searched for during the surveys. The surveys identified a total of 94 plant taxa on the Brand property.

One taxon with sensitive regulatory status were found on the property during the surveys. It is ranked 4.3 by CNPS: **Jepson's navarretia (*Navarretia jepsonii*)**

CNPS Rare Plant Rank 4 is a watch list of plants about which not enough is known to qualify them as "rare, threatened, or endangered" and consequently placed in Rare Plant Rank 1B. A determination as to whether impacts to this population requires mitigation is up to the local permitting agency in consultation with the Department of Fish and Wildlife. The 4.3 classification is described as not very rare in California.

TABLE 4. FLORA OF THE BRAND PROPERTY

Habit	Species	Common Name	Family	Origin
forb	*Daucus carota*	Queen Anne's lace	Apiaceae	A
forb	*Petroselinum crispum*	parsley	Apiaceae	A
forb	*Torilis arvensis*	field hedge parsley	Apiaceae	A
forb	*Agoseris grandiflora*	California dandelion, big-flower agoseris	Asteraceae	N
forb	*Agoseris heterophylla var. heterophylla*	annual agoseris, annual mountain dandelion	Asteraceae	N
forb	*Anisocarpus madioides*	woodland madia	Asteraceae	N
forb	*Centaurea solstitialis*	yellow star thistle	Asteraceae	A
forb	*Cirsium brevistylum*	clustered thistle, Indian thistle	Asteraceae	N
forb	*Eriophyllum lanatum var. arachnoideum*	common woolly sunflower, spiderweb sunflower	Asteraceae	N
forb	*Hypochaeris glabra*	smooth cat's ear	Asteraceae	A
forb	*Logfia gallica*	daggerleaf cottonrose	Asteraceae	A
forb	*Micropus californicus var. californicus*	cottontop, slender cottonweed	Asteraceae	N
forb	*Wyethia glabra*	green mule ears, shining mule ears	Asteraceae	N
forb	*Cynoglossum grande*	grand hound's tongue	Boraginaceae	N
forb	*Carex nudata*	naked sedge, torrent sedge	Cyperaceae	N
forb	*Carex serratodens*	saw-toothed sedge	Cyperaceae	N
forb	*Cyperus eragrostis*	tall flat sedge	Cyperaceae	N
forb	*Eleocharis macrostachya*	creeping spikerush, pale spikerush	Cyperaceae	N
forb	*Croton setigerus*	turkey mullein	Euphorbiaceae	N
forb	*Acmispon brachycarpus*	shortpodded lotus, hill lotus	Fabaceae	N
forb	*Lathyrus jepsonii var. californicus*	California tule pea	Fabaceae	N
forb	*Lupinus bicolor*	miniature lupine	Fabaceae	N
forb	*Lupinus succulentis*	arroyo lupine	Fabaceae	N
forb	*Trifolium hirtum*	rose clover	Fabaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Vicia villosa ssp. villosa*	winter vetch, hairy vetch	Fabaceae	A
forb	*Erodium cicutarium*	red-stem storksbill	Geraniaceae	A
forb	*Hypericum perforatum*	Klamathweed	Hypericaceae	A
forb	*Iris macrosiphon*	bowl-tubed iris	Iridaceae	N
forb	*Sisyrinchium bellum*	blue-eyed grass, western blue-eyed grass	Iridaceae	N
forb	*Juncus tenuis*	poverty rush	Juncaceae	N
forb	*Stachys albens*	cobwebby hedge nettle, white-stem hedge nettle	Lamiaceae	N
forb	*Calochortus amabilis*	Diogenes lantern, golden fairy lantern	Liliaceae	N
forb	*Calochortus luteus*	yellow Mariposa lily	Liliaceae	N
forb	*Chlorogalum pomeridianum*	wavyleaf soap plant	Liliaceae	N
forb	*Dichelostemma congestum*	fork-toothed ookow	Liliaceae	N
forb	*Triteleia laxa*	Ithuriel's spear	Liliaceae	N
forb	*Claytonia perfoliata ssp. perfoliata*	miner's lettuce	Montiaceae	N
forb	*Clarkia concinna ssp. concinna*	lovely clarkia, red ribbons	Onagraceae	N
forb	*Clarkia purpurea ssp. quadrivulnera*	purple clarkia, winecup clarkia, four-spot	Onagraceae	N
forb	*Eschscholzia californica*	California poppy	Papaveraceae	N
forb	*Mimulus guttatus*	seep monkeyflower	Phrymaceae	N
forb	*Plantago lanceolata*	English plantain	Plantaginaceae	A
forb	***Navarretia jepsonii***	**Jepson's navarretia; CNPS Rank 4.3**	**Polemoniaceae**	**N**
forb	*Navarretia mellita*	skunk navarretia	Polemoniaceae	N
forb	*Polygala californica*	California milkwort	Polygalaceae	N
forb	*Rumex crispus*	curly dock	Polygonaceae	A
forb	*Anagalis arvensis*	scarlet pimpernel	Primulaceae	A
forb	*Galium porrigens var. porrigens*	climbing bedstraw, graceful bedstraw	Rubiaceae	N
forb	*Pedicularis densiflora*	warrior's plume, Indian warrior	Scrophulariaceae	N
forb	*Typha angustifolia*	narrow-leaf cattail	Typhaceae	N

Habit	Species	Common Name	Family	Origin
grass	*Aira caryophyllea*	silver European hairgrass	Poaceae	A
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Briza maxima*	big quaking grass	Poaceae	A
grass	*Briza minor*	small quaking grass	Poaceae	A
grass	*Bromus arvensis*	field brome	Poaceae	A
grass	*Bromus diandrus*	ripgut grass, ripgut brome	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Bromus laevipes*	woodland brome	Poaceae	N
grass	*Bromus madritensis ssp. rubens*	red brome	Poaceae	A
grass	*Cynosurus echinatus*	hedgehog dogtail, annual dogtail	Poaceae	A
grass	*Elymus glaucus ssp. glaucus*	blue wildrye	Poaceae	N
grass	*Festuca myuros*	rattail sixweeks grass	Poaceae	A
grass	*Gastridium phleoides*	nitgrass	Poaceae	A
grass	*Hordeum marinum ssp. gussoneanum*	Mediterranean barley	Poaceae	A
grass	*Phalaris aquatica*	Harding grass	Poaceae	A
shrub	*Sambucus nigra ssp. caerulea*	blue elderberry	Adoxacaceae	N
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N
shrub	*Baccharis pilularis*	coyote brush, chaparral broom	Asteraceae	N
shrub	*Arctostaphylos canescens ssp. canescens*	hoary manzanita	Ericaceae	N
shrub	*Arctostaphylos manzanita ssp. manzanita*	common manzanita	Ericaceae	N
shrub	*Cytisus scoparius*	Scotch broom	Fabaceae	A
shrub	*Rupertia physodes*	California tea	Fabaceae	N
shrub	*Eriodictyon californicum*	California yerba santa	Hydrophyllaceae	N
shrub	*Ceanothus incanus*	coast whitethorn	Rhamnaceae	N
shrub	*Ceanothus integerrimus*	deerbrush, blue blossom	Rhamnaceae	N
shrub	*Adenostoma fasciculatum*	chamise	Rosaceae	N
shrub	*Cercocarpus betuloides var. betuloides*	birch-leaf mountain mahogany	Rosaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Heteromeles arbutifolia*	toyon	Rosaceae	N
shrub	*Rubus armeniacus*	Himalayan blackberry	Rosaceae	A
tree	*Juniperus californica*	California juniper	Cupressaceae	N
tree	*Arbutus menziesii*	Pacific madrone	Ericaceae	N
tree	*Quercus douglasii*	blue oak	Fagaceae	N
tree	*Quercus garryanna var. garryanna*	Oregon white oak	Fagaceae	N
tree	*Quercus kelloggii*	California black oak	Fagaceae	N
tree	*Umbellularia californica*	California bay	Lauraceae	N
tree	*Pinus attenuata*	knobcone pine	Pinaceae	N
tree	*Pinus ponderosa*	ponderosa pine	Pinaceae	N
tree	*Pinus sabiniana*	ghost pine, foothill pine	Pinaceae	N
tree	*Pseudotsuga menziesii var. menziesii*	Douglas fir	Pinaceae	N
tree	*Populus fremontii var. fremontii*	Fremont cottonwood	Salicaceae	N
tree	*Salix laevigata*	red willow	Salicaceae	N
tree/ shrub	*Quercus wislizeni*	interior live oak	Fagaceae	N
vine	*Lathyrus tingitanus*	Tangier pea	Fabaceae	A
vine	*Vitis californica*	California wild grape	Vitaceae	N

Origin: N = Native, A = Alien

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Summary: This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society *On-line Inventory of Rare and Endangered Vascular Plants of California,* and the California Department of Fish and Wildlife's *Wildlife Habitat Relations System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within and in the immediate vicinity of both project areas.
- A delineation of possible waters of the U.S.

Sensitive Plants: A total of 94 native and introduced plant taxa were identified within the survey area during the in-season botanical survey. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

A single taxon with sensitive status was identified: **Jepson's navarretia (*Navarretia jepsonii*).** CNPS Rare Plant Rank 4 is a watch list of plants about which not enough is known to qualify them as "rare, threatened, or endangered" and consequently placed on Rare Plant Rank 1B. A determination as to whether impacts to this population requires mitigation is up to the local permitting agency in consultation with the Department of Fish and Wildlife. Plants with a CNPS Rank of 4.3 are considered to be not very sensitive in California.

Sensitive Wildlife: As described in Section 4.3, a total of 17 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the potential on-site habitat. The following species may be present in the survey area in their sensitive status:

Foothill yellow-legged frog	Western pond turtle
Purple martin	White-tailed kite
Pallid bat	Silver-haired bat

Possible Waters of the U.S.: A cumulative total **0.6875 acre** of possible waters of the U.S. occurring as a mix of ephemeral streams and ponds. (See delineation report, Appendix C.)

6.2 Potential Impacts and Proposed Mitigation for Biological Resources: The proposed project consists of a parcel map which would split the existing 29.35-acre parcel into smaller 4 parcels ranging in size from approximately 5 to 9.5 acres. The land division in itself will not have a direct adverse impact on biological resources. The size and location of proposed future development on each new parcel (presumed to be residential) has not been specifically determined and presumably would be up to the purchaser of each parcel as long as it met Lake County development standards. This future residential development would include administrative-level building permits which do not require CEQA review, although any proposed new roadways or other development may trigger such a review.

Based on the floristic-level botanical survey conducted on this property, there are no plants with sensitive regulatory status, considering that Jepson's navarretia is ranked as a CNPS 4.3 species defined as not very rare in California. Consequently, specific building envelopes are not recommended. Based on these factors we provide below recommendations for future residential development that are designed to mitigate potential adverse impacts to biological resources identified in this analysis. These recommendations may be filed with the parcel map or implemented through other means determined appropriate by the Lake County Community Development Department staff.

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

1. **Habitat Fragmentation**

   Potential Impacts: The Brand property is located in an area surrounded by continuous open and undeveloped habitat. At present, wildlife in the region have access to Douglas fir forest, mixed oak woodland, and ponderosa pine forest on the property that is contiguous with similar habitat on the surrounding slopes to the north, west, and south. Development within the surrounding woodlands and forests on the property would reduce or eliminate wildlife use of these habitats.

Proposed Mitigation for Habitat Fragmentation:

- **Measure 1:** It is recommended that to the extent practical, residential development and its access be emphasized within the central, valley portions of the property and be accessed by existing ranch roads. Of particular note, development within the Douglas fir forest in the southern portion of the property should be restricted to the margins of this habitat or to adjacent mixed oak woodlands along the eastern edge of the property.

- **Measure 2:** The use of fencing should be restricted to residential yards and existing vineyard development.

2. Woodland and Forest Resources

Potential Impact: woodland and forest on the property occurs primarily on the slopes surrounding the central, valley portion of the property. Development within these woodlands and forests would directly impact these resources.

Proposed Mitigation for Impacts to Woodland and Forest:

Impacts to woodland and forest resources would be minimized through implementation of **Measure 1** as recommended above.

3. Sensitive Plants and Wildlife

Potential Impact:

A. Plants: Jepson's navarretia, a CNPS Rank 4.3 plant, was identified within the manzanita shrub alliance community during the floristic-level botanical survey. Jepson's navarretia is a CNPS Rank 4.3 plant defined as "not very rare in California". However, the ultimate determination as to whether Jepson's navarretia requires mitigation is up to the Lake County Community Development Department in consultation with the California Department of Fish and Wildlife.

- **Measure 3:** If it is determined that mitigation should be implemented for Jepson's navarretia, it is recommended that the manzanita shrub alliance communities mapped in Figure 2 be excluded from development.

B. Wildlife: The following wildlife species with sensitive regulatory status have a potential to be present within the survey area:

- Foothill yellow legged frog
- Western pond turtle
- Purple martin
- White-tailed kite
- Silver-haired bat
- Pallid bat

Construction or disturbance within the creek channel extending along the northern end of the property has a potential to result in an incidental take of foothill yellow-legged frogs and western pond turtles if conducted when this channel contains water.

Removal of trees has a potential to result in an incidental take of purple martin and white-tailed kite if conducted during the breeding season (February 15 – August 31).

Removal of trees has a potential to result in an incidental take of silver haired and pallid bats if conducted between the following dates:

January 1-February 14
April 2- September 14
October 15- December 31

Proposed Mitigation for impacts to Wildlife:

- **Measure 4 - Proposed Mitigation for Foothill Yellow-legged Frog:** In the event that work is proposed within the active channel of the creek extending along the northern property boundary, it is recommended that it occur either prior to April 1 or after June 15, by which time frog larvae and young are mobile and independent. Disturbance of the channel structure should be limited to the immediate construction site. Alternatively, work may occur when the channel is naturally dry.

In the event that work must occur within the active channel when water is present between April 1 and June 15, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid

California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.

Any foothill yellow-legged adult or larval frogs within the work area shall be captured and transferred to an adjacent, unaffected stream segment. In the event that eggs of this species are found during these surveys, in-channel activities shall be delayed for one week (eggs usually hatch within 5 days) and the site reinspected to determine if eggs have hatched. If not, an additional delay will be required until the eggs have hatched.

- **Measure 5 - Proposed Mitigation for Western Pond Turtle:** In order to avoid potential impacts to western pond turtles, work within the channel of the creek extending along the northern edge of the property, or within ponds should occur after August 15 but before the onset of winter rains and the end of the grading season (October 15). Downed trees, stumps and other basking sites and refuges within these aquatic habitats should remain undisturbed.

In the event that work must occur within the active channel between April 1 and June 15, or within a pond, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.

In the event that western pond turtles are identified, a qualified biologist with a valid California Department of Fish and Wildlife collecting permit should be present during all construction activities at the crossing site.

- **Measure 6 - Proposed Mitigation for White-tailed Kites and Purple Martins:** To the extent feasible, vineyard construction, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31). If construction during the nesting season cannot be avoided, any required vegetation removal should be the minimal amount necessary for construction and should be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a

construction buffer shall be established around it in consultation with CDFW staff and shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.

- **Measure 7 - Proposed Mitigation for Pallid Bats:** If trees are to be removed (outside of the dates listed below), any tree to be removed that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen days prior to tree removal. Suitable trees include those with hollows and/or shedding bark.

If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.

4. Waters of the U.S.

Potential Impact: Work within any water of the U.S. as mapped in Figure 3 may result in fill of a water of the U.S.

Proposed Mitigation for Impacts to Waters of the U.S:

- **Measure 8:** Placement of fill within Waters of the U.S. may require a Nationwide Permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

5. Erosion Control:

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff to Saint Helena Creek.

Proposed Mitigation for Impacts Related to Erosion Control:

- **Measure 9:** All work in or near waterways should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to St. Helena Creek. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required.

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APPENDIX A

CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES

WITHIN THE

SURROUNDING CALIF. 7½' QUADS.

Surrounding 9-Quad List: Detert Reservoir Quadrangle

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Aetna Springs	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Aetna Springs	*Taricha torosa*	Coast Range newt	None	None	SSC	-
Aetna Springs	*Ardea alba*	great egret	None	None	-	-
Aetna Springs	*Ardea herodias*	great blue heron	None	None	-	-
Aetna Springs	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Aetna Springs	*Agelaius tricolor*	tricolored blackbird	None	Cand End	SSC	-
Aetna Springs	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
Aetna Springs	*Vandykea tuberculata*	serpentine cypress long-horned beetle	None	None	-	-
Aetna Springs	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Aetna Springs	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Aetna Springs	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-
Aetna Springs	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Aetna Springs	*Lasiurus cinereus*	hoary bat	None	None	-	-
Aetna Springs	*Myotis ciliolabrum*	western small-footed myotis	None	None	-	-
Aetna Springs	*Myotis evotis*	long-eared myotis	None	None	-	-
Aetna Springs	*Myotis thysanodes*	fringed myotis	None	None	-	-
Aetna Springs	*Myotis volans*	long-legged myotis	None	None	-	-
Aetna Springs	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Aetna Springs	*Emys marmorata*	western pond turtle	None	None	SSC	-
Aetna Springs	*Serpentine Bunchgrass*	Serpentine Bunchgrass	None	None	-	-
Aetna Springs	*Wildflower Field*	Wildflower Field	None	None	-	-
Aetna Springs	*Eryngium jepsonii*	Jepson's coyote-thistle	None	None	-	1B.2
Aetna Springs	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Aetna Springs	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Aetna Springs	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Aetna Springs	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Aetna Springs	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Aetna Springs	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Aetna Springs	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Aetna Springs	*Streptanthus morrisonii ssp. elatus*	Three Peaks jewelflower	None	None	-	1B.2
Aetna Springs	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Aetna Springs	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Aetna Springs	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Aetna Springs	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Aetna Springs	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Aetna Springs	*Monardella viridis*	green monardella	None	None	-	4.3
Aetna Springs	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Aetna Springs	*Fritillaria pluriflora*	adobe-lily	None	None	-	1B.2
Aetna Springs	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	*Lilium bolanderi*	Bolander's lily	None	None	-	4.2
Aetna Springs	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Aetna Springs	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Aetna Springs	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
Aetna Springs	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
Aetna Springs	*Cypripedium montanum*	mountain lady's-slipper	None	None	-	4.2
Aetna Springs	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Aetna Springs	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Aetna Springs	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Aetna Springs	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Aetna Springs	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Aetna Springs	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Aetna Springs	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Aetna Springs	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Aetna Springs	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Aetna Springs	*Navarretia rosulata*	Marin County navarretia	None	None	-	1B.2
Aetna Springs	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Aetna Springs	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Aetna Springs	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Calistoga	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Calistoga	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Calistoga	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Calistoga	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Calistoga	*Accipiter striatus*	sharp-shinned hawk	None	None	WL	-
Calistoga	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Calistoga	*Syncaris pacifica*	California freshwater shrimp	End	End	-	-
Calistoga	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Calistoga	*Entosphenus tridentatus*	Pacific lamprey	None	None	SSC	-
Calistoga	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Calistoga	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Calistoga	*Bombus occidentalis*	western bumble bee	None	None	-	-
Calistoga	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Calistoga	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Calistoga	*Myotis evotis*	long-eared myotis	None	None	-	-
Calistoga	*Myotis thysanodes*	fringed myotis	None	None	-	-
Calistoga	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Calistoga	*Emys marmorata*	western pond turtle	None	None	SSC	-
Calistoga	*Coastal and Valley Freshwater Marsh*	Coastal and Valley Freshwater Marsh	None	None	-	-
Calistoga	*Eryngium constancei*	Loch Lomond button-celery	End	End	-	1B.1
Calistoga	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Calistoga	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Calistoga	*Erigeron biolettii*	streamside daisy	None	None	-	3
Calistoga	*Harmonia nutans*	nodding harmonia	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Calistoga	*Lasthenia burkei*	Burke's goldfields	End	End	-	1B.1
Calistoga	*Lessingia hololeuca*	woolly-headed lessingia	None	None	-	3
Calistoga	*Plagiobothrys strictus*	Calistoga popcornflower	End	Threat	-	1B.1
Calistoga	*Spergularia macrotheca var. longistyla*	long-styled sand-spurrey	None	None	-	1B.2
Calistoga	*Arctostaphylos stanfordiana ssp. decumbens*	Rincon Ridge manzanita	None	None	-	1B.1
Calistoga	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Calistoga	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Calistoga	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
Calistoga	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Calistoga	*Trifolium hydrophilum*	saline clover	None	None	-	1B.2
Calistoga	*Monardella viridis*	green monardella	None	None	-	4.3
Calistoga	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Calistoga	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Calistoga	*Limnanthes vinculans*	Sebastopol meadowfoam	End	End	-	1B.1
Calistoga	*Sidalcea hickmanii ssp. napensis*	Napa checkerbloom	None	None	-	1B.1
Calistoga	*Clarkia breweri*	Brewer's clarkia	None	None	-	4.2
Calistoga	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Calistoga	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Calistoga	*Poa napensis*	Napa blue grass	End	End	-	1B.1
Calistoga	*Puccinellia simplex*	California alkali grass	None	None	-	1B.2
Calistoga	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Calistoga	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Calistoga	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Calistoga	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Calistoga	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Calistoga	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Calistoga	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Calistoga	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Calistoga	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Calistoga	*Triteleia lugens*	dark-mouthed triteleia	None	None	-	4.3
Detert Reservoir	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Detert Reservoir	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Detert Reservoir	*Taricha torosa*	Coast Range newt	None	None	SSC	-
Detert Reservoir	*Falco mexicanus*	prairie falcon	None	None	WL	-
Detert Reservoir	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Detert Reservoir	*Progne subis*	purple martin	None	None	SSC	-
Detert Reservoir	*Agelaius tricolor*	tricolored blackbird	None	Cand End	SSC	-
Detert Reservoir	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
Detert Reservoir	*Trachykele hartmani*	serpentine cypress wood-boring beetle	None	None	-	-
Detert Reservoir	*Hydrochara ricksecker*i	Ricksecker's water scavenger beetle	None	None	-	-
Detert Reservoir	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Detert Reservoir	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Detert Reservoir	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Detert Reservoir	*Lasiurus cinereus*	hoary bat	None	None	-	-
Detert Reservoir	*Myotis ciliolabrum*	western small-footed myotis	None	None	-	-
Detert Reservoir	*Myotis evotis*	long-eared myotis	None	None	-	-
Detert Reservoir	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Detert Reservoir	*Emys marmorata*	western pond turtle	None	None	SSC	-
Detert Reservoir	*Northern Vernal Pool*	Northern Vernal Pool	None	None	-	-
Detert Reservoir	*Lomatium hooveri*	Hoover's lomatium	None	None	-	4.3
Detert Reservoir	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Detert Reservoir	*Erigeron biolettii*	streamside daisy	None	None	-	3
Detert Reservoir	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Detert Reservoir	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Detert Reservoir	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Detert Reservoir	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Detert Reservoir	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Detert Reservoir	*Cryptantha dissita*	serpentine cryptantha	None	None	-	1B.2
Detert Reservoir	*Streptanthus brachiatus ssp. brachiatus*	Socrates Mine jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus morrisonii ssp. elatus*	Three Peaks jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus vernalis*	early jewelflower	None	None	-	1B.2
Detert Reservoir	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Detert Reservoir	*Calystegia collina ssp. venusta*	South Coast Range morning-glory	None	None	-	4.3
Detert Reservoir	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Detert Reservoir	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Detert Reservoir	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Detert Reservoir	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Detert Reservoir	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Detert Reservoir	*Ribes victoris*	Victor's gooseberry	None	None	-	4.3
Detert Reservoir	*Juncus luciensis*	Santa Lucia dwarf rush	None	None	-	1B.2
Detert Reservoir	*Trichostema ruygtii*	Napa bluecurls	None	None	-	1B.2
Detert Reservoir	*Calochortus uniflorus*	pink star-tulip	None	None	-	4.2
Detert Reservoir	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Detert Reservoir	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Detert Reservoir	*Limnanthes floccosa ssp. floccosa*	woolly meadowfoam	None	None	-	4.2
Detert Reservoir	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Detert Reservoir	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Detert Reservoir	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Detert Reservoir	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Detert Reservoir	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Detert Reservoir	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Detert Reservoir	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Detert Reservoir	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Detert Reservoir	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Detert Reservoir	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Detert Reservoir	*Navarretia myersii ssp. deminuta*	small pincushion navarretia	None	None	-	1B.1
Detert Reservoir	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Detert Reservoir	*Eriogonum umbellatum var. bahiiforme*	bay buckwheat	None	None	-	4.2
Detert Reservoir	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Detert Reservoir	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Detert Reservoir	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Detert Reservoir	*Ceanothus purpureus*	holly-leaved ceanothus	None	None	-	1B.2
Detert Reservoir	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Detert Reservoir	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Jericho Valley	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Jericho Valley	*Aquila chrysaetos*	golden eagle	None	None	FP ; WL	-
Jericho Valley	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
Jericho Valley	*Falco mexicanus*	prairie falcon	None	None	WL	-
Jericho Valley	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Jericho Valley	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Jericho Valley	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Jericho Valley	*Emys marmorata*	western pond turtle	None	None	SSC	-
Jericho Valley	*Northern Interior Cypress Forest*	Northern Interior Cypress Forest	None	None	-	-
Jericho Valley	*Serpentine Bunchgrass*	Serpentine Bunchgrass	None	None	-	-
Jericho Valley	*Grimmia torenii*	Toren's grimmia	None	None	-	1B.3
Jericho Valley	*Lomatium hooveri*	Hoover's lomatium	None	None	-	4.3
Jericho Valley	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Jericho Valley	*Balsamorhiza macrolepis*	big-scale balsamroot	None	None	-	1B.2
Jericho Valley	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Jericho Valley	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Jericho Valley	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Jericho Valley	*Arabis modesta*	modest rockcress	None	None	-	4.3
Jericho Valley	*Arabis oregana*	Oregon rockcress	None	None	-	4.3
Jericho Valley	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Jericho Valley	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Jericho Valley	*Streptanthus morrisonii ssp. kruckebergii*	Kruckeberg's jewelflower	None	None	-	1B.2
Jericho Valley	*Equisetum palustre*	marsh horsetail	None	None	-	3
Jericho Valley	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Jericho Valley	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Jericho Valley	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Jericho Valley	*Juglans hindsii*	Northern California black walnut	None	None	-	1B.1
Jericho Valley	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Jericho Valley	*Fritillaria pluriflora*	adobe-lily	None	None	-	1B.2
Jericho Valley	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Jericho Valley	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Jericho Valley	*Hesperolinon drymarioides*	drymaria-like western flax	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Jericho Valley	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Jericho Valley	*Malacothamnus helleri*	Heller's bush-mallow	None	None	-	3.3
Jericho Valley	*Sidalcea keckii*	Keck's checkerbloom	End	None	-	1B.1
Jericho Valley	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
Jericho Valley	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Jericho Valley	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
Jericho Valley	*Piperia leptopetala*	narrow-petaled rein orchid	None	None	-	4.3
Jericho Valley	*Castilleja rubicundula var. rubicundula*	pink creamsacs	None	None	-	1B.2
Jericho Valley	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Jericho Valley	*Orobanche valida ssp. howellii*	Howell's broomrape	None	None	-	4.3
Jericho Valley	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Jericho Valley	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Jericho Valley	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Jericho Valley	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Jericho Valley	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Jericho Valley	*Eriogonum tripodum*	tripod buckwheat	None	None	-	4.2
Jericho Valley	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mark West Springs	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Mark West Springs	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Mark West Springs	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Mark West Springs	*Syncaris pacifica*	California freshwater shrimp	End	End	-	-
Mark West Springs	*Lavinia symmetricus navarroensis*	Navarro roach	None	None	SSC	-
Mark West Springs	*Lavinia symmetricus ssp. 4*	Clear Lake - Russian River roach	None	None	SSC	-
Mark West Springs	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Mark West Springs	*Lampetra ayresii*	river lamprey	None	None	SSC	-
Mark West Springs	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Mark West Springs	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Mark West Springs	*Oncorhynchus tshawytscha pop. 17*	chinook salmon - California coastal ESU	Threat	None	-	-
Mark West Springs	*Atractelmis wawona*	Wawona riffle beetle	None	None	-	-
Mark West Springs	*Pekania pennanti*	fisher - West Coast DPS	None	Threat	SSC	-
Mark West Springs	*Taxidea taxus*	American badger	None	None	SSC	-
Mark West Springs	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Mark West Springs	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Mark West Springs	*Myotis lucifugus*	little brown bat	None	None	-	-
Mark West Springs	*Myotis thysanodes*	fringed myotis	None	None	-	-
Mark West Springs	*Anodonta californiensis*	California floater	None	None	-	-
Mark West Springs	*Emys marmorata*	western pond turtle	None	None	SSC	-
Mark West Springs	*Anomobryum julaceum*	slender silver moss	None	None	-	4.2
Mark West Springs	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Mark West Springs	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Mark West Springs	*Erigeron biolettii*	streamside daisy	None	None	-	3
Mark West Springs	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Mark West Springs	*Hemizonia congesta ssp. congesta*	congested-headed hayfield tarplant	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Mark West Springs	*Microseris paludosa*	marsh microseris	None	None	-	1B.2
Mark West Springs	*Viburnum ellipticum*	oval-leaved viburnum	None	None	-	2B.3
Mark West Springs	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Mark West Springs	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Mark West Springs	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
Mark West Springs	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Mark West Springs	*Juglans hindsii*	Northern California black walnut	None	None	-	1B.1
Mark West Springs	*Monardella viridis*	green monardella	None	None	-	4.3
Mark West Springs	*Lilium rubescens*	redwood lily	None	None	-	4.2
Mark West Springs	*Calandrinia breweri*	Brewer's calandrinia	None	None	-	4.2
Mark West Springs	*Gratiola heterosepala*	Boggs Lake hedge-hyssop	None	End	-	1B.2
Mark West Springs	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Mark West Springs	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Mark West Springs	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Mark West Springs	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Mark West Springs	*Eriogonum umbellatum var. bahiiforme*	bay buckwheat	None	None	-	4.2
Mark West Springs	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Mark West Springs	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Mark West Springs	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Mark West Springs	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Middletown	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Middletown	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
Middletown	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Middletown	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-
Middletown	*Lasiurus cinereus*	hoary bat	None	None	-	-
Middletown	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Middletown	*Emys marmorata*	western pond turtle	None	None	SSC	-
Middletown	*Northern Basalt Flow Vernal Pool*	Northern Basalt Flow Vernal Pool	None	None	-	-
Middletown	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Middletown	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Middletown	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Middletown	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Middletown	*Hemizonia congesta ssp. congesta*	congested-headed hayfield tarplant	None	None	-	1B.2
Middletown	*Lasthenia burkei*	Burke's goldfields	End	End	-	1B.1
Middletown	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Middletown	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Middletown	*Legenere limosa*	legenere	None	None	-	1B.1
Middletown	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Middletown	*Sedella leiocarpa*	Lake County stonecrop	End	End	-	1B.1
Middletown	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Middletown	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Middletown	*Trifolium hydrophilum*	saline clover	None	None	-	1B.2
Middletown	*Calochortus uniflorus*	pink star-tulip	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Middletown	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Middletown	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Middletown	*Hesperolinon didymocarpum*	Lake County western flax	None	End	-	1B.2
Middletown	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Middletown	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Middletown	*Gratiola heterosepala*	Boggs Lake hedge-hyssop	None	End	-	1B.2
Middletown	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Middletown	*Orcuttia tenuis*	slender Orcutt grass	Threat	End	-	1B.1
Middletown	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Middletown	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Middletown	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Middletown	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Middletown	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Middletown	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Middletown	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Middletown	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Middletown	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Middletown	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mount St. Helena	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Mount St. Helena	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Mount St. Helena	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Mount St. Helena	*Aquila chrysaetos*	golden eagle	None	None	FP ; WL	-
Mount St. Helena	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Mount St. Helena	*Stygobromus cherylae*	Barr's amphipod	None	None	-	-
Mount St. Helena	*Lavinia symmetricus ssp. 4*	Clear Lake - Russian River roach	None	None	SSC	-
Mount St. Helena	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Mount St. Helena	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Mount St. Helena	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Mount St. Helena	*Oncorhynchus tshawytscha pop. 17*	chinook salmon - California coastal ESU	Threat	None	-	-
Mount St. Helena	*Trachykele hartmani*	serpentine cypress wood-boring beetle	None	None	-	-
Mount St. Helena	*Pekania pennanti*	fisher - West Coast DPS	None	Threat	SSC	-
Mount St. Helena	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Mount St. Helena	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Mount St. Helena	*Emys marmorata*	western pond turtle	None	None	SSC	-
Mount St. Helena	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Mount St. Helena	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Mount St. Helena	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Mount St. Helena	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Mount St. Helena	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Mount St. Helena	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Mount St. Helena	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Mount St. Helena	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Mount St. Helena	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Mount St. Helena	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Mount St. Helena	*Limnanthes vinculans*	Sebastopol meadowfoam	End	End	-	1B.1
Mount St. Helena	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Mount St. Helena	*Sidalcea oregana ssp. valida*	Kenwood Marsh checkerbloom	End	End	-	1B.1
Mount St. Helena	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Mount St. Helena	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Mount St. Helena	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Mount St. Helena	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Mount St. Helena	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Mount St. Helena	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Mount St. Helena	*Stuckenia filiformis ssp. alpina*	slender-leaved pondweed	None	None	-	2B.2
Mount St. Helena	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mount St. Helena	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Mount St. Helena	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Mount St. Helena	*Horkelia parryi*	Parry's horkelia	None	None	-	1B.2
Mount St. Helena	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
St. Helena	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
St. Helena	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
St. Helena	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
St. Helena	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
St. Helena	*Ardea herodias*	great blue heron	None	None	-	-
St. Helena	*Progne subis*	purple martin	None	None	SSC	-
St. Helena	*Setophaga petechia*	yellow warbler	None	None	SSC	-
St. Helena	*Athene cunicularia*	burrowing owl	None	None	SSC	-
St. Helena	*Strix occidentalis caurina*	northern spotted owl	Threat	Threat	SSC	-
St. Helena	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
St. Helena	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
St. Helena	*Erethizon dorsatum*	North American porcupine	None	None	-	-
St. Helena	*Antrozous pallidus*	pallid bat	None	None	SSC	-
St. Helena	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
St. Helena	*Myotis evotis*	long-eared myotis	None	None	-	-
St. Helena	*Myotis thysanodes*	fringed myotis	None	None	-	-
St. Helena	*Myotis yumanensis*	Yuma myotis	None	None	-	-
St. Helena	*Emys marmorata*	western pond turtle	None	None	SSC	-
St. Helena	*Northern Vernal Pool*	Northern Vernal Pool	None	None	-	-
St. Helena	*Eryngium jepsonii*	Jepson's coyote-thistle	None	None	-	1B.2
St. Helena	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
St. Helena	*Erigeron biolettii*	streamside daisy	None	None	-	3
St. Helena	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
St. Helena	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
St. Helena	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
St. Helena	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
St. Helena	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
St. Helena	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
St. Helena	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
St. Helena	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
St. Helena	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
St. Helena	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
St. Helena	*Trichostema ruygtii*	Napa bluecurls	None	None	-	1B.2
St. Helena	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
St. Helena	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
St. Helena	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None	-	1B.2
St. Helena	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
St. Helena	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
St. Helena	*Castilleja ambigua var. ambigua*	johnny-nip	None	None	-	4.2
St. Helena	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
St. Helena	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
St. Helena	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
St. Helena	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
St. Helena	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
St. Helena	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
St. Helena	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
St. Helena	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
St. Helena	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
St. Helena	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
St. Helena	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
St. Helena	*Ceanothus pinetorum*	Kern ceanothus	None	None	-	4.3
St. Helena	*Ceanothus purpureus*	holly-leaved ceanothus	None	None	-	1B.2
St. Helena	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
St. Helena	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
St. Helena	*Triteleia lugens*	dark-mouthed triteleia	None	None	-	4.3
Whispering Pines	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Whispering Pines	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Whispering Pines	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Whispering Pines	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Whispering Pines	*Progne subis*	purple martin	None	None	SSC	-
Whispering Pines	*Bombus occidentalis*	western bumble bee	None	None	-	-
Whispering Pines	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Whispering Pines	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Whispering Pines	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Whispering Pines	*Lasiurus cinereus*	hoary bat	None	None	-	-
Whispering Pines	*Myotis evotis*	long-eared myotis	None	None	-	-
Whispering Pines	*Myotis thysanodes*	fringed myotis	None	None	-	-
Whispering Pines	*Emys marmorata*	western pond turtle	None	None	SSC	-
Whispering Pines	*Sceloporus graciosus graciosus*	northern sagebrush lizard	None	None	-	-
Whispering Pines	*Central Valley Drng Rainbow Trout/Cyprinid Str*	Cent Vall Drng Rainbow Trout/Cyprinid Str	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	*Clear Lake Drainage Resident Trout Stream*	Clear Lake Drainage Resident Trout Stream	None	None	-	-
Whispering Pines	*Grimmia torenii*	Toren's grimmia	None	None	-	1B.3
Whispering Pines	*Mielichhoferia elongata*	elongate copper moss	None	None	-	4.3
Whispering Pines	*Chlorogalum pomeridianum var. minus*	dwarf soaproot	None	None	-	1B.2
Whispering Pines	*Eryngium constancei*	Loch Lomond button-celery	End	End	-	1B.1
Whispering Pines	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Whispering Pines	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Whispering Pines	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Whispering Pines	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Whispering Pines	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Whispering Pines	*Cryptantha dissita*	serpentine cryptantha	None	None	-	1B.2
Whispering Pines	*Arabis blepharophylla*	coast rockcress	None	None	-	4.3
Whispering Pines	*Streptanthus brachiatus ssp. brachiatus*	Socrates Mine jewelflower	None	None	-	1B.2
Whispering Pines	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Whispering Pines	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Whispering Pines	*Legenere limosa*	legenere	None	None	-	1B.1
Whispering Pines	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Whispering Pines	*Sedella leiocarpa*	Lake County stonecrop	End	End	-	1B.1
Whispering Pines	*Carex praticola*	northern meadow sedge	None	None	-	2B.2
Whispering Pines	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Whispering Pines	*Arctostaphylos stanfordiana ssp. raichei*	Raiche's manzanita	None	None	-	1B.1
Whispering Pines	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Whispering Pines	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Whispering Pines	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Whispering Pines	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Whispering Pines	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Whispering Pines	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Whispering Pines	*Hesperolinon adenophyllum*	glandular western flax	None	None	-	1B.2
Whispering Pines	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Whispering Pines	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None	-	1B.2
Whispering Pines	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Whispering Pines	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Whispering Pines	*Cordylanthus tenuis ssp. capillaris*	Pennell's bird's-beak	End	Rare	-	1B.2
Whispering Pines	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Whispering Pines	*Antirrhinum subcordatum*	dimorphic snapdragon	None	None	-	4.3
Whispering Pines	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Whispering Pines	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Whispering Pines	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Whispering Pines	*Imperata brevifolia*	California satintail	None	None	-	2B.1
Whispering Pines	*Panicum acuminatum var. thermale*	Geysers panicum	None	End	-	1B.2
Whispering Pines	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Whispering Pines	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Whispering Pines	*Leptosiphon grandiflorus*	large-flowered leptosiphon	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Whispering Pines	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Whispering Pines	*Navarretia leucocephala ssp. pauciflora*	few-flowered navarretia	End	Threat	-	1B.1
Whispering Pines	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Whispering Pines	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Whispering Pines	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Whispering Pines	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Whispering Pines	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Whispering Pines	*Horkelia bolanderi*	Bolander's horkelia	None	None	-	1B.2

KEY:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A = Presumed extinct in California, but extant elsewhere
2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.
2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
3 = Plants about which we need more information (Review List)
3.1 = Plants about which we need more information (Review List); seriously threatened in California
3.2 = Plants about which we need more information (Review List); fairly threatened in California
3.3 = Plants about which we need more information (Review List); not very threatened in California
4.1 = Plants of limited distribution (watch list); seriously threatened in California
4.2 = Plants of limited distribution (watch list); fairly threatened in California
4.3 = Plants of limited distribution (watch list); not very threatened in California

CDFW / State and Federal Status:

SE/ST/SD = State Endangered/Threatened/Delisted
SC/SCD = State Candidate for Listing/Delisting
SSC = CDFW Species of Special Concern
SFP = State Fully Protected
WL = CDFW Watch List
FE/FT/FD = Federal Endangered/Threatened/Delisted
FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting
FC = Federal Candidate

State and Federal Status:

Threat = Threatened
End = Endangered
Prop = Proposed
Cand = Candidate
Cand End/Threat = State Candidate for Endangered/Threatened

APPENDIX B

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM RESULTS

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
supported by the
CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP
and maintained by the
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
Database Version: 9.0

SPECIES SUMMARY REPORT

FE = Federal Endangered
FT = Federal Threatened
CE = California Endangered
CT = California Threatened
CF = California Fully Protected
CP = California Protected
SC = California Species of Special Concern
PE = Federally-Proposed Endangered
PT = Federally-Proposed Threatened
FC = Federal Candidate
BL = BLM Sensitive
FS = USFS Sensitive
CD = CDF Sensitive
HA = Harvest

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

ID	Species Name	Status	Native/Introduced
A020	SPECKLED BLACK SALAMANDER		NATIVE
B051	GREAT BLUE HERON	CD	NATIVE
B057	CATTLE EGRET		NATIVE
B111	WHITE-TAILED KITE	CF BL	NATIVE
B114	NORTHERN HARRIER	SC	NATIVE
B115	SHARP-SHINNED HAWK		NATIVE
B116	COOPER'S HAWK		NATIVE
B117	NORTHERN GOSHAWK	SC BL FS CD	NATIVE
B119	RED-SHOULDERED HAWK		NATIVE
B123	RED-TAILED HAWK		NATIVE
B124	FERRUGINOUS HAWK		NATIVE
B125	ROUGH-LEGGED HAWK		NATIVE
B251	BAND-TAILED PIGEON	HA	NATIVE
B260	GREATER ROADRUNNER		NATIVE
B263	FLAMMULATED OWL		NATIVE
B264	WESTERN SCREECH OWL		NATIVE
B265	GREAT HORNED OWL		NATIVE
B267	NORTHERN PYGMY OWL		NATIVE
B269	BURROWING OWL	SC BL	NATIVE
B272	LONG-EARED OWL	SC	NATIVE
B273	SHORT-EARED OWL	SC	NATIVE
B274	NORTHERN SAW-WHET OWL		NATIVE
B277	COMMON POORWILL		NATIVE
B281	VAUX'S SWIFT	SC	NATIVE
B287	ANNA'S HUMMINGBIRD		NATIVE
B294	LEWIS' S WOODPECKER		NATIVE
B299	RED-BREASTED SAPSUCKER		NATIVE
B302	NUTTALL'S WOODPECKER		NATIVE
B303	DOWNY WOODPECKER		NATIVE
B304	HAIRY WOODPECKER		NATIVE
B305	WHITE-HEADED WOODPECKER		NATIVE
B307	NORTHERN FLICKER		NATIVE

B309	OLIVE-SIDED FLYCATCHER		SC	NATIVE
B317	HAMMOND'S FLYCATCHER			NATIVE
B318	DUSKY FLYCATCHER			NATIVE
B320	PACIFIC-SLOPE FLYCATCHER			NATIVE
B326	ASH-THROATED FLYCATCHER			NATIVE
B337	HORNED LARK			NATIVE
B338	PURPLE MARTIN		SC	NATIVE
B346	STELLER'S JAY			NATIVE
B348	WESTERN SCRUB-JAY			NATIVE
B350	CLARK'S NUTCRACKER			NATIVE
B356	MOUNTAIN CHICKADEE			NATIVE
B357	CHESTNUT-BACKED CHICKADEE			NATIVE
B358	OAK TITMOUSE			NATIVE
B360	BUSHTIT			NATIVE
B361	RED-BREASTED NUTHATCH			NATIVE
B362	WHITE-BREASTED NUTHATCH			NATIVE
B363	PYGMY NUTHATCH			NATIVE
B364	BROWN CREEPER			NATIVE
B368	BEWICK'S WREN		SC	NATIVE
B369	HOUSE WREN			NATIVE
B375	GOLDEN-CROWNED KINGLET			NATIVE
B376	RUBY-CROWNED KINGLET			NATIVE
B377	BLUE-GRAY GNATCATCHER			NATIVE
B381	MOUNTAIN BLUEBIRD			NATIVE
B385	SWAINSON'S THRUSH			NATIVE
B386	HERMIT THRUSH			NATIVE
B390	VARIED THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B398	CALIFORNIA THRASHER			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO		SC	NATIVE
B418	WARBLING VIREO			NATIVE
B425	ORANGE-CROWNED WARBLER			NATIVE
B430	YELLOW WARBLER		SC	NATIVE
B435	YELLOW-RUMPED WARBLER			NATIVE
B436	BLACK-THROATED GRAY WARBLER			NATIVE
B437	TOWNSEND'S WARBLER			NATIVE
B438	HERMIT WARBLER			NATIVE
B460	MACGILLIVRAY'S WARBLER			NATIVE
B475	BLACK-HEADED GROSBEAK			NATIVE
B477	LAZULI BUNTING			NATIVE
B482	GREEN-TAILED TOWHEE			NATIVE

B483	SPOTTED TOWHEE			SC			NATIVE
B493	BLACK-CHINNED SPARROW						NATIVE
B495	LARK SPARROW						NATIVE
B497	BELL'S SPARROW	FT		SC			NATIVE
B499	SAVANNAH SPARROW	CE		SC			NATIVE
B501	GRASSHOPPER SPARROW			SC			NATIVE
B504	FOX SPARROW						NATIVE
B506	LINCOLN'S SPARROW						NATIVE
B509	GOLDEN-CROWNED SPARROW						NATIVE
B510	WHITE-CROWNED SPARROW						NATIVE
B512	DARK-EYED JUNCO						NATIVE
B521	WESTERN MEADOWLARK						NATIVE
B524	BREWER'S BLACKBIRD						NATIVE
B528	BROWN-HEADED COWBIRD						NATIVE
B532	BULLOCK'S ORIOLE						NATIVE
B537	CASSIN'S FINCH						NATIVE
B539	RED CROSSBILL						NATIVE
B542	PINE SISKIN						NATIVE
B543	LESSER GOLDFINCH						NATIVE
B544	LAWRENCE'S GOLDFINCH						NATIVE
B545	AMERICAN GOLDFINCH						NATIVE
B546	EVENING GROSBEAK						NATIVE
B554	PLUMBEOUS VIREO						NATIVE
B699	BARRED OWL						NATIVE
B773	AMERICAN REDSTART						NATIVE
B798	WHITE-THROATED SPARROW						NATIVE
B799	HARRIS'S SPARROW						NATIVE
B809	INDIGO BUNTING						NATIVE
M006	ORNATE SHREW	FE		SC			NATIVE
M012	TROWBRIDGE'S SHREW						NATIVE
M015	SHREW-MOLE						NATIVE
M018	BROAD-FOOTED MOLE			SC			NATIVE
M033	WESTERN RED BAT			SC	FS		NATIVE
M034	HOARY BAT						NATIVE
M037	TOWNSEND'S BIG-EARED BAT			SC	BL FS		NATIVE
M045	BRUSH RABBIT	FE	CE			HA	NATIVE
M047	AUDUBON'S COTTONTAIL					HA	NATIVE
M051	BLACK-TAILED JACKRABBIT			SC		HA	NATIVE
M055	YELLOW-PINE CHIPMUNK						NATIVE
M057	SHADOW CHIPMUNK						NATIVE
M059	SONOMA CHIPMUNK						NATIVE
M075	GOLDEN-MANTLED GROUND SQUIRREL						NATIVE
M079	DOUGLAS' SQUIRREL					HA	NATIVE
M080	NORTHERN FLYING SQUIRREL			SC	FS		NATIVE
M081	BOTTA'S POCKET GOPHER						NATIVE

M084	MAZAMA POCKET GOPHER						NATIVE
M087	SAN JOAQUIN POCKET MOUSE			SC	BL		NATIVE
M105	CALIFORNIA KANGAROO RAT			SC			NATIVE
M113	WESTERN HARVEST MOUSE						NATIVE
M117	DEER MOUSE			SC			NATIVE
M119	BRUSH MOUSE						NATIVE
M120	PINYON MOUSE						NATIVE
M129	CALIFORNIA RED-BACKED VOLE						NATIVE
M134	CALIFORNIA VOLE	FE	CE	SC	BL		NATIVE
M151	BLACK BEAR					HA	NATIVE
M160	AMERICAN BADGER			SC		HA	NATIVE
M177	ELK					HA	NATIVE
M181	MULE DEER					HA	NATIVE
R022	WESTERN FENCE LIZARD						NATIVE
R023	COMMON SAGEBRUSH LIZARD				BL		NATIVE
R039	TIGER WHIPTAIL						NATIVE
R040	SOUTHERN ALLIGATOR LIZARD						NATIVE
R042	NORTHERN ALLIGATOR LIZARD						NATIVE
R057	GOPHERSNAKE			SC			NATIVE
R058	EASTERN KINGSNAKE						NATIVE
R060	LONG-NOSED SNAKE						NATIVE
R071	DESERT NIGHTSNAKE						NATIVE

Total Number of Species: 144

Query Parameters

Included Locations
Lake Co
Included Location Seasons
Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)
Annual Grassland, Blue Oak Woodland, Chamise-redshank Chaparral, Douglas-fir, Evergreen Orchard, Lacustrine, Montane Hardwood, Montane Hardwood-conifer, Ponderosa Pine, Urban, Vineyard

Habitat Suitability Threshold
Reproduction - Low, Cover - Low, Feeding - Low

Included Habitat Seasons
Migrant, Summer, Winter, Yearlong

Excluded Elements
Bank, Barren, Bogs, Brush Pile, Buildings, Carrion, Cave, Cliff, Fences, Kelp, Lakes, Lithic, Log - Large (hollow), Log - Large (rotten), Log - Large (sound), Mud Flats, Rivers, Rock, Sand Dune, Shrub/water, Slash - Large (hollow), Slash - Large (rotten), Slash - Large (sound), Soil - Saline, Soil - Sandy, Springs, Springs - Hot, Springs - Mineral, Steep Slope, Streams - Intermittent, Streams - Permanent, Talus, Tidepools, Transmission Lines, Vernal Pools, Water, Water - Created Body, Water - Fast, Water - Slow

Included Species All Species Included
Included Special Statuses Native

APPENDIX C

DELINEATION REPORT

DELINEATION OF WATERS OF THE U.S.

1.0 Methodology

1.1 Purpose of Delineation: This delineation has been conducted at the request of the local permitting agency in order to determine the extent of possible waters of the U.S. on the project.

1.2 Delineation Procedure: This delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, 2008*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement* 1973, and Mason's *Flora of the Marshes of California,*1957, were used as supplemental texts; however, all nomenclature and wetland indicator status have been checked with the U.S. Army Corps of Engineers. 2016. *National Wetland Plant Lists: Arid West* and *California*.

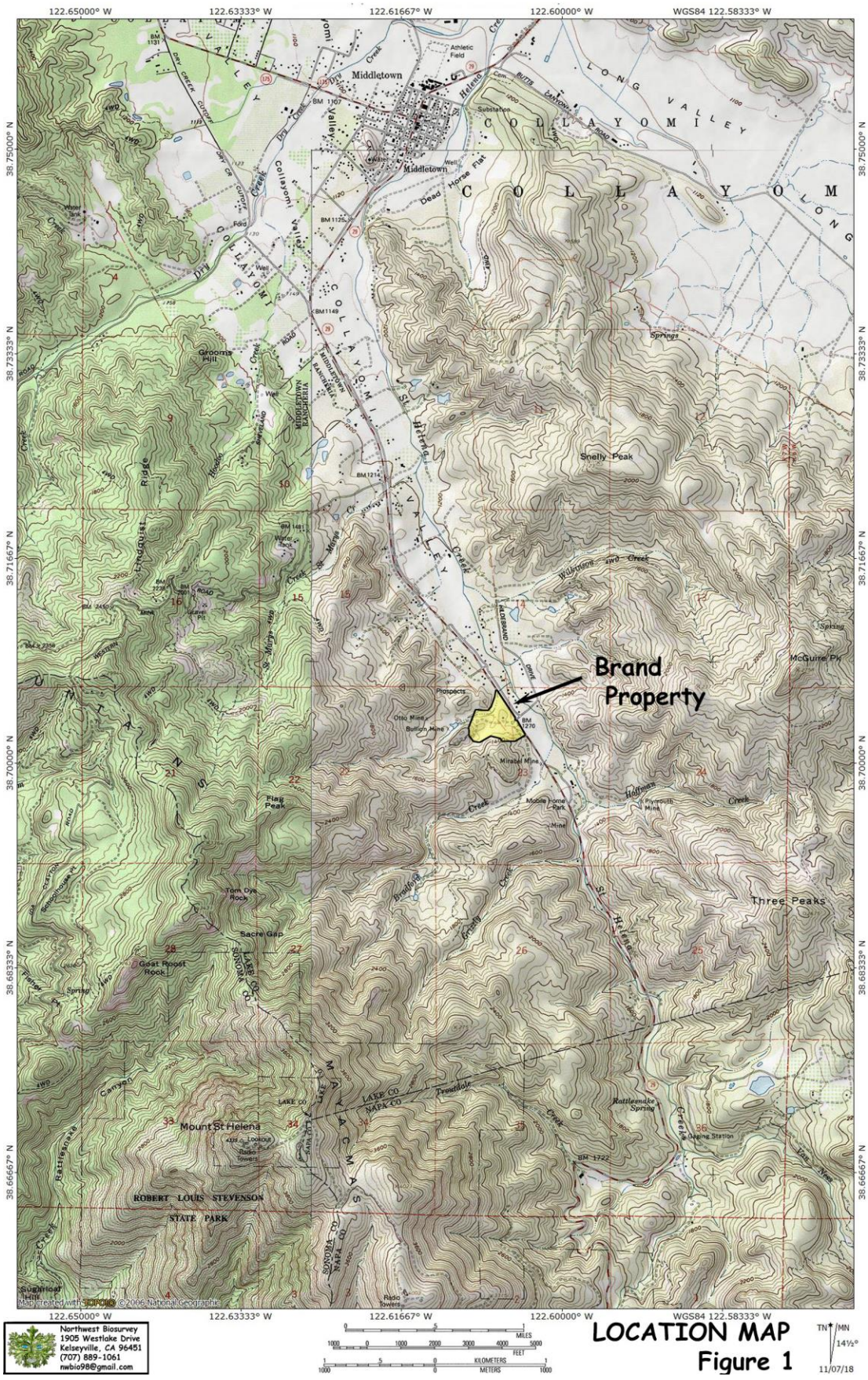
The survey included use of Google satellite images, 7.5' USGS quadrangle maps, and LIDAR mapped overlays along with an extensive foot survey.

1.3 Delineation Dates: Delineation fieldwork was completed on May 28, 2018.

1.4 Delineation Staff: The delineation was conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has more than 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

2.0 Existing Conditions

2.1 Location: The project site is located at 23087 Highway 29, Middletown, California (APN 013-028-81; Sec. 23, T10N R06W, Detert Reservoir, Calif. 7½' Topographic Map). A location map is provided in **Figure 1**.



Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

MILES 0 1 2 3 4 5
FEET 1000 0 1000 2000 3000 4000 5000
KILOMETERS 1 0 1
METERS 1000 0 1000

LOCATION MAP
Figure 1

TN MN 14½° 11/07/18

2.1 Site Topography and Drainage: The Brand property occupies an eastern spur of Flag Peak in the Mayacamas Mountains. Along its northern, western, and southern edges, the property rises onto adjacent slopes while the center of the parcel opens into the southern end of the Collayomi Valley along St. Helena Creek. Along its western and southern boundaries, the property rises to an elevation of 1,400 feet msl (mean sea level) while the open eastern boundary drops to the elevation of the Valley at 1,280 feet msl.

The parcel drains north to an unnamed tributary of St. Helena Creek which in turn drains east across the narrow valley to St. Helena Creek. The area topography is shown in **Figure 1**.

2.3 Soils: Based on the *Soil Survey of Lake County, California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

- **Bressa-Millsholm loams, 15-30% slopes (soil unit 120):**

  This unit is on hills and consists of 45% Bressa loam and 35% Millsholm loam. Vegetation is mainly annual grasses and oaks. The Bressa soil is moderately deep and well-drained, and formed in material weathered from sandstone. The upper 12 inches is typically light brown or grey loam, above 14 inches of clay loam. Fractured sandstone occurs at a depth of 26 inches. Permeability is moderately slow, runoff is rapid, and erosion hazard is severe. The Millsholm soil is shallow and well-drained and formed from sandstone or shale. The surface area is brown loam 3 inches thick over pale brown clay loam 8 inches thick. Fractured sandstone is at 11 inches. Permeability is moderate, runoff is rapid and hazard of erosion is severe. This soil type occurs in the center of the parcel.

- **Jafa loam, 5-15% slopes (soil unit 145):**

  This very deep, well-drained soil is on terraces and fans. It formed in alluvium derived from mixed rock sources. The upper part of the surface layer is typically pale brown loam for 8 inches over 8 inches of light brown loam. The upper 16 inches of the subsoil is brown clay loam over 8 inches of reddish yellow clay loam. Permeability is moderately slow. Surface runoff is medium and the hazard of erosion is moderate. Vegetation on this unit includes tree species such as ponderosa pine, Douglas fir, and California black oak. The understory typically consists of brush, grass, and forbs, including manzanita, buckbrush, soft chess, blue wildrye, and poison oak. The east portion of the parcel near Highway 29 contains this soil type.

- **Speaker-Maymen-Millsholm association, 30-50% slopes (soil unit 227):**

  This map unit is on hills and mountains. This soil unit is about 40% Speaker loam, 25% Maymen gravelly loam, and 15% Millsholm loam. The Speaker soil is on north- and

east-facing slopes, and the Maymen and Millsholm soils are on south- and west-facing slopes and on ridges. The Speaker soil is moderately deep and well drained. It formed in material weathered from sandstone or shale. Permeability is moderately slow. Runoff is rapid and the hazard of erosion is severe. The Maymen soil is shallow and somewhat excessively drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid and the hazard from erosion is severe. The Millsholm soil is shallow and well drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid, and the hazard of erosion is severe. Vegetation is mostly conifers and hardwoods on the Speaker soil, including Douglas fir, ponderosa pine, and black oak. Brush and hardwoods occur on the Maymen soil, and oaks and annual grasses on the Millsholm soil. This soil type is found in the steeper areas in the west and southern parts of the property.

3.0 Aquatic Resources Results

3.1 Waters of the U.S: Waters of the U.S. within the property consist of ephemeral and intermittent stream channels and ponds. No wetlands were delineated. The total area of all delineated waters is **0.6875 acre**. The delineation results are shown below in **Table 1**.

TABLE 1. POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

Name	Cowardin Code	HGM Code	Waters Type	Latitude	Longitude	Length (ft)	Width (ft)	Area (acres)
Stream Segments								
ES1	R6	-	NRPW	38.704213°	-122.607630°	1157	4.2	0.1116
ES2	R6	-	NRPW	38.703900°	-122.608080°	125	3.0	0.0086
ES3	R6	-	NRPW	38.703657°	-122.608241°	113	1.0	0.0026
ES4	R6	-	NRPW	38.703653°	-122.608045°	66	2.5	0.0038
ES5	R6	-	NRPW	38.702107°	-122.608204°	122	3.0	0.0084
ES6	R6	-	NRPW	38.703423°	-122.606845°	640	4.0	0.0588
ES7	R6	-	NRPW	38.704785°	-122.606406°	406	3.0	0.0280
Total Stream Segments:								**0.2217**
Ponds								
P1	L1	-	IMPNDMNT	38.702605°	-122.607807°	-	-	0.3359
P2	L1	-	IMPNDMNT	38.704295°	-122.606819°	-	-	0.1299
Total Ponds:								**0.4658**
Total Possible Waters of U.S. Within Survey Area								**0.6875**

Project Name: Brand

Contact: Jon M Webb, PLS 6709
Albion Surveys, Inc.
1113 Hunt Avenue
Saint Helena, CA 94574
jwebb@albionsurveys.com

Delineator: Steve Zalusky
Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 95451
(707) 889-1061

Date of Map: November 8, 2018

POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

Name	Cowardin Code	HGM Code	Waters Type	Latitude	Longitude	Length (ft)	Width (ft)	Area (acres)
Stream Segments								
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							Total Ponds:	0.4658
Total Possible Waters of U.S. Within Survey Area								0.6875

Legend

- Map Reference Point
- Proposed Parcel Boundaries
- Survey Boundary
- Upland Sample Point
- Wetland Sample Point

Wetlands (0.0000 Acres)

- Vernal Pools (0.0000 Acres)
- Wetlands (0.0000 Acres)

Other Waters (0.6875 Acres)

- Ephemeral Drainages (0.2217 Acres)
- Intermittent Streams (0.0000 Acres)
- Perennial Streams (0.0000 Acres)
- Ponds (0.4658 Acres)

Map Source: Google Earth
Date: 2/14/2018
100'

38.704303°
-122.609044°

proposed parcel boundaries

ES1
ES2
ES3
ES4
ES5
ES6
ES7
P1
P2

State Highway 29

38.702285°
-122.604075°

Property Boundary

N
1" = 100'

Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

Figure 3

MITIGATION MONITORING AND REPORTING PROGRAM

Brand Family Initial Study, IS 17-31
General Plan Amendment (GPAP 17-01)
Rezone (RZ 17-01)
Parcel Map (PM 17-01)

	Mitigation Measure	Implementation Responsibility	Monitoring & Reporting Responsibility	Timing	Date Implemented
Air Quality					
The project has the potential to create fugitive dust during construction and expose sensitive receptors to pollutant concentrations.	AQ-1: Work practices shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles.	Applicant; project contractor	Applicant	Life of project	
	AQ-2: Vehicles and equipment shall be well maintained and in compliance with State emission requirements. The permit holder shall obtain all necessary for any diesel generators or diesel engines installed as operating, support, or emergency backup equipment for the Lake County Air Quality Management District.	Applicant; project contractor	Applicant; Lake County Air Quality Management District.	Life of project	
	AQ-3: Vegetation that is removed for any development must be properly disposed. The permit holder shall chip vegetation and spread the material for erosion control.	Applicant; project contractor	Applicant	Life of project	

	AQ-4: All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	Applicant; project contractor	Applicant	Life of the project	
	AQ-5: According to County Records, parcel number 013-028-82 may have known Serpentine soils. Therefore, prior to any ground disturbance and/or future development the applicant shall contact the Lake County Air Quality Management District as a Dust Mitigation Plan may be required.	Applicant; project contractor	Applicant; Lake County Air Quality Management District	Prior to ground disturbance	
	AQ-6: Work practices and/or future development shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles.	Applicant; project contractor	Applicant	During construction; Life of project	
	AQ-7: All vegetative waste from development activities shall be composted and/or chipped as a means of disposal. All vegetation removed shall be chipped and spread for ground cover and erosion control. Site development and vegetation disposal shall not create a nuisance odors, smoke or dust.	Applicant; project contractor	Applicant	Life of project	

	AQ-8: Burning of vegetative material is discourage, but if not alternative material is available, a Smoke Management Plan shall be submitted to the Lake County Air Quality Management District and the local fire protection District for review and approval.	Applicant; project contractor	Applicant; Lake County Air Quality Management District	Life of project	
Biological Resources					
Construction activities associated with the proposed Project have the potential to indirectly significantly impact habitat for sensitive species	BIO 1: All residential development and its access shall be emphasized within the central, valley portions of the project parcels and be accessed by existing ranch roads.	Applicant; project contractor	Applicant	Life of project	
	BIO-2: Development within the Douglas Fir Forest in the southern portions of the property shall be restricted to the margins of this habitat and/or to adjacent mixed oak woodlands along the eastern edge of the property within the 2.1 ace area on parcel four delineated as "Development Area, 2.1 Acres on final map.	Applicant; project contractor	Applicant; Community Development Department	Life of project	
	BIO-3: The use of fencing shall be restricted to residential yards and existing vineyard development.	Applicant; project contractor	Applicant	During construction	
	BIO-4: In order to avoid potential impacts to the Yellow Legged Frog, any development within the active channel of the creek extending along the northern property boundary, shall occur prior to April 1 or after June 15, by which time frog larvae and young are mobile and independent. Disturbance of the channel structure shall be limited to the immediate construction site. Alternatively, work may occur when the channel is naturally dry.	Applicant; project contractor	Applicant	Life of project	

	• In the event that work must occur within the active channel when water is present between April 1 and June 15, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event. • Any foothill yellow-legged adult or larval frogs within the work area shall be captured and transferred to an adjacent, unaffected stream segment. • In the event that eggs of this species are found during these surveys, in-channel activities shall be delayed for one week (eggs usually hatch within 5 days) and the site re-inspected to determine if eggs have hatched. If not, an additional delay shall be required until the eggs have hatched.				
	<u>BIO-5:</u> In order to avoid potential impacts to the Western Pond Turtle, all work within the channel of the creek extending along the northern edge of the property, or within ponds should occur after August 15 but before the onset of winter rains and the end of the grading season (October 15). Downed trees, stumps and other basking sites and refuges within these aquatic habitats shall remain undisturbed. • In the event that work must occur within the active channel between April 1 and	Applicant; project contractor	Applicant; Qualified Biologist	During construction	

	June 15, or within a pond, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event. • In the event that western pond turtles are identified, a qualified biologist with a valid California Department of Fish and Wildlife collecting permit should be present during all construction activities at the crossing site.				
	BIO-6: To avoid any potential impacts to the White-tailed kites and/or Purple Martins any vineyard development, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31). • If construction during the nesting season cannot be avoided, any required vegetation removal shall be the minimal amount necessary for development and shall be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a Construction buffer shall be established in consultation with California Department of Fish and Wildlife staff.	Applicant; Project contractor	Applicant; California Department of Fish and Wildlife	During construction	

	Said buffer shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.				
	BIO-7: To avoid potential impacts to the Pallid Bat, any tress to be removed (outside of the dates listed below), that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen (14) days prior to tree removal. Suitable trees include those with hollows and/or shedding bark. • If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.	Applicant; Project contractor	Applicant; Qualified Biologist	During construction	
	BIO-8: Placement of any fill and/or any project improvements/ development that results in the discharge of dredged and/or fill material into potential jurisdictional areas on the project sites shall require authorization from the following agencies, which included but is not limited to the following: • U.S Army Corps of Engineers Nationwide Permit. • Regional Water Quality Control Board pursuant to Sections 404 and 401 of the Clean Water Act	Applicant; Project contractor	Applicant; U.S. Army Corps of Engineers; Regional Water Quality Control Board; California Dept. of Fish and Wildlife	During construction; Life of project	

	• California Department of Fish and Wildlife – 1601/1604 Stream Alteration Agreement.				
	BIO-9: Any development shall maintain a minimum of a thirty (30) foot or greater setback from top of bank for all waterways located on project parcels.	Applicant; Project contractor	Applicant; Qualified Biologist	Life of project	
	BIO-10: Prior to any work occurring in and/or near any waterway, the applicant shall submit Erosion and Sediment Control Plans and a Storm Water Management Plan to the Community Development Department for review and approval. Said Plans shall protect the local watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. [Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required]	Applicant; Project contractor	Applicant; Community Development Department; Regional Water Quality Control Board	Prior to work near any waterway	
	BIO-11: All manzanita Shrub Areas shown on the final parcel map may contain Jepson Navarretia and a survey of the area in question shall be performed by a qualified Botanist prior to development.	Applicant; Project contractor	Applicant; Qualified Botanist	Prior to development	

Cultural Resources and Tribal Cultural Resources					
Construction of the Project has the potential for accidental discovery of unknown, undiscovered cultural resources and tribal cultural resources.	CUL-1: Should any archaeological, paleontological, or cultural materials be discovered during site development, all activity shall be halted in the vicinity of the find(s), the applicant shall notify the local overseeing Tribe, and a qualified archaeologist to evaluate the find(s) and recommend mitigation procedures, if necessary, subject to the approval of the Community Development Director. Should any human remains be encountered, the applicant shall notify the Sheriff's Department, the local overseeing Tribe, and a qualified archaeologist for proper internment and Tribal rituals per Public Resources Code Section 5097.98 and Health and Safety Code 7050.5.	Project contractor; Qualified archaeologist	Applicant; Community Development Department	During site preparation and throughout construction activities	
	CUL-2: All employees shall be trained in recognizing potentially significant artifacts that may be discovered during ground disturbance. If any artifacts or remains are found, the local overseeing Tribe shall immediately be notified; a licensed archaeologist shall be notified, and the Lake County Community Development Director shall be notified of such finds.	Project contractor; Qualified archaeologist	Applicant; Community Development Department	Prior to site preparation and throughout construction activities	
Geology/Soils					
The project has the potential to result in substantial soil erosion	Implement Mitigation Measure AQ-5	See AQ-5	See AQ-5	See AQ-5	
	GEO-1: Prior to any ground disturbance, the permitted shall submit Erosion Control and Sediment Plans to the Community Development Department for review and approval. Said Erosion Control and Sediment Plans shall protect the local	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	

watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. All BMP's shall be maintained for life of the project.				
GEO-2: Prior to any ground disturbance, (if applicable), the permit holder shall submit and obtain a Grading Permit from the Community Development. The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage Regulations to the maximum extent practicable. The project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the County storm drainage system. BMPs typically include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance with Chapters 29 and 30 of the Lake County Code.	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	
GEO-3: Excavation, filling, vegetation clearing or other disturbance of the soil shall not occur between October 15 and April 15 unless authorized by the Community Development Director. The actual dates of this defined grading period may be adjusted according to weather and	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	

	soil conditions at the discretion of the Community Development Director.				
	GEO-4: The permit holder shall monitor the site during the rainy season (October 15 - May 15), including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed.	Applicant; Project contractor	Applicant; Project contractor	Life of project	
Hazards					
The project may result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	HAZ-1: All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material.	Applicant; Project contractor	Applicant; Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board	Life of project	
	HAZ-2: The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak onto the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials.	Applicant; Project contractor	Applicant; Project contractor	Life of project	
	HAZ-3: Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.	Applicant; Project contractor	Applicant; Project contractor	Life of project	

	HAZ- 4: The storage of hazardous materials equal to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.	Applicant; Project contractor	Applicant; Lake County Environmental Health Division; Regional Water Quality Control Board.	Life of project	
	HAZ-5: The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage regulations to prevent or reduce discharge of all construction or post-construction pollutants and hazardous materials offsite or into the creek. The site shall be monitored during the rainy season (October 15-April 15) and erosion controls maintained.	Applicant; Project contractor	Applicant; Regional Water Quality Control Board	Life of project	
Hydrology/Water Quality					
The project has the potential to violate water quality standards, degrade water quality and alter drainage patterns	Implement Mitigation Measures BIO-9, BIO-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	

RECEIVED

SEP 26 2017

LAKE COUNTY COMMUNITY
DEVELOPMENT DEPT.

STATEMENT OF ZONING DISTRICT CHANGE

This Rezone application seeks to Rezone two parcels which are currently split zone, both parcels being split by Rural Land (RL) and Rural Residential (RR) Zoning Districts. Currently APN 013-028-81 contains 10.85 acres of RR zoning and 18.50 acres of RL zoning. APN 013-028-82 contains 3.81 acres of RR zoning and 41.45 acres of RL zoning.

The applicant wishes to Rezone APN 013-028-81, 29.35 acres, to be completely within the RR zoning district and Rezone APN 013-028-82, 45.26 acres, to be completely within the RL zoning district.

APN 013-028-81 is compatible with existing land uses and the Development Standards allowed under the RR zoning. Rezoning this property to RR would not be "spot" zoning because many of the adjoining properties are either Zoned RR or have been developed in a consistency with the RR zoning. The property is gently sloping rural parcel containing two residences and a family vineyard. The property can be further divided into 3 or 4 parcels while adhering to the RR standards, thus promoting rural residential development consistent with General Plan Policy LU-3.2.

The property abuts Highway 29 and because of the existing development on the property, the fuel loading on the property is minimal. The adjoining properties to the north and east are zoned RR with similar development. The adjoining properties to the south are zoned RL but have been developed in a way consistent with the RR zoning. This property is one of the only parcels south of Middletown with split zoning, abuts Highway 29 and contains the physical attributes of properties in the RR zoning district.

APN 013-028-82 is compatible with existing land uses and the Development Standards allowed under the RL zoning. Rezoning this property to RL would not be "spot" zoning because the property development is consistent with the adjoining properties also zoned RL. The property is mountainous, heavily wooded and brushy and consistent with the RL zoning district development standards and the General Plan.

CURRENT OWNER

RICHARD AND GAIL BRAND
ASSESSOR'S PARCEL NO. 013-028-81-10
SITE ADDRESS:
23987 HIGHWAY 29
MIDDLETOWN, CA 95461

LAND SURVEYOR

ALBION SURVEYS
1113 HUNT AVENUE
ST. HELENA, CA 94574
(707) 963-1217
ATTN: JON WEBB, PLS 6709

PARCEL AREAS

PARCEL ONE: 8.90 AC± (8.06 AC± NET)
PARCEL TWO: 5.00 AC± (4.75 AC± NET)
PARCEL THREE: 9.52 AC± (8.61 AC± NET)
PARCEL FOUR: 5.93 AC± (5.22 AC± NET)
==========
TOTAL ACREAGE: 29.35 AC±

LAND USE

PARCEL ONE:
EXISTING – RESIDENTIAL
PROPOSED – RESIDENTIAL

PARCEL TWO:
EXISTING – RESIDENTIAL
PROPOSED – RESIDENTIAL

PARCEL THREE:
EXISTING – AGRICULTURAL
PROPOSED – AGRICULTURAL

PARCEL FOUR:
EXISTING – VACANT
PROPOSED – VACANT

UTILITIES & ACCESS

PARCEL ONE:
WATER – EXISTING WELL ON APN 013-028-082-00
SANITARY SEWAGE – EXISTING SEPTIC
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL TWO:
WATER – EXISTING WELL ON APN 013-028-082-00
SANITARY SEWAGE – EXISTING SEPTIC
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL THREE:
WATER – NONE
SANITARY SEWAGE – NONE
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

PARCEL FOUR:
WATER – NONE
SANITARY SEWAGE – NONE
ACCESS – PRIVATE ROAD TO STATE HIGHWAY 29

AVERAGE CROSS SLOPES

PARCEL ONE: 15%
PARCEL TWO: 17%
PARCEL THREE: 21%
PARCEL FOUR: 29%

GENERAL PLAN DESIGNATION

RURAL RESIDENTIAL/RURAL LAND

ZONING

RR: RURAL RESIDENTIAL

LEGEND:

SEPTIC TANK
WELL
SEPTIC FIELD
40' CONTOUR PER USGS QUAD MAP ELEVATIONS BASED ON NGVD29
30' PROPERTY LINE SETBACK
APPROXIMATE BOUNDARY LINE
APPROXIMATE EASEMENT LINE
BUILDING LINE
EDGE OF VINEYARD BLOCK
APPROXIMATE SLOPE PERCENTAGE

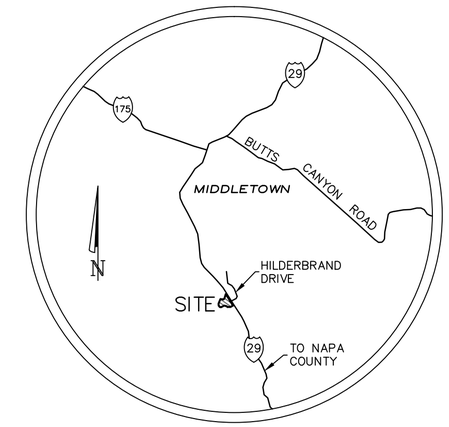
NOTE:
THIS IS NOT A BOUNDARY SURVEY. BOUNDARY SHOWN HEREON IS APPROXIMATE AND SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION OR CRITICAL DESIGN. BEARINGS AND DISTANCES SHOWN CALCULATED USING 12 PM 18, LAKE COUNTY RECORDS.

PREPARED BY ALBION SURVEYS AT THE REQUEST OF RICHARD BRAND

JON M. WEBB, PLS 6709 DATE

LICENSED LAND SURVEYOR
JON M. WEBB
No. 6709
Exp. 06/30/2018
STATE OF CALIFORNIA

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 INCH = 100 FT.



LOCATION MAP
NOT TO SCALE

STORM WATER NOTE

STORM WATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP). STRUCTURAL SOURCES AND TREATMENT CONTROLS WILL BE DESIGNED "BY OTHERS" AS SET FORTH IN THE CURRENT IMPROVEMENT STANDARDS AND APPROVAL BY THE LOCAL AGENCY AT THE TIME OF SITE DEVELOPMENT. NO MAJOR GRADING IS PLANNED FOR THIS PROJECT.

TENTATIVE PARCEL MAP

OF THE LANDS OF

BRAND

BEING A PORTION OF SEC. 23, T.10N., R.7W., M.D.B.&M.
AND A PORTION OF THE CALLAYOMI RANCHO

COUNTY OF LAKE, STATE OF CALIFORNIA

BY
ALBION SURVEYS
ST. HELENA, CALIFORNIA

ALBION

LAKE COUNTY A.P.N. 013-028-81
JANUARY 16, 2017

SHEET 1 OF 1
C3D PROJ. 3476
3476-TPM.dwg

ZONING MAP

OF THE LANDS OF

BRAND

COUNTY OF LAKE, STATE OF CALIFORNIA

BY
ALBION SURVEYS, INC.
ST. HELENA, CALIFORNIA

JUNE 19, 2014

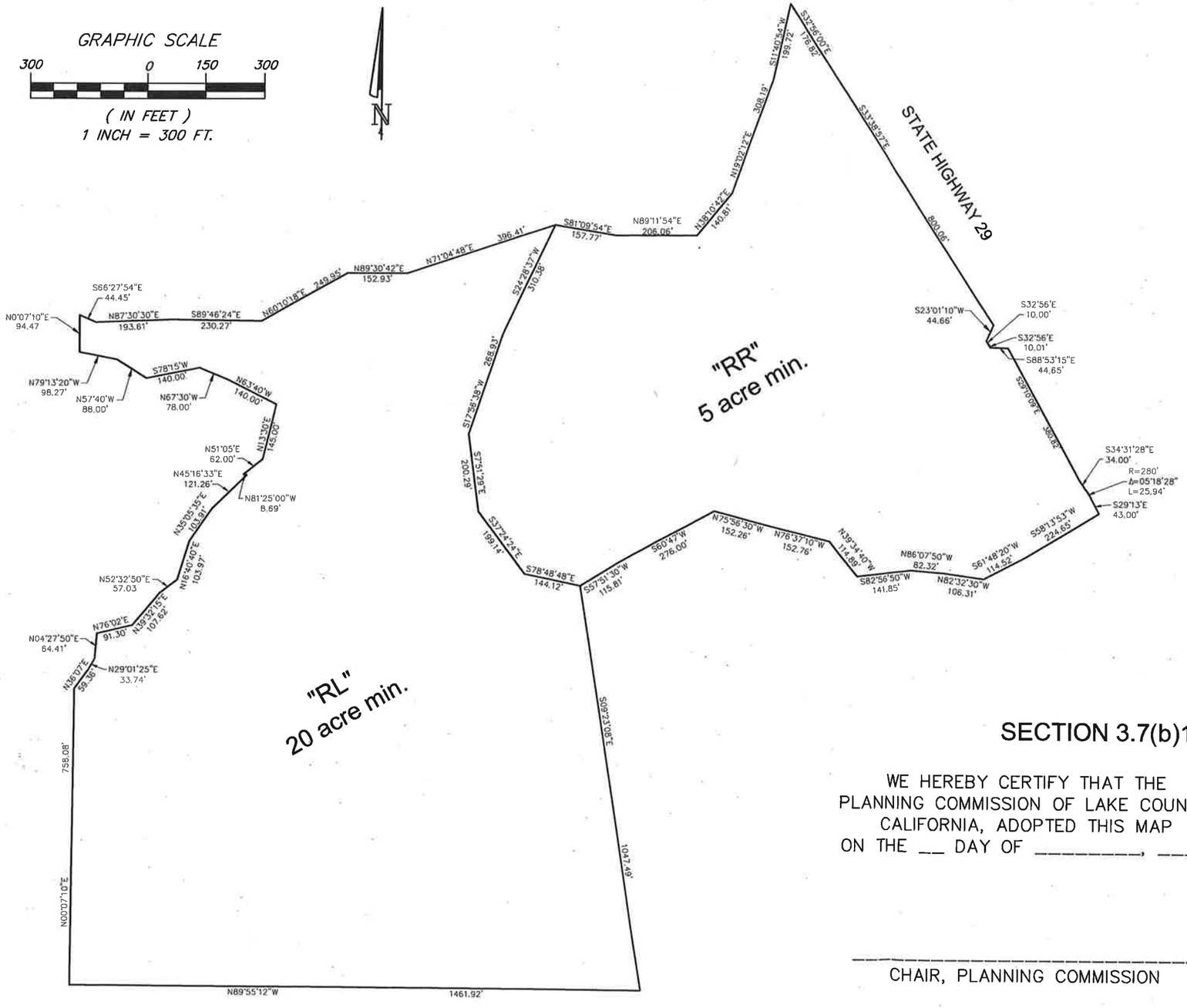


EXHIBIT "A"
SECTION 3.7(b)1. , OF ORDINANCE 6012

WE HEREBY CERTIFY THAT THE PLANNING COMMISSION OF LAKE COUNTY, CALIFORNIA, ADOPTED THIS MAP ON THE __ DAY OF _____, _____

_____
CHAIR, PLANNING COMMISSION

WE HEREBY CERTIFY THAT THIS MAP CONSTITUTES SECTION 3.7(b)1. , OF ORDINANCE 1602 OF LAKE COUNTY, CALIFORNIA AND THAT SECTION WAS ADOPTED BY ORDINANCE _____, PASSED ON THE __ DAY OF _____, _____

_____
CHAIR, BOARD OF SUPERVISORS

BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEY AND DELINEATION OF WATERS OF THE U.S.

for the

BRAND PROPERTY

APN 013-028-81

Lake County, California

November 8, 2018

Prepared by

Northwest Biosurvey

ATTACHMENT 2

BIOLOGICAL RESOURCE ASSESSMENT
WITH BOTANICAL SURVEY AND
DELINEATION OF WATERS OF THE U.S.
for the
BRAND PROPERTY
APN 013-028-81
Lake County, California

November 8, 2018

Prepared for: Whitney Brand
whitneybrand@gmail.com

Jon M Webb, PLS 6709
Albion Surveys, Inc.
1113 Hunt Avenue
Saint Helena, CA 94574
jwebb@albionsurveys.com

Prepared by: Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 95451
nwbio98@gmail.com

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FIGURES AND TABLES

1.0 PROJECT DESCRIPTION

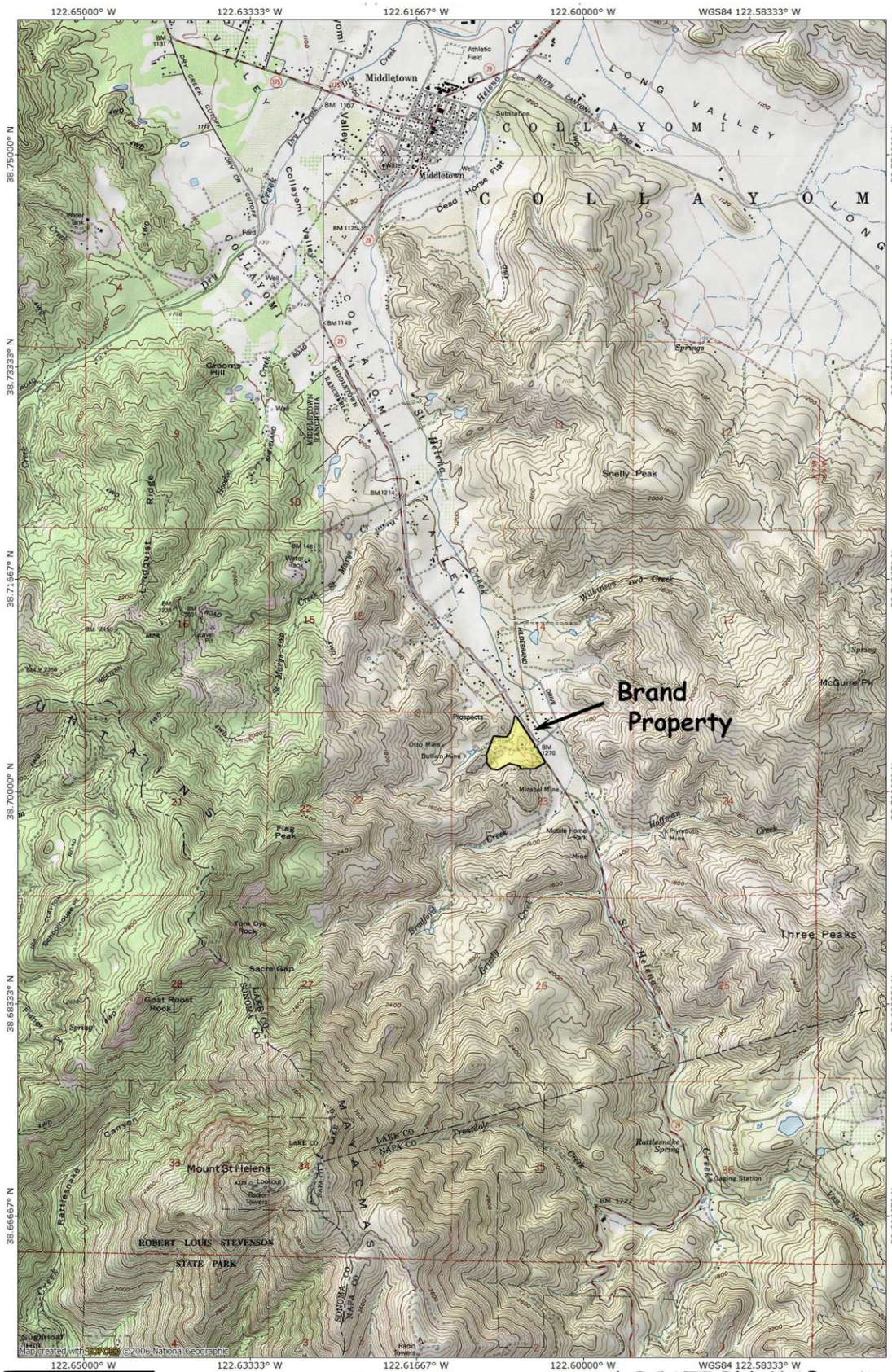
1.1 Proposed Project: This survey covers a parcel 29.35 acres in size, located on Highway 29 south of Middletown in Lake County. The property is currently developed with vineyards, residential structures, and agricultural structures. The property owner is proposing to subdivide the parcel. The local permitting agency is requesting completion of a botanical survey and assessment of biological resources on the property as part of the California Environmental Quality Act (CEQA) review required for this project.

The initial phase of this assessment evaluates the potential of the property to contain sensitive plant and wildlife habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa[1]. The biological resource assessment will determine whether the property contains sensitive plants or potentially contains sensitive wildlife requiring mitigation under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".

A delineation of waters of the U.S. was conducted due to the presence of drainages and wetlands within the project area. Due to the fact that wetland delineations are prepared with a standard format for U.S. Army Corps of Engineers review, the delineation is provided separately in Appendix C.

1.2 Location: The project site is located at 23087 Highway 29, Middletown, California (APN 013-028-81; Sec. 23, T10N R06W, Detert Reservoir, Calif. 7½' Topographic Map). A location map is provided in **Figure 1**.

[1] Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.



Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

LOCATION MAP
Figure 1

TN 14½° MN
11/07/18

2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of species present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database (CNDDB)*; RareFind 5, 2018
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (2018 edition)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHR)*, Version 9.0

The CNDDB and RareFind 5 databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The CNPS database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species.

The CWHR database operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

2.1 Botanical Survey Methods: An in-season botanical survey was conducted for the project site. The CNDDB report and maps for the Detert Reservoir quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens, 2009), and mapped on a 1"=100' aerial photo. Vegetation type names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual, Higher Plants of California,* 2012. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types at the site is provided in **Figure 2.**

2.2 Delineation Methods: The delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual,* January 1987 and the *Arid West 2008 Supplement*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement*, 1973, and Mason's *Flora of the Marshes of California,* 1957, were used as supplemental texts. The survey included use of lidar mapped overlays and an extensive foot survey.

2.3 Survey Dates: Site visits for the plant surveys, vegetation mapping, and the delineation were conducted on May 28 and June 15, 2018.

2.4 Biological Assessment Staff: The field surveys, plant taxonomy, vegetation mapping, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. He has over 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

Database review and report preparation were conducted by Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has 15 years of experience as a planner in local government and the private sector and 16 years in field biology. She has a Bachelor of Arts Degree and has completed all course work toward an M.A. Degree in Rural and Town Planning from Chico State University. Prior to joining Northwest Biosurvey in 2002, Ms. Zalusky was a senior planner for the Lake County Community Development Department.

3.0 SITE CHARACTERISTICS

3.1 Site Topography and Drainage: The Brand property occupies an eastern spur of Flag Peak in the Mayacamas Mountains. Along its northern, western, and southern edges, the property rises onto adjacent slopes while the center of the parcel opens into the southern end of the Collayomi Valley along St. Helena Creek. Along its western and southern boundaries, the property rises to an elevation of 1,400 feet msl (mean sea level) while the open eastern boundary drops to the elevation of the Valley at 1,280 feet msl.

The parcel drains north to an unnamed tributary of St. Helena Creek which in turn drains east across the narrow valley to St. Helena Creek. The area topography is shown in **Figure 1**.

3.2 Soils: Based on the *Soil Survey of Lake County, California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

- **Bressa-Millsholm loams, 15-30% slopes (soil unit 120):**

  This unit is on hills and consists of 45% Bressa loam and 35% Millsholm loam. Vegetation is mainly annual grasses and oaks. The Bressa soil is moderately deep and well-drained, and formed in material weathered from sandstone. The upper 12 inches is typically light brown or grey loam, above 14 inches of clay loam. Fractured sandstone occurs at a depth of 26 inches. Permeability is moderately slow, runoff is rapid, and erosion hazard is severe. The Millsholm soil is shallow and well-drained and formed from sandstone or shale. The surface area is brown loam 3 inches thick over pale brown clay loam 8 inches thick. Fractured sandstone is at 11 inches. Permeability is moderate, runoff is rapid and hazard of erosion is severe. This soil type occurs in the center of the parcel.

- **Jafa loam, 5-15% slopes (soil unit 145):**

  This very deep, well-drained soil is on terraces and fans. It formed in alluvium derived from mixed rock sources. The upper part of the surface layer is typically pale brown loam for 8 inches over 8 inches of light brown loam. The upper 16 inches of the subsoil is brown clay loam over 8 inches of reddish yellow clay loam. Permeability is moderately slow. Surface runoff is medium and the hazard of erosion is moderate. Vegetation on this unit includes tree species such as ponderosa pine, Douglas fir, and California black oak. The understory typically consists of brush, grass, and forbs, including manzanita, buckbrush, soft chess, blue wildrye, and poison oak. The east portion of the parcel near Highway 29 contains this soil type.

- **Speaker-Maymen-Millsholm association, 30-50% slopes (soil unit 227):**

  This map unit is on hills and mountains. This soil unit is about 40% Speaker loam, 25% Maymen gravelly loam, and 15% Millsholm loam. The Speaker soil is on north- and east-facing slopes, and the Maymen and Millsholm soils are on south- and west-facing slopes and on ridges. The Speaker soil is moderately deep and well drained. It formed in material weathered from sandstone or shale. Permeability is moderately slow. Runoff is rapid and the hazard of erosion is severe. The Maymen soil is shallow and somewhat excessively drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid and the hazard from erosion is severe. The Millsholm soil is shallow and well drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid, and the hazard of erosion is severe. Vegetation is mostly conifers and hardwoods on the Speaker soil, including Douglas fir, ponderosa pine, and black oak. Brush and hardwoods occur on the Maymen soil, and oaks and annual grasses on the Millsholm soil. This soil type is found in the steeper areas in the west and southern parts of the property.

3.3 Vegetation Types: This site contains eleven plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and other cover types are listed below in **Table 1**. They are described below the table and shown in the vegetation map provided in **Figure 2**.

TABLE 1. AREAS OF VEGETATION TYPES

VEGETATION TYPE	ACRES	PERCENT OF TOTAL
Douglas fir forest	4.12	14.04
Ponderosa pine forest	2.32	7.90
Knobcone pine forest	0.36	1.23
California black oak forest	0.98	3.34
Mixed oak woodland	5.09	17.34
Blue oak woodland	1.22	4.16
Red willow thicket	0.06	0.20
Manzanita shrub alliance	1.67	5.69
Narrow-leaf cattail marsh	0.04	0.14
Pale spike rush marsh	0.05	0.17
Wild oat grassland	4.16	14.17

VEGETATION TYPE	ACRES	PERCENT OF TOTAL
Vineyard	4.22	14.38
Olive orchard	0.08	0.27
Open water	0.32	1.09
Ruderal (disturbed areas)	4.66	15.88
Total	**29.35**	**100.0%**

- **Douglas fir forest:**

  This shaded forest occupies a north-facing slope along the southern edge of the property. The upper canopy is dominated by Douglas fir (*Pseudotsuga menziesii var. menziesii*) with scattered ponderosa pine (*Pinus ponderosa*). This conifer forest rises above a subcanopy of California black oak forest which occurs in slightly less-shaded areas and forms the upper tree canopy due to the lack of the taller conifers.

- **Ponderosa pine forest:**

  This community supports a nearly homogenous upper canopy of ponderosa pine with a canopy cover ranging from 60-80%. These trees are relatively small, ranging from 6-8 inches DBH (diameter at breast height); however, there are larger trees (18-20" DBH) scattered among them or occurring as isolated older stands. This is a relatively young forest seeded by trees that survived a past clearing event (fire, etc., within the past 50 years).

  The shrub layer is poison oak (*Toxicodendron diversilobum*), birch-leaf mountain mahogany (*Cercocarpus betuloides var. betuloides*), and common manzanita (*Arctostaphylos manzanita ssp. manzanita*). This shrub layer is the remnant of an earlier post-fire seral stage that will be shaded out as the forest matures. The ground cover is primarily duff with an thin to moderate cover of woodland forbs and grasses including California tule pea (*Lathyrus jepsonii var. californicus*), grand hound's tongue (*Cynoglossum grande*), fork-toothed ookow (*Dichelostemma congestum*), Diogenes lantern (*Calochortus amabilis*), bowl-tubed iris (*Iris macrosiphon*), and woodland brome (*Bromus laevipes*).

- **Knobcone pine forest:**

  Knobcone pine (*Pinus attenuata*) occurs as a small "island" between the mixed oak and California black oak woodlands along the eastern property boundary. It supports a dense canopy of knobcone pine with scattered young ponderosa

pine. The shrub layer and ground cover consist of the more xeric members of the mixed oak woodland community.

- **California black oak forest:**

  This dense forest community occupies two small areas along the eastern and southern edges of the property. It contains a nearly-identical species palate to the Douglas fir forest; the difference being a significant shift in dominance from Douglas fir to California black oak (*Quercus kelloggii*), which provides more than 50% of the upper canopy cover. The remainder of the tree canopy is Pacific madrone (*Arbutus menziesii*) and California bay (*Umbellularia californica*). Douglas fir and ponderosa pine remain present as scattered trees throughout the community.

  The density and species mix within the shrub layer varies depending on location. The more exposed northern community shares a number of more xeric (dry soil) shrubs with the adjacent mixed oak woodland, including toyon (*Heteromeles arbutifolia*) and birch-leaf mountain mahogany, while the more shaded community to the south includes more mesic (moist soil) shrubs such as deerbrush (*Ceanothus integerrimus*), common manzanita, and California tea (*Rupertia physodes*).

  The ground cover includes a mix of woodland forbs and grasses including: field hedge parsley (*Torilis arvensis*), woodland brome, ookow, bowl-tubed iris, hedgehog dogtail (*Cynosurus echinatus*), and Queen Anne's lace (*Daucus carota*).

- **Mixed oak woodland:**

  This is the most extensive woodland on the property and occupies the level terrain along the eastern edge of the property and the south-facing slope along the northern property boundary. It is essentially an ecotone (intergrade) between the black oak and more xeric blue oak woodlands. The community includes a codominant mix of California black oak, mature interior live oak (*Quercus wislizeni*), and blue oak (*Quercus douglasii*). The most shaded sites include scattered Douglas fir and ponderosa pine while the more xeric sites include a heavier concentration of blue oak.

  The shrub layer is relatively dense and includes birch-leaf mountain mahogany, toyon, poison oak, Scotch broom (*Cytisus scoparius*), and deerbrush. The ground cover includes a mix of xeric and mesic grasses and forbs depending on the amount of shading. These include slender wild oat (*Avena barbata*), rattail sixweeks grass (*Festuca myuros*), blue wild rye (*Elymus glaucus ssp. glaucus*),

woodland brome, winter vetch (*Vicia villosa ssp. villosa*), common woolly sunflower (*Eriophyllum lanatum var. arachnoideum*), bowl-tubed iris, hedgehog dogtail, climbing bedstraw (*Galium porrigens var. porrigens*), and English plantain (*Plantago lanceolata*).

- **Blue oak woodland:**

  This is an open woodland of the flat terrain in the middle of the property. It is dominated by blue oak but includes subdominant ghost pine (*Pinus sabiniana*). The shrub layer is thin but includes common manzanita, poison oak, and birch-leaf mountain mahogany. The ground cover is wild oat grassland which is described below.

- **Red willow thicket:**

  This dense, shrubby community occurs as a narrow band along the eastern bank of the small pond in the northern half of the property. It also occurs along segments of the nearby waterway. It is heavily dominated by red willow with scattered patches of Himalayan blackberry (*Rubus armeniacus*). It gives way to narrow-leaf cattail (*Typha angustifolia*), pale spikerush (*Eleocharis macrostachya*), and open water on its pondward side, and to wild oat grassland along its upland boundary. Along the stream course, the channel is primarily exposed cobbles and gravel with patches of torrent sedge (*Carex nudata*), seep monkeyflower (*Mimulus guttatus*), and cobwebby hedge nettle (*Stachys albens*) indicating perennial flows or, at least, long-duration saturated conditions.

- **Manzanita shrub alliance:**

  This dense, xeric shrub community consists of a mix of common and hoary manzanita (*Arctostaphylos canescens ssp. canescens*) with scattered California juniper (*Juniperus californica*), knobcone pine, and blue oak. The ground cover is primarily leaf litter due to the dense shrub canopy, but community edges and small openings support wild oat grassland and wavy-leaf soap plant (*Chlorogalum pomeridianum*).

- **Narrow-leaf cattail marsh:**

  This small marsh community occupies the shallow western extension of the reservoir in the southern half of the property. It consists of an homogenous cover of narrow-leaf cattail.

- **Pale spikerush marsh:**

  Pale spikerush occurs as a narrow, homogenous band around the shallow perimeters of the two reservoirs on the property. It is present as a mappable-sized community along the western half of the small northern reservoir.

- **Wild oat grassland:**

  This grassland is the dominant ground cover through all of the open upland habitats of the property. The species palate varies depending on location (soil moisture and aspect) but is generally dominated by slender wild oat, soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), annual agoseris (*Agoseris heterophylla var. heterophylla*), four-spot (*Clarkia purpurea ssp. quadrivulnera*), hedgehog dogtail, field hedge parsley, big quaking grass (*Briza maxima*), and Queen Anne's lace.

- **Vineyard:**

  Established vineyards occupy the flatter terrain in the center of the property.

- **Olive Orchard:**

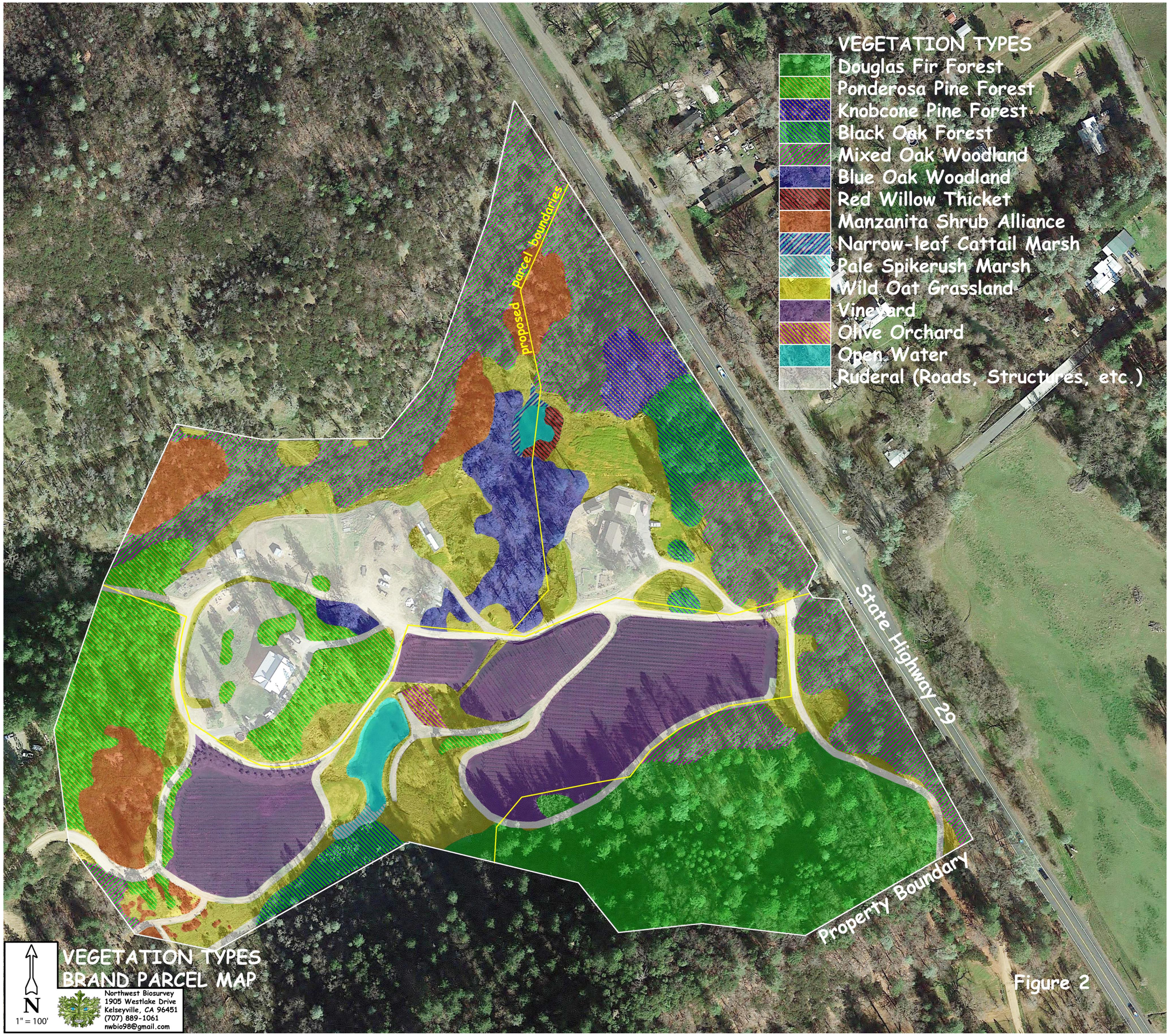
  A young olive orchard is located east of the southern reservoir.

- **Open water:**

  The deeper portions of both reservoirs support open water habitat throughout all or most of the year, depending on water use within the vineyards.

- **Ruderal:**

  This term refers to the roads, residential structures, and parking areas on the property.


VEGETATION TYPES
Douglas Fir Forest
Ponderosa Pine Forest
Knobcone Pine Forest
Black Oak Forest
Mixed Oak Woodland
Blue Oak Woodland
Red Willow Thicket
Manzanita Shrub Alliance
Narrow-leaf Cattail Marsh
Pale Spikerush Marsh
Wild Oat Grassland
Vineyard
Olive Orchard
Open Water
Ruderal (Roads, Structures, etc.)
proposed parcel boundaries
State Highway 29
Property Boundary
N
1" = 100'
VEGETATION TYPES
BRAND PARCEL MAP
Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com
Figure 2

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 <u>CNPS On-Line Electronic Inventory Analysis</u>: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of the county occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel (including serpentine soil and vernal pool species). The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

<u>Note</u>: *The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa. Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 <u>California Natural Diversity Database</u>: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Detert Reservoir 7½' quadrangle were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name

Brand Project

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	1B.2	None	None	Apr-Jul	Broadleafed upland forest (openings), Chaparral, Cismontane woodland
Antirrhinum virga	twig-like snapdragon	Plantaginaceae	perennial herb	4.3	None	None	Jun-Jul	Chaparral, Lower montane coniferous forest
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Asclepias solanoana	serpentine milkweed	Apocynaceae	perennial herb	4.2	None	None	May-Jul(Aug)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Astragalus clevelandii	Cleveland's milk-vetch	Fabaceae	perennial herb	4.3	None	None	Jun-Sep	Chaparral, Cismontane woodland, Riparian forest
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Fabaceae	annual herb	1B.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	1B.2	None	None	May-Jul	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland
Calyptridium quadripetalum	four-petaled pussypaws	Montiaceae	annual herb	4.3	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Ceanothus sonomensis	Sonoma ceanothus	Rhamnaceae	perennial evergreen shrub	1B.2	None	None	Feb-Apr	Chaparral (sandy, serpentinite or volcanic)
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland
Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	4.3	None	None	Jul-Aug	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Delphinium uliginosum	swamp larkspur	Ranunculaceae	perennial herb	4.2	None	None	May-Jun	Chaparral, Valley and foothill grassland
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	1B.2	None	None	May-Sep	Chaparral (serpentinite or volcanic)
Eriogonum umbellatum var. bahiiforme	bay buckwheat	Polygonaceae	perennial herb	4.2	None	None	Jul-Sep	Cismontane woodland, Lower montane coniferous forest
Erythronium helenae	St. Helena fawn lily	Liliaceae	perennial bulbiferous herb	4.2	None	None	Mar-May	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland
Harmonia hallii	Hall's harmonia	Asteraceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Harmonia nutans	nodding harmonia	Asteraceae	annual herb	4.3	None	None	Mar-May	Chaparral, Cismontane woodland
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (serpentinite)

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	1B.2	None	None	Mar-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	annual herb	4.2	None	None	Mar-May(Jun)	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	1B.2	None	None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
Navarretia myersii ssp. deminuta	small pincushion navarretia	Polemoniaceae	annual herb	1B.1	None	None	Apr-May	Vernal pools (clay loam)
Navarretia paradoxinota	Porter's navarretia	Polemoniaceae	annual herb	1B.3	None	None	May-Jun(Jul)	Meadows and seeps
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	perennial herb	1B.3	None	None	Apr-Aug	Chaparral (rocky)
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	perennial herb	1B.2	None	None	(Jun)Jul-Aug	Meadows and seeps, Riparian forest
Streptanthus batrachopus	Tamalpais jewelflower	Brassicaceae	annual herb	1B.3	None	None	Apr-Jul	Closed-cone coniferous forest, Chaparral
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland
Streptanthus morrisonii ssp. elatus	Three Peaks jewelflower	Brassicaceae	perennial herb	1B.2	None	None	Jun-Sep	Chaparral (serpentinite)

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Streptanthus vernalis	early jewelflower	Brassicaceae	annual herb	1B.2	None	None	Mar-May	Closed-cone coniferous forest, Chaparral
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	1B.2	None	None	Jun-Oct	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools

KEY FOR TABLE 2:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere; moderately threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A = Presumed extinct in California, but extant elsewhere
2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; moderately threatened in Calif.
2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
3 = Plants about which we need more information (Review List)
3.1 = Plants about which we need more information (Review List); seriously threatened in California
3.2 = Plants about which we need more information (Review List); moderately threatened in California
3.3 = Plants about which we need more information (Review List); not very threatened in California

CNPS Rare Plant-Threat Rank Definitions:

4.1 = Plants of limited distribution (watch list); seriously threatened in California
4.2 = Plants of limited distribution (watch list); moderately threatened in California
4.3 = Plants of limited distribution (watch list); not very threatened in California

State and Federal Status:

CESA = California Endangered Species Act
FESA = Federal Endangered Species Act

SR = State. Rare
ST = State. Threatened
SSC = CDFW Species of Special Concern
WL = CDFW Watch List
FT = Federal Threatened
SE = State Endangered.
SD = State Delisted
FP = CDFW Fully Protected
FE = Federal Endangered
FD = Federal Delisted

TABLE 3. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE DETERT RESERVOIR, CALIF. 7½' QUAD.

Habitat Type	Habitat Present
Northern vernal pool	No

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amorpha californica var. napensis	Napa false indigo	Broadleaved upland forest (openings), chaparral, cismontane woodland; --/--/1B.2	April-July decid. shrub	Habitat present
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic; --/--/1B.3	March-May everg. shrub	Habitat not present
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Chaparral, cismontane woodland, valley & foothill grassland/often serpentinite; --/--/1B.2	April-June ann. herb	Poor habitat present
Brodiaea leptandra	narrow-anthered brodiaea	Broadleaved upland forest, chaparral, lower montane conif. forest; --/--/1B.2	May-July per. herb	Habitat not present
Ceanothus confusus	Rincon Ridge ceanothus	Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1	Feb.-April everg. shrub	Habitat not present
Ceanothus divergens	Calistoga ceanothus	Chaparral, cismontane woodland/serpentine, volcanic, rocky;--/--/1B.2	Feb.-March everg. shrub	Habitat not present
Ceanothus purpureus	holly-leaved ceanothus	Chaparral, cismontane woodland/volcanic, rocky; --/--/1B.2	Feb.-June everg. shrub	Habitat not present
Ceanothus sonomensis	Sonoma ceanothus	Chaparral/sandy, serpentine or volcanic; --/--/1B.2	Feb.-April everg. shrub	Habitat not present
Cryptantha dissita	serpentine cryptantha	Chaparral/serpentine outcrops; --/--/1B.2	April-June ann. herb	Habitat not present
Erigeron greenei	Greene's narrow-leaved daisy	Chaparral/serpentine and volcanic, generally in shrubby vegetation; --/--/1B.2	May-Sept. per. herb	Habitat not present
Harmonia hallii	Hall's harmonia	Open rocky areas in chaparral/serpentine barrens, hills & ridges; --/--/1B.2	April-June ann. herb	Habitat not present
Hesperolinon bicarpellatum	two-carpellate western flax	Chaparral/serpentine barrens at edge of chaparral; --/--/1B.2	May-July ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Hesperolinon sharsmithiae	Sharsmith's western flax	Chaparral, serpentinite; --/--/1B.2	May-July ann. herb	Habitat not present
Juncus luciensis	Santa Lucia dwarf rush	Chaparral, Great Basin scrub, lower montane coniferous forest; meadows & seeps, vernal pools; --/--/1B.2	April-July annual herb	Habitat not present
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine; --/--/1B.2	April-May, ann. herb	Poor habitat present
Leptosiphon jepsonii	Jepson's leptisiphon	Chaparral, cismontane woodland, grassy slopes/volcanic or serpentine edge; --/--/1B.2	Apr-May ann. herb	Habitat not present
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Chaparral, cismontane woodland, valley & foothill grassland, vernal pools/vernally mesic; --/--/4.2	March-May (June) ann. herb	Habitat not present
Lupinus sericatus	Cobb Mountain lupine	Broadleaved upland forest, chaparral, cismontane woodland, lower montane conif. forest; --/--/1B.2	March-June per. herb	Habitat present
Navarretia myersii ssp. deminuta	small pincushion navarretia**	Vernal pools (clay loam); --/--/1B.1	April-May ann. herb	Habitat not present
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Chaparral/crevices in rock outcrops and talus slopes; --/--/1B.3	April-Aug. per. herb	Habitat not present
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewel-flower	Closed cone conif. forest, chaparral: serpentine; --/--/1B.2	May-June per. herb	Habitat not present
Streptanthus hesperidis	green jewel flower	Chaparral or cismontane woodland (openings)/ serpentine, rocky; --/--/1B.2	May-July ann. herb	Habitat not present
Streptanthus morrisonii ssp. elatus	Three Peaks jewel flower	Chaparral/serpentine barrens, outcrops, and talus; --/--/1B.2	June-Sept. per. herb	Habitat not present
Streptanthus vernalis	early jewel-flower	Closed-cone coniferous forest, chaparral/ serpentinite; --/--/1B.2	March-May ann. herb	Habitat not present
Trichostema ruygtii	Napa bluecurls	Chaparral, cismontane woodland, lower montane conif. forest, valley & foothill grassland, vernal pools; --/--/1B.2	June-Oct. ann. herb	Poor habitat present

* See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
*Hydrochara ricksecker*i	Ricksecker's water scavenger beetle	Aquatic beetle that lives in slow-flowing streams, shallow open water, springs, stagnant ponds, & vernal pools; G2/S2	year-round	Habitat not present
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	Habitat not present
Trachykele hartmani	serpentine cypress wood-boring beetle	Breeds and develops in Sargent cypress in Lake, Napa, and Colusa Counties, and in Cupressus goveniana in coastal counties of Central California; G1/S1	year-round	Habitat not present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SCT/SSC/G3/S2S3	year-round	Habitat present
Emys marmorata	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3/S3	year-round	Habitat present
Dicamptodon ensatus	California giant salamander	Cool, moist forest habitats associated with rocky streams; SSC/G3/SNR	year-round	Habitat not present
Progne subis	purple martin	Open woodland near water. Nests in old woodpecker cavities in isolated trees, sometimes in human-made structures; SSC/G5/S3	migratory in winter	Moderate habitat present
Falco peregrinus anatum	American peregrine falcon	Volcanic cliffs, steep slopes covered by chaparral with open grassy areas; nesting sites on ledges; FD/SD/CFP/G4/S3S4	year-round	Habitat not present
Falco mexicanus	prairie falcon	Dry open terrain, with cliff nesting sites; WL/G5/S4	year-round	Habitat not present
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland (marshes) with cattails, tules, sedges; SE/SSC/G2G3/S2	year-round	Habitat present
Lasionycteris noctivagans	silver-haired bat	Coastal & montane forest, feeds over streams, ponds and brushy areas. Roosts in hollow trees; G5/S3S4	year-round	Habitat present
Lasiurus cinereus	hoary bat	Open habitats with access to trees and water; G5/S4	migratory- spring & fall	Habitat present
Corynorhinus townsendii	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SC/SSC/G3/S2	year-round	Habitat not present

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Antrozous pallidus	pallid bat	Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance; SSC/G5/S3	local migrant	Habitat present

Key for Table 3:

SE/ST/SD = State Endangered/Threatened/Delisted
SSC = CDFW Species of Special Concern
WL = CDFW Watch List
FE/FT/FD=Federal Endangered/Threatened/Delisted
Threat = Threatened
Cand = Candidate
SC/SCD = State Candidate for Listing/Delisting
SFP = State Fully Protected
FC = Federal Candidate
FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting
End = Endangered
Prop = Proposed

NatureServe Conservation Status:
G1/S1 = Global/State Critically Imperiled
G2/S2 = Global/State Imperiled
G3/S3 = Global/State Vulnerable
G4/S4 = Global/State Apparently Secure
G5/S5 = Global/State Secure
SNR = Not yet assessed

4.3 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists numerous native species with both sensitive and non-sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.4 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 17 sensitive wildlife species need to be accounted for within the project area. Fourteen are identified as present within the Detert Reservoir quadrangle by the CNDDB. Three species – white-tailed kite, yellow warbler, and yellow-breasted chat – are added based on the presence of potential habitat. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

- **Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*):**

  This species is known from accounts in the San Francisco Bay Area. It occupies ponds and shallow waters of streams, lakes, or marshes. This species is listed here because it was identified in Long Valley in vernal pools. There is no appropriate habitat for this species in or near the project area.

- **Obscure bumble bee (*Bombus oliginosus*):**

  This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat, and does not thrive in developed urban or agricultural areas. Its food sources include plant genera *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia*. This property lacks suitable habitat.

- **Serpentine cypress wood-boring beetle (*Trachykele hartmani*)**:

  This beetle breeds and develops in Sargent cypress in Lake, Colusa, and Sonoma Counties, and has been identified in the CNDDB as occurring within the Pope Valley. One CNDDB occurrence from the 1980s lists the species in a cypress along St. Helena Creek approximately one mile north of the Napa County line. There are no Sargent cypress within the survey area and this species would not be present.

- **Foothill yellow-legged frog (*Rana boylii*):**

  Based on previous surveys conducted in the region by Northwest Biosurvey, the species is relatively common in shaded pool/riffle headwater streams in the region. They are heavily dependent on the presence of perennial water and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral streams unsuitable as breeding sites. The ephemeral streams on the property may support foothill yellow-

legged frogs, at least seasonally. The frogs have been found in St. Helena Creek, to which this property eventually drains.

- **Western pond turtle (*Emys marmorata*):**

  These turtles prefer slow or ponded water but will range widely through less suitable habitat in search of these sites. Stream channels are often used as movement corridors between waterways or ponds. Eggs are laid on land in sheltered nests. Young overwinter in the nest and emerge the following spring in Northern California. Food includes aquatic insects, crustaceans, fish, and riparian vegetation. When present, pond turtles are readily observed basking along shorelines or on logs in shallow water. There are two ponds on the property, one of which is contiguous with a stream, and this species may be present on the site, although none were seen during the site visits.

- **California giant salamander (*Dicamptodon ensatus)*:**

  This species is found in damp forests in cool, rocky streams, and occasionally in ponds and lakes. It prefers humid coastal forests, including Douglas fir, redwood, montane and valley-foothill riparian habitats. Cold flowing water is necessary for egg-laying and maturing. Larvae and adults in their aquatic state hide between rocks in streambeds; on land they may be found under litter or underground. Food is snails, slugs, small rodents and mammals, fish, and other amphibians. The salamanders are mostly nocturnal. There is no suitable habitat on the property for this species.

- **Purple martin (*Progne subis*):**

  These migratory passerine (perching) birds prefer open, old growth, multilayered woodland with nearby water. Much is known about habitat preference in this species due to recent research. They are commonly found in riparian habitat, or valley foothill with montane hardwood or montane-hardwood-conifer habitats near water. Up to 70-percent of nests are in fire-killed firs and pines. On the coast, preferred habitat is redwood forest. These birds may nest as pairs in old woodpecker cavities or in colonies in large hollow snags; nests are also sometimes found in residential areas or in manmade structures. Most tree nest sites are located in the upper slopes of hilly and mountainous terrain and Northwest Biosurvey staff has found this species in habitat meeting these requirements in the Geysers area of Lake and Napa Counties. There is some possible habitat within the fir forests on the property.

- **American peregrine falcon (*Falco peregrinus anatum*)**:

  The falcons prefer woodland and forest habitats near water for breeding, and will remain year-long in riparian areas. In addition to water, the species requires protective cliffs and ledges in canyons for nesting and cover. Population decline has been mostly due to pesticide use. The protected status of this species is applied to active nest sites. There are documented occurrences of this species in the vicinity of this site and falcons may hunt in the area, but there are no suitable isolated nesting sites on the property.

- **Prairie falcon (*Falco mexicanus*):**

  This species does not currently have sensitive species status, but it is on the state watch list. This raptor prefers dry, open terrain and nests in cliffs or rock outcrops. The falcon hunts in open country and ranges widely while foraging. It is associated mostly with perennial grasslands, savannahs, rangeland, and some types of agricultural lands. While this species may forage occasionally in the area, there is no suitable nesting habitat in the project area.

- **White-tailed kite (*Elanus leucurus*):**

  Usually found near agricultural areas, the kite prefers open areas near woodlands and water. These raptors hunt over open country and feed mostly on small diurnal mammals, but will sometimes eat birds, insects, amphibians, and reptiles. They prefer large, deciduous trees surrounded by open land such as grassland, meadows, farmland, and wetlands for nesting and roosting sites and dense woodlands for cover. The survey area contains patches of grassland with adjacent mature trees, which makes it ideal kite habitat. The California Fully Protected status of these raptors pertains to nesting pairs with an emphasis on protecting nesting habitat. This species is also protected under the Migratory Bird Treaty Act.

- **Tricolored blackbird (*Agelaius tricolor*):**

  These blackbirds are typically colony nesters in fresh emergent wetland habitat (tule or cattail marsh), but may also occur in dense blackberry or willow shrub communities adjacent to water. The species is usually readily observed and heard when present, and has a distinctive cat-like call unlike other blackbird species. One occurrence is noted in the CNDDB within a cattail marsh near Detert Reservoir. While some areas adjacent to the ponds may provide potential habitat, the patch size of this habitat may be too small to provide good nesting sites. No tricolored blackbirds were seen or heard during the site visits.

- **Yellow warbler (*Dendroica petechia brewsteri*):**

  These warblers require riparian woodland with a dense shrubby understory for nesting and cover. They arrive in these areas in April and are typically gone by October. Fledging is usually completed by August. Nests are constructed in shrubs and small trees in the lower canopy of the woodland. They forage for insects in the upper canopy.

- **Yellow-breasted chat (*Icteria virens*):**

  The habitat requirements for this warbler are very similar to those for the yellow warbler. They require dense willow thickets near streams for nesting and cover, arriving at this habitat for the breeding season in April and leaving by late September. The nesting season extends from May to August. They are omnivorous, eating insects and spiders as well as fruit. The narrow stream channels and small patch sizes of suitable habitat on the property are unlikely to provide suitable nesting habitat for this species.

- **Silver-haired bat (*Lasionycteris noctivagans*):**

  This species occurs throughout most of North America and is associated mainly with coastal and montane forest habitats. The species is primarily a tree roosting bat, roosting during the day behind loose tree bark, in hollow trees, and in abandoned woodpecker holes. Occasionally individuals roost in man-made structures. This species has also been known to hibernate in mines, caves, trees, and buildings in colder portions of their range. The silver-haired bat takes a wide variety of prey, including moths, flies, beetles, ants, and termites, and is adept at exploiting large swarms of insects. Foraging typically occurs over streams, ponds, and open brushy areas and is believed to occur when other bat species are not present. The CNDDB lists one occurrence from the 1930s in Long Valley. The site may provide habitat for this species. This species does not have sensitive status.

- **Hoary Bat *(Lasiurus cinereus)*:**

  The hoary bat roosts in open habitats in woodlands or forest in the branches of deciduous and coniferous trees. Males are solitary and females roost in dense foliage in medium to large trees with their young; they do not form maternity colonies. The primary prey of the hoary bat is moths but include beetles and dragonflies. The hoary bat hunts above canopy level, over open areas and water. This species will sometimes set up foraging territories at bright lights where insects congregate. They are not attracted to human structures such as houses but are sometimes found in large trees in suburban areas. This species is migratory to warmer climates during the winter, sometimes moving with flocks of birds. Jays are a threat to this species. As with the silver-haired bat, the CNDDB lists one occurrence from the 1930s in Long Valley. The project area near the larger pond

contains moderate habitat for this species. This species does not have sensitive status.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**

  The most restrictive resource required by this species is daytime roosting habitat, and this bat is extremely sensitive to disturbance of roosting sites. This relatively sedentary species will use mines, caves, tunnels, or other human-made structures for roosting, and may share roosting sites with other species. They may use separate roosting sites for day and night, and prefer open roosting sites with complete darkness. They require cold sites for hibernation and warm sites for maternity roosts. These bats typically prefer relatively mesic (moist) habitat such as riparian. They feed mostly on moths and may forage with other species. Townsend's big-eared bats appear to prefer buildings and mines and have been identified in the CNDDB in old mines in the vicinity of this property. However, the lack of abandoned structures on the site make it unlikely that this species roosts here.

- **Pallid bat (*Antrozous pallidus*):**

  Optimal habitat for these bats consists of open, dry habitats with rocky areas, but it may be found in open forest and woodlands with access to open habitats for feeding. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites but may also use buildings and hollow trees. Foraging occurs over open country. These bats have a home range of 1 to 3 miles and, like the Townsend's bat, are known to roost with other bat species. Also similar to the Townsend's bat, this species is extremely sensitive to human disturbance of roosting sites. This species is identified in the CNDDB near Mirabel Mine in 1919, south of this site. The site may provide moderate potential roosting and feeding habitat in the forests and oak woodlands on the parcel.

5.0 FIELD SURVEY RESULTS

5.1 <u>Botanical Field Survey Results</u>: Table 4 presents the results of the botanical survey for the project. Each of the sensitive plant species potentially occurring at the site and listed in Tables 2 and 3 was specifically searched for during the surveys. The surveys identified a total of 94 plant taxa on the Brand property.

One taxon with sensitive regulatory status were found on the property during the surveys. It is ranked 4.3 by CNPS: **Jepson's navarretia (*Navarretia jepsonii*)**

CNPS Rare Plant Rank 4 is a watch list of plants about which not enough is known to qualify them as "rare, threatened, or endangered" and consequently placed in Rare Plant Rank 1B. A determination as to whether impacts to this population requires mitigation is up to the local permitting agency in consultation with the Department of Fish and Wildlife. The 4.3 classification is described as not very rare in California.

TABLE 4. FLORA OF THE BRAND PROPERTY

Habit	Species	Common Name	Family	Origin
forb	*Daucus carota*	Queen Anne's lace	Apiaceae	A
forb	*Petroselinum crispum*	parsley	Apiaceae	A
forb	*Torilis arvensis*	field hedge parsley	Apiaceae	A
forb	*Agoseris grandiflora*	California dandelion, big-flower agoseris	Asteraceae	N
forb	*Agoseris heterophylla var. heterophylla*	annual agoseris, annual mountain dandelion	Asteraceae	N
forb	*Anisocarpus madioides*	woodland madia	Asteraceae	N
forb	*Centaurea solstitialis*	yellow star thistle	Asteraceae	A
forb	*Cirsium brevistylum*	clustered thistle, Indian thistle	Asteraceae	N
forb	*Eriophyllum lanatum var. arachnoideum*	common woolly sunflower, spiderweb sunflower	Asteraceae	N
forb	*Hypochaeris glabra*	smooth cat's ear	Asteraceae	A
forb	*Logfia gallica*	daggerleaf cottonrose	Asteraceae	A
forb	*Micropus californicus var. californicus*	cottontop, slender cottonweed	Asteraceae	N
forb	*Wyethia glabra*	green mule ears, shining mule ears	Asteraceae	N
forb	*Cynoglossum grande*	grand hound's tongue	Boraginaceae	N
forb	*Carex nudata*	naked sedge, torrent sedge	Cyperaceae	N
forb	*Carex serratodens*	saw-toothed sedge	Cyperaceae	N
forb	*Cyperus eragrostis*	tall flat sedge	Cyperaceae	N
forb	*Eleocharis macrostachya*	creeping spikerush, pale spikerush	Cyperaceae	N
forb	*Croton setigerus*	turkey mullein	Euphorbiaceae	N
forb	*Acmispon brachycarpus*	shortpodded lotus, hill lotus	Fabaceae	N
forb	*Lathyrus jepsonii var. californicus*	California tule pea	Fabaceae	N
forb	*Lupinus bicolor*	miniature lupine	Fabaceae	N
forb	*Lupinus succulentis*	arroyo lupine	Fabaceae	N
forb	*Trifolium hirtum*	rose clover	Fabaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Vicia villosa ssp. villosa*	winter vetch, hairy vetch	Fabaceae	A
forb	*Erodium cicutarium*	red-stem storksbill	Geraniaceae	A
forb	*Hypericum perforatum*	Klamathweed	Hypericaceae	A
forb	*Iris macrosiphon*	bowl-tubed iris	Iridaceae	N
forb	*Sisyrinchium bellum*	blue-eyed grass, western blue-eyed grass	Iridaceae	N
forb	*Juncus tenuis*	poverty rush	Juncaceae	N
forb	*Stachys albens*	cobwebby hedge nettle, white-stem hedge nettle	Lamiaceae	N
forb	*Calochortus amabilis*	Diogenes lantern, golden fairy lantern	Liliaceae	N
forb	*Calochortus luteus*	yellow Mariposa lily	Liliaceae	N
forb	*Chlorogalum pomeridianum*	wavyleaf soap plant	Liliaceae	N
forb	*Dichelostemma congestum*	fork-toothed ookow	Liliaceae	N
forb	*Triteleia laxa*	Ithuriel's spear	Liliaceae	N
forb	*Claytonia perfoliata ssp. perfoliata*	miner's lettuce	Montiaceae	N
forb	*Clarkia concinna ssp. concinna*	lovely clarkia, red ribbons	Onagraceae	N
forb	*Clarkia purpurea ssp. quadrivulnera*	purple clarkia, winecup clarkia, four-spot	Onagraceae	N
forb	*Eschscholzia californica*	California poppy	Papaveraceae	N
forb	*Mimulus guttatus*	seep monkeyflower	Phrymaceae	N
forb	*Plantago lanceolata*	English plantain	Plantaginaceae	A
forb	***Navarretia jepsonii***	**Jepson's navarretia; CNPS Rank 4.3**	**Polemoniaceae**	**N**
forb	*Navarretia mellita*	skunk navarretia	Polemoniaceae	N
forb	*Polygala californica*	California milkwort	Polygalaceae	N
forb	*Rumex crispus*	curly dock	Polygonaceae	A
forb	*Anagalis arvensis*	scarlet pimpernel	Primulaceae	A
forb	*Galium porrigens var. porrigens*	climbing bedstraw, graceful bedstraw	Rubiaceae	N
forb	*Pedicularis densiflora*	warrior's plume, Indian warrior	Scrophulariaceae	N
forb	*Typha angustifolia*	narrow-leaf cattail	Typhaceae	N

Habit	Species	Common Name	Family	Origin
grass	*Aira caryophyllea*	silver European hairgrass	Poaceae	A
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Briza maxima*	big quaking grass	Poaceae	A
grass	*Briza minor*	small quaking grass	Poaceae	A
grass	*Bromus arvensis*	field brome	Poaceae	A
grass	*Bromus diandrus*	ripgut grass, ripgut brome	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Bromus laevipes*	woodland brome	Poaceae	N
grass	*Bromus madritensis ssp. rubens*	red brome	Poaceae	A
grass	*Cynosurus echinatus*	hedgehog dogtail, annual dogtail	Poaceae	A
grass	*Elymus glaucus ssp. glaucus*	blue wildrye	Poaceae	N
grass	*Festuca myuros*	rattail sixweeks grass	Poaceae	A
grass	*Gastridium phleoides*	nitgrass	Poaceae	A
grass	*Hordeum marinum ssp. gussoneanum*	Mediterranean barley	Poaceae	A
grass	*Phalaris aquatica*	Harding grass	Poaceae	A
shrub	*Sambucus nigra ssp. caerulea*	blue elderberry	Adoxacaceae	N
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N
shrub	*Baccharis pilularis*	coyote brush, chaparral broom	Asteraceae	N
shrub	*Arctostaphylos canescens ssp. canescens*	hoary manzanita	Ericaceae	N
shrub	*Arctostaphylos manzanita ssp. manzanita*	common manzanita	Ericaceae	N
shrub	*Cytisus scoparius*	Scotch broom	Fabaceae	A
shrub	*Rupertia physodes*	California tea	Fabaceae	N
shrub	*Eriodictyon californicum*	California yerba santa	Hydrophyllaceae	N
shrub	*Ceanothus incanus*	coast whitethorn	Rhamnaceae	N
shrub	*Ceanothus integerrimus*	deerbrush, blue blossom	Rhamnaceae	N
shrub	*Adenostoma fasciculatum*	chamise	Rosaceae	N
shrub	*Cercocarpus betuloides var. betuloides*	birch-leaf mountain mahogany	Rosaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Heteromeles arbutifolia*	toyon	Rosaceae	N
shrub	*Rubus armeniacus*	Himalayan blackberry	Rosaceae	A
tree	*Juniperus californica*	California juniper	Cupressaceae	N
tree	*Arbutus menziesii*	Pacific madrone	Ericaceae	N
tree	*Quercus douglasii*	blue oak	Fagaceae	N
tree	*Quercus garryanna var. garryanna*	Oregon white oak	Fagaceae	N
tree	*Quercus kelloggii*	California black oak	Fagaceae	N
tree	*Umbellularia californica*	California bay	Lauraceae	N
tree	*Pinus attenuata*	knobcone pine	Pinaceae	N
tree	*Pinus ponderosa*	ponderosa pine	Pinaceae	N
tree	*Pinus sabiniana*	ghost pine, foothill pine	Pinaceae	N
tree	*Pseudotsuga menziesii var. menziesii*	Douglas fir	Pinaceae	N
tree	*Populus fremontii var. fremontii*	Fremont cottonwood	Salicaceae	N
tree	*Salix laevigata*	red willow	Salicaceae	N
tree/ shrub	*Quercus wislizeni*	interior live oak	Fagaceae	N
vine	*Lathyrus tingitanus*	Tangier pea	Fabaceae	A
vine	*Vitis californica*	California wild grape	Vitaceae	N

Origin: N = Native, A = Alien

6.0 SUMMARY AND RECOMMENDATIONS

6.1 Summary: This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society *On-line Inventory of Rare and Endangered Vascular Plants of California,* and the California Department of Fish and Wildlife's *Wildlife Habitat Relations System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within and in the immediate vicinity of both project areas.
- A delineation of possible waters of the U.S.

Sensitive Plants: A total of 94 native and introduced plant taxa were identified within the survey area during the in-season botanical survey. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

A single taxon with sensitive status was identified: **Jepson's navarretia (*Navarretia jepsonii*).** CNPS Rare Plant Rank 4 is a watch list of plants about which not enough is known to qualify them as "rare, threatened, or endangered" and consequently placed on Rare Plant Rank 1B. A determination as to whether impacts to this population requires mitigation is up to the local permitting agency in consultation with the Department of Fish and Wildlife. Plants with a CNPS Rank of 4.3 are considered to be not very sensitive in California.

Sensitive Wildlife: As described in Section 4.3, a total of 17 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the potential on-site habitat. The following species may be present in the survey area in their sensitive status:

Foothill yellow-legged frog	Western pond turtle
Purple martin	White-tailed kite
Pallid bat	Silver-haired bat

Possible Waters of the U.S.: A cumulative total **0.6875 acre** of possible waters of the U.S. occurring as a mix of ephemeral streams and ponds. (See delineation report, Appendix C.)

6.2 Potential Impacts and Proposed Mitigation for Biological Resources: The proposed project consists of a parcel map which would split the existing 29.35-acre parcel into smaller 4 parcels ranging in size from approximately 5 to 9.5 acres. The land division in itself will not have a direct adverse impact on biological resources. The size and location of proposed future development on each new parcel (presumed to be residential) has not been specifically determined and presumably would be up to the purchaser of each parcel as long as it met Lake County development standards. This future residential development would include administrative-level building permits which do not require CEQA review, although any proposed new roadways or other development may trigger such a review.

Based on the floristic-level botanical survey conducted on this property, there are no plants with sensitive regulatory status, considering that Jepson's navarretia is ranked as a CNPS 4.3 species defined as not very rare in California. Consequently, specific building envelopes are not recommended. Based on these factors we provide below recommendations for future residential development that are designed to mitigate potential adverse impacts to biological resources identified in this analysis. These recommendations may be filed with the parcel map or implemented through other means determined appropriate by the Lake County Community Development Department staff.

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

1. **Habitat Fragmentation**

   Potential Impacts: The Brand property is located in an area surrounded by continuous open and undeveloped habitat. At present, wildlife in the region have access to Douglas fir forest, mixed oak woodland, and ponderosa pine forest on the property that is contiguous with similar habitat on the surrounding slopes to the north, west, and south. Development within the surrounding woodlands and forests on the property would reduce or eliminate wildlife use of these habitats.

Proposed Mitigation for Habitat Fragmentation:

- **Measure 1:** It is recommended that to the extent practical, residential development and its access be emphasized within the central, valley portions of the property and be accessed by existing ranch roads. Of particular note, development within the Douglas fir forest in the southern portion of the property should be restricted to the margins of this habitat or to adjacent mixed oak woodlands along the eastern edge of the property.

- **Measure 2:** The use of fencing should be restricted to residential yards and existing vineyard development.

2. Woodland and Forest Resources

Potential Impact: woodland and forest on the property occurs primarily on the slopes surrounding the central, valley portion of the property. Development within these woodlands and forests would directly impact these resources.

Proposed Mitigation for Impacts to Woodland and Forest:

Impacts to woodland and forest resources would be minimized through implementation of **Measure 1** as recommended above.

3. Sensitive Plants and Wildlife

Potential Impact:

A. Plants: Jepson's navarretia, a CNPS Rank 4.3 plant, was identified within the manzanita shrub alliance community during the floristic-level botanical survey. Jepson's navarretia is a CNPS Rank 4.3 plant defined as "not very rare in California". However, the ultimate determination as to whether Jepson's navarretia requires mitigation is up to the Lake County Community Development Department in consultation with the California Department of Fish and Wildlife.

- **Measure 3:** If it is determined that mitigation should be implemented for Jepson's navarretia, it is recommended that the manzanita shrub alliance communities mapped in Figure 2 be excluded from development.

B. Wildlife: The following wildlife species with sensitive regulatory status have a potential to be present within the survey area:

- Foothill yellow legged frog
- Western pond turtle
- Purple martin
- White-tailed kite
- Silver-haired bat
- Pallid bat

Construction or disturbance within the creek channel extending along the northern end of the property has a potential to result in an incidental take of foothill yellow-legged frogs and western pond turtles if conducted when this channel contains water.

Removal of trees has a potential to result in an incidental take of purple martin and white-tailed kite if conducted during the breeding season (February 15 – August 31).

Removal of trees has a potential to result in an incidental take of silver haired and pallid bats if conducted between the following dates:

January 1-February 14
April 2- September 14
October 15- December 31

Proposed Mitigation for impacts to Wildlife:

- **Measure 4 - Proposed Mitigation for Foothill Yellow-legged Frog:** In the event that work is proposed within the active channel of the creek extending along the northern property boundary, it is recommended that it occur either prior to April 1 or after June 15, by which time frog larvae and young are mobile and independent. Disturbance of the channel structure should be limited to the immediate construction site. Alternatively, work may occur when the channel is naturally dry.

In the event that work must occur within the active channel when water is present between April 1 and June 15, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid

California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.

Any foothill yellow-legged adult or larval frogs within the work area shall be captured and transferred to an adjacent, unaffected stream segment. In the event that eggs of this species are found during these surveys, in-channel activities shall be delayed for one week (eggs usually hatch within 5 days) and the site reinspected to determine if eggs have hatched. If not, an additional delay will be required until the eggs have hatched.

- **Measure 5 - Proposed Mitigation for Western Pond Turtle:** In order to avoid potential impacts to western pond turtles, work within the channel of the creek extending along the northern edge of the property, or within ponds should occur after August 15 but before the onset of winter rains and the end of the grading season (October 15). Downed trees, stumps and other basking sites and refuges within these aquatic habitats should remain undisturbed.

In the event that work must occur within the active channel between April 1 and June 15, or within a pond, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event.

In the event that western pond turtles are identified, a qualified biologist with a valid California Department of Fish and Wildlife collecting permit should be present during all construction activities at the crossing site.

- **Measure 6 - Proposed Mitigation for White-tailed Kites and Purple Martins:** To the extent feasible, vineyard construction, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31). If construction during the nesting season cannot be avoided, any required vegetation removal should be the minimal amount necessary for construction and should be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a

construction buffer shall be established around it in consultation with CDFW staff and shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.

- **Measure 7 - Proposed Mitigation for Pallid Bats:** If trees are to be removed (outside of the dates listed below), any tree to be removed that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen days prior to tree removal. Suitable trees include those with hollows and/or shedding bark.

If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.

4. Waters of the U.S.

Potential Impact: Work within any water of the U.S. as mapped in Figure 3 may result in fill of a water of the U.S.

Proposed Mitigation for Impacts to Waters of the U.S:

- **Measure 8:** Placement of fill within Waters of the U.S. may require a Nationwide Permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

5. Erosion Control:

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff to Saint Helena Creek.

Proposed Mitigation for Impacts Related to Erosion Control:

- **Measure 9:** All work in or near waterways should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to St. Helena Creek. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required.

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APPENDIX A

CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES

WITHIN THE

SURROUNDING CALIF. 7½' QUADS.

Surrounding 9-Quad List: Detert Reservoir Quadrangle

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Aetna Springs	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Aetna Springs	*Taricha torosa*	Coast Range newt	None	None	SSC	-
Aetna Springs	*Ardea alba*	great egret	None	None	-	-
Aetna Springs	*Ardea herodias*	great blue heron	None	None	-	-
Aetna Springs	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Aetna Springs	*Agelaius tricolor*	tricolored blackbird	None	Cand End	SSC	-
Aetna Springs	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
Aetna Springs	*Vandykea tuberculata*	serpentine cypress long-horned beetle	None	None	-	-
Aetna Springs	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Aetna Springs	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Aetna Springs	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-
Aetna Springs	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Aetna Springs	*Lasiurus cinereus*	hoary bat	None	None	-	-
Aetna Springs	*Myotis ciliolabrum*	western small-footed myotis	None	None	-	-
Aetna Springs	*Myotis evotis*	long-eared myotis	None	None	-	-
Aetna Springs	*Myotis thysanodes*	fringed myotis	None	None	-	-
Aetna Springs	*Myotis volans*	long-legged myotis	None	None	-	-
Aetna Springs	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Aetna Springs	*Emys marmorata*	western pond turtle	None	None	SSC	-
Aetna Springs	*Serpentine Bunchgrass*	Serpentine Bunchgrass	None	None	-	-
Aetna Springs	*Wildflower Field*	Wildflower Field	None	None	-	-
Aetna Springs	*Eryngium jepsonii*	Jepson's coyote-thistle	None	None	-	1B.2
Aetna Springs	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Aetna Springs	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Aetna Springs	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Aetna Springs	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Aetna Springs	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Aetna Springs	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Aetna Springs	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Aetna Springs	*Streptanthus morrisonii ssp. elatus*	Three Peaks jewelflower	None	None	-	1B.2
Aetna Springs	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Aetna Springs	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Aetna Springs	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Aetna Springs	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Aetna Springs	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Aetna Springs	*Monardella viridis*	green monardella	None	None	-	4.3
Aetna Springs	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Aetna Springs	*Fritillaria pluriflora*	adobe-lily	None	None	-	1B.2
Aetna Springs	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	*Lilium bolanderi*	Bolander's lily	None	None	-	4.2
Aetna Springs	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Aetna Springs	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Aetna Springs	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
Aetna Springs	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
Aetna Springs	*Cypripedium montanum*	mountain lady's-slipper	None	None	-	4.2
Aetna Springs	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Aetna Springs	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Aetna Springs	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Aetna Springs	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Aetna Springs	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Aetna Springs	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Aetna Springs	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Aetna Springs	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Aetna Springs	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Aetna Springs	*Navarretia rosulata*	Marin County navarretia	None	None	-	1B.2
Aetna Springs	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Aetna Springs	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Aetna Springs	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Calistoga	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Calistoga	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Calistoga	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Calistoga	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Calistoga	*Accipiter striatus*	sharp-shinned hawk	None	None	WL	-
Calistoga	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Calistoga	*Syncaris pacifica*	California freshwater shrimp	End	End	-	-
Calistoga	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Calistoga	*Entosphenus tridentatus*	Pacific lamprey	None	None	SSC	-
Calistoga	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Calistoga	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Calistoga	*Bombus occidentalis*	western bumble bee	None	None	-	-
Calistoga	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Calistoga	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Calistoga	*Myotis evotis*	long-eared myotis	None	None	-	-
Calistoga	*Myotis thysanodes*	fringed myotis	None	None	-	-
Calistoga	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Calistoga	*Emys marmorata*	western pond turtle	None	None	SSC	-
Calistoga	*Coastal and Valley Freshwater Marsh*	Coastal and Valley Freshwater Marsh	None	None	-	-
Calistoga	*Eryngium constancei*	Loch Lomond button-celery	End	End	-	1B.1
Calistoga	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Calistoga	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Calistoga	*Erigeron biolettii*	streamside daisy	None	None	-	3
Calistoga	*Harmonia nutans*	nodding harmonia	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Calistoga	*Lasthenia burkei*	Burke's goldfields	End	End	-	1B.1
Calistoga	*Lessingia hololeuca*	woolly-headed lessingia	None	None	-	3
Calistoga	*Plagiobothrys strictus*	Calistoga popcornflower	End	Threat	-	1B.1
Calistoga	*Spergularia macrotheca var. longistyla*	long-styled sand-spurrey	None	None	-	1B.2
Calistoga	*Arctostaphylos stanfordiana ssp. decumbens*	Rincon Ridge manzanita	None	None	-	1B.1
Calistoga	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Calistoga	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Calistoga	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
Calistoga	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Calistoga	*Trifolium hydrophilum*	saline clover	None	None	-	1B.2
Calistoga	*Monardella viridis*	green monardella	None	None	-	4.3
Calistoga	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Calistoga	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Calistoga	*Limnanthes vinculans*	Sebastopol meadowfoam	End	End	-	1B.1
Calistoga	*Sidalcea hickmanii ssp. napensis*	Napa checkerbloom	None	None	-	1B.1
Calistoga	*Clarkia breweri*	Brewer's clarkia	None	None	-	4.2
Calistoga	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Calistoga	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Calistoga	*Poa napensis*	Napa blue grass	End	End	-	1B.1
Calistoga	*Puccinellia simplex*	California alkali grass	None	None	-	1B.2
Calistoga	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Calistoga	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Calistoga	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Calistoga	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Calistoga	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Calistoga	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Calistoga	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Calistoga	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Calistoga	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Calistoga	*Triteleia lugens*	dark-mouthed triteleia	None	None	-	4.3
Detert Reservoir	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Detert Reservoir	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Detert Reservoir	*Taricha torosa*	Coast Range newt	None	None	SSC	-
Detert Reservoir	*Falco mexicanus*	prairie falcon	None	None	WL	-
Detert Reservoir	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Detert Reservoir	*Progne subis*	purple martin	None	None	SSC	-
Detert Reservoir	*Agelaius tricolor*	tricolored blackbird	None	Cand End	SSC	-
Detert Reservoir	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
Detert Reservoir	*Trachykele hartmani*	serpentine cypress wood-boring beetle	None	None	-	-
Detert Reservoir	*Hydrochara ricksecker*i	Ricksecker's water scavenger beetle	None	None	-	-
Detert Reservoir	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Detert Reservoir	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Detert Reservoir	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Detert Reservoir	*Lasiurus cinereus*	hoary bat	None	None	-	-
Detert Reservoir	*Myotis ciliolabrum*	western small-footed myotis	None	None	-	-
Detert Reservoir	*Myotis evotis*	long-eared myotis	None	None	-	-
Detert Reservoir	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Detert Reservoir	*Emys marmorata*	western pond turtle	None	None	SSC	-
Detert Reservoir	*Northern Vernal Pool*	Northern Vernal Pool	None	None	-	-
Detert Reservoir	*Lomatium hooveri*	Hoover's lomatium	None	None	-	4.3
Detert Reservoir	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Detert Reservoir	*Erigeron biolettii*	streamside daisy	None	None	-	3
Detert Reservoir	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Detert Reservoir	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Detert Reservoir	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Detert Reservoir	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Detert Reservoir	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Detert Reservoir	*Cryptantha dissita*	serpentine cryptantha	None	None	-	1B.2
Detert Reservoir	*Streptanthus brachiatus ssp. brachiatus*	Socrates Mine jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus morrisonii ssp. elatus*	Three Peaks jewelflower	None	None	-	1B.2
Detert Reservoir	*Streptanthus vernalis*	early jewelflower	None	None	-	1B.2
Detert Reservoir	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Detert Reservoir	*Calystegia collina ssp. venusta*	South Coast Range morning-glory	None	None	-	4.3
Detert Reservoir	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Detert Reservoir	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Detert Reservoir	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Detert Reservoir	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Detert Reservoir	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Detert Reservoir	*Ribes victoris*	Victor's gooseberry	None	None	-	4.3
Detert Reservoir	*Juncus luciensis*	Santa Lucia dwarf rush	None	None	-	1B.2
Detert Reservoir	*Trichostema ruygtii*	Napa bluecurls	None	None	-	1B.2
Detert Reservoir	*Calochortus uniflorus*	pink star-tulip	None	None	-	4.2
Detert Reservoir	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Detert Reservoir	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Detert Reservoir	*Limnanthes floccosa ssp. floccosa*	woolly meadowfoam	None	None	-	4.2
Detert Reservoir	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Detert Reservoir	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Detert Reservoir	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Detert Reservoir	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Detert Reservoir	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Detert Reservoir	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Detert Reservoir	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Detert Reservoir	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Detert Reservoir	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Detert Reservoir	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Detert Reservoir	*Navarretia myersii ssp. deminuta*	small pincushion navarretia	None	None	-	1B.1
Detert Reservoir	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Detert Reservoir	*Eriogonum umbellatum var. bahiiforme*	bay buckwheat	None	None	-	4.2
Detert Reservoir	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Detert Reservoir	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Detert Reservoir	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Detert Reservoir	*Ceanothus purpureus*	holly-leaved ceanothus	None	None	-	1B.2
Detert Reservoir	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
Detert Reservoir	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Jericho Valley	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Jericho Valley	*Aquila chrysaetos*	golden eagle	None	None	FP ; WL	-
Jericho Valley	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
Jericho Valley	*Falco mexicanus*	prairie falcon	None	None	WL	-
Jericho Valley	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Jericho Valley	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Jericho Valley	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Jericho Valley	*Emys marmorata*	western pond turtle	None	None	SSC	-
Jericho Valley	*Northern Interior Cypress Forest*	Northern Interior Cypress Forest	None	None	-	-
Jericho Valley	*Serpentine Bunchgrass*	Serpentine Bunchgrass	None	None	-	-
Jericho Valley	*Grimmia torenii*	Toren's grimmia	None	None	-	1B.3
Jericho Valley	*Lomatium hooveri*	Hoover's lomatium	None	None	-	4.3
Jericho Valley	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Jericho Valley	*Balsamorhiza macrolepis*	big-scale balsamroot	None	None	-	1B.2
Jericho Valley	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Jericho Valley	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Jericho Valley	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Jericho Valley	*Arabis modesta*	modest rockcress	None	None	-	4.3
Jericho Valley	*Arabis oregana*	Oregon rockcress	None	None	-	4.3
Jericho Valley	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Jericho Valley	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Jericho Valley	*Streptanthus morrisonii ssp. kruckebergii*	Kruckeberg's jewelflower	None	None	-	1B.2
Jericho Valley	*Equisetum palustre*	marsh horsetail	None	None	-	3
Jericho Valley	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Jericho Valley	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Jericho Valley	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Jericho Valley	*Juglans hindsii*	Northern California black walnut	None	None	-	1B.1
Jericho Valley	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Jericho Valley	*Fritillaria pluriflora*	adobe-lily	None	None	-	1B.2
Jericho Valley	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Jericho Valley	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Jericho Valley	*Hesperolinon drymarioides*	drymaria-like western flax	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Jericho Valley	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Jericho Valley	*Malacothamnus helleri*	Heller's bush-mallow	None	None	-	3.3
Jericho Valley	*Sidalcea keckii*	Keck's checkerbloom	End	None	-	1B.1
Jericho Valley	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
Jericho Valley	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Jericho Valley	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
Jericho Valley	*Piperia leptopetala*	narrow-petaled rein orchid	None	None	-	4.3
Jericho Valley	*Castilleja rubicundula var. rubicundula*	pink creamsacs	None	None	-	1B.2
Jericho Valley	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Jericho Valley	*Orobanche valida ssp. howellii*	Howell's broomrape	None	None	-	4.3
Jericho Valley	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Jericho Valley	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Jericho Valley	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Jericho Valley	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Jericho Valley	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Jericho Valley	*Eriogonum tripodum*	tripod buckwheat	None	None	-	4.2
Jericho Valley	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mark West Springs	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Mark West Springs	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Mark West Springs	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Mark West Springs	*Syncaris pacifica*	California freshwater shrimp	End	End	-	-
Mark West Springs	*Lavinia symmetricus navarroensis*	Navarro roach	None	None	SSC	-
Mark West Springs	*Lavinia symmetricus ssp. 4*	Clear Lake - Russian River roach	None	None	SSC	-
Mark West Springs	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Mark West Springs	*Lampetra ayresii*	river lamprey	None	None	SSC	-
Mark West Springs	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Mark West Springs	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Mark West Springs	*Oncorhynchus tshawytscha pop. 17*	chinook salmon - California coastal ESU	Threat	None	-	-
Mark West Springs	*Atractelmis wawona*	Wawona riffle beetle	None	None	-	-
Mark West Springs	*Pekania pennanti*	fisher - West Coast DPS	None	Threat	SSC	-
Mark West Springs	*Taxidea taxus*	American badger	None	None	SSC	-
Mark West Springs	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Mark West Springs	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Mark West Springs	*Myotis lucifugus*	little brown bat	None	None	-	-
Mark West Springs	*Myotis thysanodes*	fringed myotis	None	None	-	-
Mark West Springs	*Anodonta californiensis*	California floater	None	None	-	-
Mark West Springs	*Emys marmorata*	western pond turtle	None	None	SSC	-
Mark West Springs	*Anomobryum julaceum*	slender silver moss	None	None	-	4.2
Mark West Springs	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Mark West Springs	*Centromadia parryi ssp. parryi*	pappose tarplant	None	None	-	1B.2
Mark West Springs	*Erigeron biolettii*	streamside daisy	None	None	-	3
Mark West Springs	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Mark West Springs	*Hemizonia congesta ssp. congesta*	congested-headed hayfield tarplant	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Mark West Springs	*Microseris paludosa*	marsh microseris	None	None	-	1B.2
Mark West Springs	*Viburnum ellipticum*	oval-leaved viburnum	None	None	-	2B.3
Mark West Springs	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Mark West Springs	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
Mark West Springs	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
Mark West Springs	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Mark West Springs	*Juglans hindsii*	Northern California black walnut	None	None	-	1B.1
Mark West Springs	*Monardella viridis*	green monardella	None	None	-	4.3
Mark West Springs	*Lilium rubescens*	redwood lily	None	None	-	4.2
Mark West Springs	*Calandrinia breweri*	Brewer's calandrinia	None	None	-	4.2
Mark West Springs	*Gratiola heterosepala*	Boggs Lake hedge-hyssop	None	End	-	1B.2
Mark West Springs	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Mark West Springs	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Mark West Springs	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Mark West Springs	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Mark West Springs	*Eriogonum umbellatum var. bahiiforme*	bay buckwheat	None	None	-	4.2
Mark West Springs	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
Mark West Springs	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Mark West Springs	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Mark West Springs	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
Middletown	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Middletown	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
Middletown	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Middletown	*Lasionycteris noctivagans*	silver-haired bat	None	None	-	-
Middletown	*Lasiurus cinereus*	hoary bat	None	None	-	-
Middletown	*Myotis yumanensis*	Yuma myotis	None	None	-	-
Middletown	*Emys marmorata*	western pond turtle	None	None	SSC	-
Middletown	*Northern Basalt Flow Vernal Pool*	Northern Basalt Flow Vernal Pool	None	None	-	-
Middletown	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Middletown	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Middletown	*Harmonia hallii*	Hall's harmonia	None	None	-	1B.2
Middletown	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Middletown	*Hemizonia congesta ssp. congesta*	congested-headed hayfield tarplant	None	None	-	1B.2
Middletown	*Lasthenia burkei*	Burke's goldfields	End	End	-	1B.1
Middletown	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Middletown	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Middletown	*Legenere limosa*	legenere	None	None	-	1B.1
Middletown	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Middletown	*Sedella leiocarpa*	Lake County stonecrop	End	End	-	1B.1
Middletown	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Middletown	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Middletown	*Trifolium hydrophilum*	saline clover	None	None	-	1B.2
Middletown	*Calochortus uniflorus*	pink star-tulip	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Middletown	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Middletown	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Middletown	*Hesperolinon didymocarpum*	Lake County western flax	None	End	-	1B.2
Middletown	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
Middletown	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Middletown	*Gratiola heterosepala*	Boggs Lake hedge-hyssop	None	End	-	1B.2
Middletown	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Middletown	*Orcuttia tenuis*	slender Orcutt grass	Threat	End	-	1B.1
Middletown	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Middletown	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Middletown	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Middletown	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Middletown	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Middletown	*Navarretia jepsonii*	Jepson's navarretia	None	None	-	4.3
Middletown	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Middletown	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Middletown	*Navarretia paradoxinota*	Porter's navarretia	None	None	-	1B.3
Middletown	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mount St. Helena	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Mount St. Helena	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Mount St. Helena	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Mount St. Helena	*Aquila chrysaetos*	golden eagle	None	None	FP ; WL	-
Mount St. Helena	*Falco peregrinus anatum*	American peregrine falcon	Delisted	Delisted	FP	-
Mount St. Helena	*Stygobromus cherylae*	Barr's amphipod	None	None	-	-
Mount St. Helena	*Lavinia symmetricus ssp. 4*	Clear Lake - Russian River roach	None	None	SSC	-
Mount St. Helena	*Hysterocarpus traski pomo*	Russian River tule perch	None	None	SSC	-
Mount St. Helena	*Oncorhynchus kisutch pop. 4*	coho salmon - central California coast ESU	End	End	-	-
Mount St. Helena	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
Mount St. Helena	*Oncorhynchus tshawytscha pop. 17*	chinook salmon - California coastal ESU	Threat	None	-	-
Mount St. Helena	*Trachykele hartmani*	serpentine cypress wood-boring beetle	None	None	-	-
Mount St. Helena	*Pekania pennanti*	fisher - West Coast DPS	None	Threat	SSC	-
Mount St. Helena	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Mount St. Helena	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Mount St. Helena	*Emys marmorata*	western pond turtle	None	None	SSC	-
Mount St. Helena	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
Mount St. Helena	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Mount St. Helena	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
Mount St. Helena	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Mount St. Helena	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Mount St. Helena	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Mount St. Helena	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Mount St. Helena	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Mount St. Helena	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Mount St. Helena	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Mount St. Helena	*Limnanthes vinculans*	Sebastopol meadowfoam	End	End	-	1B.1
Mount St. Helena	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Mount St. Helena	*Sidalcea oregana ssp. valida*	Kenwood Marsh checkerbloom	End	End	-	1B.1
Mount St. Helena	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Mount St. Helena	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Mount St. Helena	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Mount St. Helena	*Leptosiphon latisectus*	broad-lobed leptosiphon	None	None	-	4.3
Mount St. Helena	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
Mount St. Helena	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Mount St. Helena	*Stuckenia filiformis ssp. alpina*	slender-leaved pondweed	None	None	-	2B.2
Mount St. Helena	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Mount St. Helena	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Mount St. Helena	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Mount St. Helena	*Horkelia parryi*	Parry's horkelia	None	None	-	1B.2
Mount St. Helena	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
St. Helena	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
St. Helena	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
St. Helena	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
St. Helena	*Haliaeetus leucocephalus*	bald eagle	Delisted	End	FP	-
St. Helena	*Ardea herodias*	great blue heron	None	None	-	-
St. Helena	*Progne subis*	purple martin	None	None	SSC	-
St. Helena	*Setophaga petechia*	yellow warbler	None	None	SSC	-
St. Helena	*Athene cunicularia*	burrowing owl	None	None	SSC	-
St. Helena	*Strix occidentalis caurina*	northern spotted owl	Threat	Threat	SSC	-
St. Helena	*Oncorhynchus mykiss irideus pop. 8*	steelhead - central California coast DPS	Threat	None	-	-
St. Helena	*Bombus caliginosus*	obscure bumble bee	None	None	-	-
St. Helena	*Erethizon dorsatum*	North American porcupine	None	None	-	-
St. Helena	*Antrozous pallidus*	pallid bat	None	None	SSC	-
St. Helena	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
St. Helena	*Myotis evotis*	long-eared myotis	None	None	-	-
St. Helena	*Myotis thysanodes*	fringed myotis	None	None	-	-
St. Helena	*Myotis yumanensis*	Yuma myotis	None	None	-	-
St. Helena	*Emys marmorata*	western pond turtle	None	None	SSC	-
St. Helena	*Northern Vernal Pool*	Northern Vernal Pool	None	None	-	-
St. Helena	*Eryngium jepsonii*	Jepson's coyote-thistle	None	None	-	1B.2
St. Helena	*Lomatium repostum*	Napa lomatium	None	None	-	4.3
St. Helena	*Erigeron biolettii*	streamside daisy	None	None	-	3
St. Helena	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
St. Helena	*Harmonia nutans*	nodding harmonia	None	None	-	4.3
St. Helena	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
St. Helena	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
St. Helena	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
St. Helena	*Amorpha californica var. napensis*	Napa false indigo	None	None	-	1B.2
St. Helena	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
St. Helena	*Astragalus claranus*	Clara Hunt's milk-vetch	End	Threat	-	1B.1
St. Helena	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
St. Helena	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
St. Helena	*Trichostema ruygtii*	Napa bluecurls	None	None	-	1B.2
St. Helena	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
St. Helena	*Hesperolinon sharsmithiae*	Sharsmith's western flax	None	None	-	1B.2
St. Helena	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None	-	1B.2
St. Helena	*Toxicoscordion fontanum*	marsh zigadenus	None	None	-	4.2
St. Helena	*Clarkia gracilis ssp. tracyi*	Tracy's clarkia	None	None	-	4.2
St. Helena	*Castilleja ambigua var. ambigua*	johnny-nip	None	None	-	4.2
St. Helena	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
St. Helena	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
St. Helena	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
St. Helena	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
St. Helena	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
St. Helena	*Navarretia cotulifolia*	cotula navarretia	None	None	-	4.2
St. Helena	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
St. Helena	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
St. Helena	*Ranunculus lobbii*	Lobb's aquatic buttercup	None	None	-	4.2
St. Helena	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
St. Helena	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
St. Helena	*Ceanothus pinetorum*	Kern ceanothus	None	None	-	4.3
St. Helena	*Ceanothus purpureus*	holly-leaved ceanothus	None	None	-	1B.2
St. Helena	*Ceanothus sonomensis*	Sonoma ceanothus	None	None	-	1B.2
St. Helena	*Brodiaea leptandra*	narrow-anthered brodiaea	None	None	-	1B.2
St. Helena	*Triteleia lugens*	dark-mouthed triteleia	None	None	-	4.3
Whispering Pines	*Dicamptodon ensatus*	California giant salamander	None	None	SSC	-
Whispering Pines	*Rana boylii*	foothill yellow-legged frog	None	Cand Threat	SSC	-
Whispering Pines	*Rana draytonii*	California red-legged frog	Threat	None	SSC	-
Whispering Pines	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Whispering Pines	*Progne subis*	purple martin	None	None	SSC	-
Whispering Pines	*Bombus occidentalis*	western bumble bee	None	None	-	-
Whispering Pines	*Antrozous pallidus*	pallid bat	None	None	SSC	-
Whispering Pines	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	-
Whispering Pines	*Lasiurus blossevillii*	western red bat	None	None	SSC	-
Whispering Pines	*Lasiurus cinereus*	hoary bat	None	None	-	-
Whispering Pines	*Myotis evotis*	long-eared myotis	None	None	-	-
Whispering Pines	*Myotis thysanodes*	fringed myotis	None	None	-	-
Whispering Pines	*Emys marmorata*	western pond turtle	None	None	SSC	-
Whispering Pines	*Sceloporus graciosus graciosus*	northern sagebrush lizard	None	None	-	-
Whispering Pines	*Central Valley Drng Rainbow Trout/Cyprinid Str*	Cent Vall Drng Rainbow Trout/Cyprinid Str	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	*Clear Lake Drainage Resident Trout Stream*	Clear Lake Drainage Resident Trout Stream	None	None	-	-
Whispering Pines	*Grimmia torenii*	Toren's grimmia	None	None	-	1B.3
Whispering Pines	*Mielichhoferia elongata*	elongate copper moss	None	None	-	4.3
Whispering Pines	*Chlorogalum pomeridianum var. minus*	dwarf soaproot	None	None	-	1B.2
Whispering Pines	*Eryngium constancei*	Loch Lomond button-celery	End	End	-	1B.1
Whispering Pines	*Asclepias solanoana*	serpentine milkweed	None	None	-	4.2
Whispering Pines	*Erigeron greenei*	Greene's narrow-leaved daisy	None	None	-	1B.2
Whispering Pines	*Helianthus exilis*	serpentine sunflower	None	None	-	4.2
Whispering Pines	*Layia septentrionalis*	Colusa layia	None	None	-	1B.2
Whispering Pines	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None	-	1B.2
Whispering Pines	*Cryptantha dissita*	serpentine cryptantha	None	None	-	1B.2
Whispering Pines	*Arabis blepharophylla*	coast rockcress	None	None	-	4.3
Whispering Pines	*Streptanthus brachiatus ssp. brachiatus*	Socrates Mine jewelflower	None	None	-	1B.2
Whispering Pines	*Streptanthus brachiatus ssp. hoffmanii*	Freed's jewelflower	None	None	-	1B.2
Whispering Pines	*Streptanthus hesperidis*	green jewelflower	None	None	-	1B.2
Whispering Pines	*Legenere limosa*	legenere	None	None	-	1B.1
Whispering Pines	*Calystegia collina ssp. oxyphylla*	Mt. Saint Helena morning-glory	None	None	-	4.2
Whispering Pines	*Sedella leiocarpa*	Lake County stonecrop	End	End	-	1B.1
Whispering Pines	*Carex praticola*	northern meadow sedge	None	None	-	2B.2
Whispering Pines	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None	-	1B.3
Whispering Pines	*Arctostaphylos stanfordiana ssp. raichei*	Raiche's manzanita	None	None	-	1B.1
Whispering Pines	*Astragalus breweri*	Brewer's milk-vetch	None	None	-	4.2
Whispering Pines	*Astragalus clevelandii*	Cleveland's milk-vetch	None	None	-	4.3
Whispering Pines	*Astragalus rattanii var. jepsonianus*	Jepson's milk-vetch	None	None	-	1B.2
Whispering Pines	*Lupinus sericatus*	Cobb Mountain lupine	None	None	-	1B.2
Whispering Pines	*Erythronium helenae*	St. Helena fawn lily	None	None	-	4.2
Whispering Pines	*Fritillaria purdyi*	Purdy's fritillary	None	None	-	4.3
Whispering Pines	*Hesperolinon adenophyllum*	glandular western flax	None	None	-	1B.2
Whispering Pines	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None	-	1B.2
Whispering Pines	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None	-	1B.2
Whispering Pines	*Calyptridium quadripetalum*	four-petaled pussypaws	None	None	-	4.3
Whispering Pines	*Cordylanthus tenuis ssp. brunneus*	serpentine bird's-beak	None	None	-	4.3
Whispering Pines	*Cordylanthus tenuis ssp. capillaris*	Pennell's bird's-beak	End	Rare	-	1B.2
Whispering Pines	*Erythranthe nudata*	bare monkeyflower	None	None	-	4.3
Whispering Pines	*Antirrhinum subcordatum*	dimorphic snapdragon	None	None	-	4.3
Whispering Pines	*Antirrhinum virga*	twig-like snapdragon	None	None	-	4.3
Whispering Pines	*Penstemon newberryi var. sonomensis*	Sonoma beardtongue	None	None	-	1B.3
Whispering Pines	*Calamagrostis ophitidis*	serpentine reed grass	None	None	-	4.3
Whispering Pines	*Imperata brevifolia*	California satintail	None	None	-	2B.1
Whispering Pines	*Panicum acuminatum var. thermale*	Geysers panicum	None	End	-	1B.2
Whispering Pines	*Collomia diversifolia*	serpentine collomia	None	None	-	4.3
Whispering Pines	*Leptosiphon acicularis*	bristly leptosiphon	None	None	-	4.2
Whispering Pines	*Leptosiphon grandiflorus*	large-flowered leptosiphon	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	*Leptosiphon jepsonii*	Jepson's leptosiphon	None	None	-	1B.2
Whispering Pines	*Navarretia leucocephala ssp. bakeri*	Baker's navarretia	None	None	-	1B.1
Whispering Pines	*Navarretia leucocephala ssp. pauciflora*	few-flowered navarretia	End	Threat	-	1B.1
Whispering Pines	*Navarretia leucocephala ssp. plieantha*	many-flowered navarretia	End	End	-	1B.2
Whispering Pines	*Eriogonum nervulosum*	Snow Mountain buckwheat	None	None	-	1B.2
Whispering Pines	*Delphinium uliginosum*	swamp larkspur	None	None	-	4.2
Whispering Pines	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None	-	1B.1
Whispering Pines	*Ceanothus divergens*	Calistoga ceanothus	None	None	-	1B.2
Whispering Pines	*Horkelia bolanderi*	Bolander's horkelia	None	None	-	1B.2

KEY:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A = Presumed extinct in California, but extant elsewhere
2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.
2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
3 = Plants about which we need more information (Review List)
3.1 = Plants about which we need more information (Review List); seriously threatened in California
3.2 = Plants about which we need more information (Review List); fairly threatened in California
3.3 = Plants about which we need more information (Review List); not very threatened in California
4.1 = Plants of limited distribution (watch list); seriously threatened in California
4.2 = Plants of limited distribution (watch list); fairly threatened in California
4.3 = Plants of limited distribution (watch list); not very threatened in California

CDFW / State and Federal Status:

SE/ST/SD = State Endangered/Threatened/Delisted
SC/SCD = State Candidate for Listing/Delisting
SSC = CDFW Species of Special Concern
SFP = State Fully Protected
WL = CDFW Watch List
FE/FT/FD = Federal Endangered/Threatened/Delisted
FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting
FC = Federal Candidate

State and Federal Status:

Threat = Threatened
End = Endangered
Prop = Proposed
Cand = Candidate
Cand End/Threat = State Candidate for Endangered/Threatened

APPENDIX B

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM RESULTS

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
supported by the
CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP
and maintained by the
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
Database Version: 9.0

SPECIES SUMMARY REPORT

FE = Federal Endangered
FT = Federal Threatened
CE = California Endangered
CT = California Threatened
CF = California Fully Protected
CP = California Protected
SC = California Species of Special Concern
PE = Federally-Proposed Endangered
PT = Federally-Proposed Threatened
FC = Federal Candidate
BL = BLM Sensitive
FS = USFS Sensitive
CD = CDF Sensitive
HA = Harvest

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

ID	Species Name	Status	Native/Introduced
A020	SPECKLED BLACK SALAMANDER		NATIVE
B051	GREAT BLUE HERON	CD	NATIVE
B057	CATTLE EGRET		NATIVE
B111	WHITE-TAILED KITE	CF BL	NATIVE
B114	NORTHERN HARRIER	SC	NATIVE
B115	SHARP-SHINNED HAWK		NATIVE
B116	COOPER'S HAWK		NATIVE
B117	NORTHERN GOSHAWK	SC BL FS CD	NATIVE
B119	RED-SHOULDERED HAWK		NATIVE
B123	RED-TAILED HAWK		NATIVE
B124	FERRUGINOUS HAWK		NATIVE
B125	ROUGH-LEGGED HAWK		NATIVE
B251	BAND-TAILED PIGEON	HA	NATIVE
B260	GREATER ROADRUNNER		NATIVE
B263	FLAMMULATED OWL		NATIVE
B264	WESTERN SCREECH OWL		NATIVE
B265	GREAT HORNED OWL		NATIVE
B267	NORTHERN PYGMY OWL		NATIVE
B269	BURROWING OWL	SC BL	NATIVE
B272	LONG-EARED OWL	SC	NATIVE
B273	SHORT-EARED OWL	SC	NATIVE
B274	NORTHERN SAW-WHET OWL		NATIVE
B277	COMMON POORWILL		NATIVE
B281	VAUX'S SWIFT	SC	NATIVE
B287	ANNA'S HUMMINGBIRD		NATIVE
B294	LEWIS' S WOODPECKER		NATIVE
B299	RED-BREASTED SAPSUCKER		NATIVE
B302	NUTTALL'S WOODPECKER		NATIVE
B303	DOWNY WOODPECKER		NATIVE
B304	HAIRY WOODPECKER		NATIVE
B305	WHITE-HEADED WOODPECKER		NATIVE
B307	NORTHERN FLICKER		NATIVE

B309	OLIVE-SIDED FLYCATCHER		SC	NATIVE
B317	HAMMOND'S FLYCATCHER			NATIVE
B318	DUSKY FLYCATCHER			NATIVE
B320	PACIFIC-SLOPE FLYCATCHER			NATIVE
B326	ASH-THROATED FLYCATCHER			NATIVE
B337	HORNED LARK			NATIVE
B338	PURPLE MARTIN		SC	NATIVE
B346	STELLER'S JAY			NATIVE
B348	WESTERN SCRUB-JAY			NATIVE
B350	CLARK'S NUTCRACKER			NATIVE
B356	MOUNTAIN CHICKADEE			NATIVE
B357	CHESTNUT-BACKED CHICKADEE			NATIVE
B358	OAK TITMOUSE			NATIVE
B360	BUSHTIT			NATIVE
B361	RED-BREASTED NUTHATCH			NATIVE
B362	WHITE-BREASTED NUTHATCH			NATIVE
B363	PYGMY NUTHATCH			NATIVE
B364	BROWN CREEPER			NATIVE
B368	BEWICK'S WREN		SC	NATIVE
B369	HOUSE WREN			NATIVE
B375	GOLDEN-CROWNED KINGLET			NATIVE
B376	RUBY-CROWNED KINGLET			NATIVE
B377	BLUE-GRAY GNATCATCHER			NATIVE
B381	MOUNTAIN BLUEBIRD			NATIVE
B385	SWAINSON'S THRUSH			NATIVE
B386	HERMIT THRUSH			NATIVE
B390	VARIED THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B398	CALIFORNIA THRASHER			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO		SC	NATIVE
B418	WARBLING VIREO			NATIVE
B425	ORANGE-CROWNED WARBLER			NATIVE
B430	YELLOW WARBLER		SC	NATIVE
B435	YELLOW-RUMPED WARBLER			NATIVE
B436	BLACK-THROATED GRAY WARBLER			NATIVE
B437	TOWNSEND'S WARBLER			NATIVE
B438	HERMIT WARBLER			NATIVE
B460	MACGILLIVRAY'S WARBLER			NATIVE
B475	BLACK-HEADED GROSBEAK			NATIVE
B477	LAZULI BUNTING			NATIVE
B482	GREEN-TAILED TOWHEE			NATIVE

B483	SPOTTED TOWHEE			SC			NATIVE
B493	BLACK-CHINNED SPARROW						NATIVE
B495	LARK SPARROW						NATIVE
B497	BELL'S SPARROW	FT		SC			NATIVE
B499	SAVANNAH SPARROW	CE		SC			NATIVE
B501	GRASSHOPPER SPARROW			SC			NATIVE
B504	FOX SPARROW						NATIVE
B506	LINCOLN'S SPARROW						NATIVE
B509	GOLDEN-CROWNED SPARROW						NATIVE
B510	WHITE-CROWNED SPARROW						NATIVE
B512	DARK-EYED JUNCO						NATIVE
B521	WESTERN MEADOWLARK						NATIVE
B524	BREWER'S BLACKBIRD						NATIVE
B528	BROWN-HEADED COWBIRD						NATIVE
B532	BULLOCK'S ORIOLE						NATIVE
B537	CASSIN'S FINCH						NATIVE
B539	RED CROSSBILL						NATIVE
B542	PINE SISKIN						NATIVE
B543	LESSER GOLDFINCH						NATIVE
B544	LAWRENCE'S GOLDFINCH						NATIVE
B545	AMERICAN GOLDFINCH						NATIVE
B546	EVENING GROSBEAK						NATIVE
B554	PLUMBEOUS VIREO						NATIVE
B699	BARRED OWL						NATIVE
B773	AMERICAN REDSTART						NATIVE
B798	WHITE-THROATED SPARROW						NATIVE
B799	HARRIS'S SPARROW						NATIVE
B809	INDIGO BUNTING						NATIVE
M006	ORNATE SHREW	FE		SC			NATIVE
M012	TROWBRIDGE'S SHREW						NATIVE
M015	SHREW-MOLE						NATIVE
M018	BROAD-FOOTED MOLE			SC			NATIVE
M033	WESTERN RED BAT			SC	FS		NATIVE
M034	HOARY BAT						NATIVE
M037	TOWNSEND'S BIG-EARED BAT			SC	BL FS		NATIVE
M045	BRUSH RABBIT	FE	CE			HA	NATIVE
M047	AUDUBON'S COTTONTAIL					HA	NATIVE
M051	BLACK-TAILED JACKRABBIT			SC		HA	NATIVE
M055	YELLOW-PINE CHIPMUNK						NATIVE
M057	SHADOW CHIPMUNK						NATIVE
M059	SONOMA CHIPMUNK						NATIVE
M075	GOLDEN-MANTLED GROUND SQUIRREL						NATIVE
M079	DOUGLAS' SQUIRREL					HA	NATIVE
M080	NORTHERN FLYING SQUIRREL			SC	FS		NATIVE
M081	BOTTA'S POCKET GOPHER						NATIVE

M084	MAZAMA POCKET GOPHER						NATIVE
M087	SAN JOAQUIN POCKET MOUSE			SC	BL		NATIVE
M105	CALIFORNIA KANGAROO RAT			SC			NATIVE
M113	WESTERN HARVEST MOUSE						NATIVE
M117	DEER MOUSE			SC			NATIVE
M119	BRUSH MOUSE						NATIVE
M120	PINYON MOUSE						NATIVE
M129	CALIFORNIA RED-BACKED VOLE						NATIVE
M134	CALIFORNIA VOLE	FE	CE	SC	BL		NATIVE
M151	BLACK BEAR					HA	NATIVE
M160	AMERICAN BADGER			SC		HA	NATIVE
M177	ELK					HA	NATIVE
M181	MULE DEER					HA	NATIVE
R022	WESTERN FENCE LIZARD						NATIVE
R023	COMMON SAGEBRUSH LIZARD				BL		NATIVE
R039	TIGER WHIPTAIL						NATIVE
R040	SOUTHERN ALLIGATOR LIZARD						NATIVE
R042	NORTHERN ALLIGATOR LIZARD						NATIVE
R057	GOPHERSNAKE			SC			NATIVE
R058	EASTERN KINGSNAKE						NATIVE
R060	LONG-NOSED SNAKE						NATIVE
R071	DESERT NIGHTSNAKE						NATIVE

Total Number of Species: 144

Query Parameters

Included Locations
Lake Co
Included Location Seasons
Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)
Annual Grassland, Blue Oak Woodland, Chamise-redshank Chaparral, Douglas-fir, Evergreen Orchard, Lacustrine, Montane Hardwood, Montane Hardwood-conifer, Ponderosa Pine, Urban, Vineyard

Habitat Suitability Threshold
Reproduction - Low, Cover - Low, Feeding - Low

Included Habitat Seasons
Migrant, Summer, Winter, Yearlong

Excluded Elements
Bank, Barren, Bogs, Brush Pile, Buildings, Carrion, Cave, Cliff, Fences, Kelp, Lakes, Lithic, Log - Large (hollow), Log - Large (rotten), Log - Large (sound), Mud Flats, Rivers, Rock, Sand Dune, Shrub/water, Slash - Large (hollow), Slash - Large (rotten), Slash - Large (sound), Soil - Saline, Soil - Sandy, Springs, Springs - Hot, Springs - Mineral, Steep Slope, Streams - Intermittent, Streams - Permanent, Talus, Tidepools, Transmission Lines, Vernal Pools, Water, Water - Created Body, Water - Fast, Water - Slow

Included Species All Species Included
Included Special Statuses Native

APPENDIX C

DELINEATION REPORT

DELINEATION OF WATERS OF THE U.S.

1.0 Methodology

1.1 Purpose of Delineation: This delineation has been conducted at the request of the local permitting agency in order to determine the extent of possible waters of the U.S. on the project.

1.2 Delineation Procedure: This delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, 2008*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement* 1973, and Mason's *Flora of the Marshes of California,*1957, were used as supplemental texts; however, all nomenclature and wetland indicator status have been checked with the U.S. Army Corps of Engineers. 2016. *National Wetland Plant Lists: Arid West* and *California*.

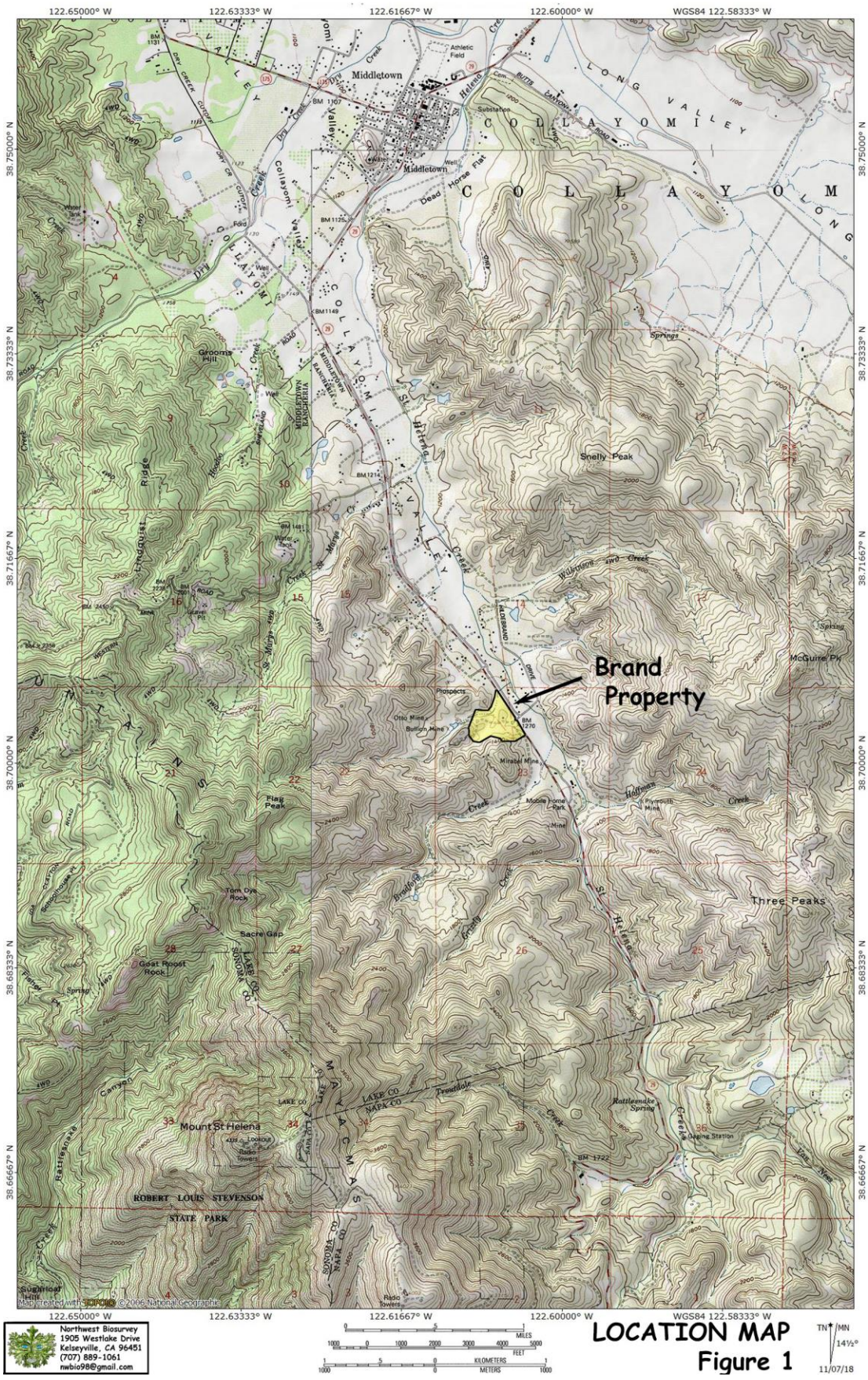
The survey included use of Google satellite images, 7.5' USGS quadrangle maps, and LIDAR mapped overlays along with an extensive foot survey.

1.3 Delineation Dates: Delineation fieldwork was completed on May 28, 2018.

1.4 Delineation Staff: The delineation was conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has more than 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

2.0 Existing Conditions

2.1 Location: The project site is located at 23087 Highway 29, Middletown, California (APN 013-028-81; Sec. 23, T10N R06W, Detert Reservoir, Calif. 7½' Topographic Map). A location map is provided in **Figure 1**.



Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

MILES 0 1 2 3 4 5
FEET 1000 0 1000 2000 3000 4000 5000
KILOMETERS 1 0 1
METERS 1000 0 1000

LOCATION MAP
Figure 1

TN MN 14½° 11/07/18

2.1 Site Topography and Drainage: The Brand property occupies an eastern spur of Flag Peak in the Mayacamas Mountains. Along its northern, western, and southern edges, the property rises onto adjacent slopes while the center of the parcel opens into the southern end of the Collayomi Valley along St. Helena Creek. Along its western and southern boundaries, the property rises to an elevation of 1,400 feet msl (mean sea level) while the open eastern boundary drops to the elevation of the Valley at 1,280 feet msl.

The parcel drains north to an unnamed tributary of St. Helena Creek which in turn drains east across the narrow valley to St. Helena Creek. The area topography is shown in **Figure 1**.

2.3 Soils: Based on the *Soil Survey of Lake County, California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

- **Bressa-Millsholm loams, 15-30% slopes (soil unit 120):**

  This unit is on hills and consists of 45% Bressa loam and 35% Millsholm loam. Vegetation is mainly annual grasses and oaks. The Bressa soil is moderately deep and well-drained, and formed in material weathered from sandstone. The upper 12 inches is typically light brown or grey loam, above 14 inches of clay loam. Fractured sandstone occurs at a depth of 26 inches. Permeability is moderately slow, runoff is rapid, and erosion hazard is severe. The Millsholm soil is shallow and well-drained and formed from sandstone or shale. The surface area is brown loam 3 inches thick over pale brown clay loam 8 inches thick. Fractured sandstone is at 11 inches. Permeability is moderate, runoff is rapid and hazard of erosion is severe. This soil type occurs in the center of the parcel.

- **Jafa loam, 5-15% slopes (soil unit 145):**

  This very deep, well-drained soil is on terraces and fans. It formed in alluvium derived from mixed rock sources. The upper part of the surface layer is typically pale brown loam for 8 inches over 8 inches of light brown loam. The upper 16 inches of the subsoil is brown clay loam over 8 inches of reddish yellow clay loam. Permeability is moderately slow. Surface runoff is medium and the hazard of erosion is moderate. Vegetation on this unit includes tree species such as ponderosa pine, Douglas fir, and California black oak. The understory typically consists of brush, grass, and forbs, including manzanita, buckbrush, soft chess, blue wildrye, and poison oak. The east portion of the parcel near Highway 29 contains this soil type.

- **Speaker-Maymen-Millsholm association, 30-50% slopes (soil unit 227):**

  This map unit is on hills and mountains. This soil unit is about 40% Speaker loam, 25% Maymen gravelly loam, and 15% Millsholm loam. The Speaker soil is on north- and

east-facing slopes, and the Maymen and Millsholm soils are on south- and west-facing slopes and on ridges. The Speaker soil is moderately deep and well drained. It formed in material weathered from sandstone or shale. Permeability is moderately slow. Runoff is rapid and the hazard of erosion is severe. The Maymen soil is shallow and somewhat excessively drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid and the hazard from erosion is severe. The Millsholm soil is shallow and well drained. It formed in material weathered from sandstone or shale. Permeability is moderate, runoff is rapid, and the hazard of erosion is severe. Vegetation is mostly conifers and hardwoods on the Speaker soil, including Douglas fir, ponderosa pine, and black oak. Brush and hardwoods occur on the Maymen soil, and oaks and annual grasses on the Millsholm soil. This soil type is found in the steeper areas in the west and southern parts of the property.

3.0 Aquatic Resources Results

3.1 Waters of the U.S: Waters of the U.S. within the property consist of ephemeral and intermittent stream channels and ponds. No wetlands were delineated. The total area of all delineated waters is **0.6875 acre**. The delineation results are shown below in **Table 1**.

TABLE 1. POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

Name	Cowardin Code	HGM Code	Waters Type	Latitude	Longitude	Length (ft)	Width (ft)	Area (acres)
Stream Segments								
ES1	R6	-	NRPW	38.704213°	-122.607630°	1157	4.2	0.1116
ES2	R6	-	NRPW	38.703900°	-122.608080°	125	3.0	0.0086
ES3	R6	-	NRPW	38.703657°	-122.608241°	113	1.0	0.0026
ES4	R6	-	NRPW	38.703653°	-122.608045°	66	2.5	0.0038
ES5	R6	-	NRPW	38.702107°	-122.608204°	122	3.0	0.0084
ES6	R6	-	NRPW	38.703423°	-122.606845°	640	4.0	0.0588
ES7	R6	-	NRPW	38.704785°	-122.606406°	406	3.0	0.0280
Total Stream Segments:								**0.2217**
Ponds								
P1	L1	-	IMPNDMNT	38.702605°	-122.607807°	-	-	0.3359
P2	L1	-	IMPNDMNT	38.704295°	-122.606819°	-	-	0.1299
Total Ponds:								**0.4658**
Total Possible Waters of U.S. Within Survey Area								**0.6875**

Project Name: Brand

Contact: Jon M Webb, PLS 6709
Albion Surveys, Inc.
1113 Hunt Avenue
Saint Helena, CA 94574
jwebb@albionsurveys.com

Delineator: Steve Zalusky
Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 95451
(707) 889-1061

Date of Map: November 8, 2018

POSSIBLE AQUATIC RESOURCES WITHIN THE SURVEY AREA

Name	Cowardin Code	HGM Code	Waters Type	Latitude	Longitude	Length (ft)	Width (ft)	Area (acres)
Stream Segments								
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P2	L1	-	IMPNDMNT	38.704295°	-122.606819°	-	-	0.1299
							Total Ponds:	0.4658
Total Possible Waters of U.S. Within Survey Area								0.6875

Legend

- Map Reference Point
- Proposed Parcel Boundaries
- Survey Boundary
- Upland Sample Point
- Wetland Sample Point

Wetlands (0.0000 Acres)

- Vernal Pools (0.0000 Acres)
- Wetlands (0.0000 Acres)

Other Waters (0.6875 Acres)

- Ephemeral Drainages (0.2217 Acres)
- Intermittent Streams (0.0000 Acres)
- Perennial Streams (0.0000 Acres)
- Ponds (0.4658 Acres)

Map Source: Google Earth
Date: 2/14/2018
100'

38.704303°
-122.609044°

proposed parcel boundaries

ES1
ES2
ES3
ES4
ES5
ES6
ES7
P1
P2

State Highway 29

38.702285°
-122.604075°

Property Boundary

N
1" = 100'

Northwest Biosurvey
1905 Westlake Drive
Kelseyville, CA 96451
(707) 889-1061
nwbio98@gmail.com

Figure 3

MITIGATION MONITORING AND REPORTING PROGRAM

Brand Family Initial Study, IS 17-31
General Plan Amendment (GPAP 17-01)
Rezone (RZ 17-01)
Parcel Map (PM 17-01)

	Mitigation Measure	Implementation Responsibility	Monitoring & Reporting Responsibility	Timing	Date Implemented
Air Quality					
The project has the potential to create fugitive dust during construction and expose sensitive receptors to pollutant concentrations.	AQ-1: Work practices shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles.	Applicant; project contractor	Applicant	Life of project	
	AQ-2: Vehicles and equipment shall be well maintained and in compliance with State emission requirements. The permit holder shall obtain all necessary for any diesel generators or diesel engines installed as operating, support, or emergency backup equipment for the Lake County Air Quality Management District.	Applicant; project contractor	Applicant; Lake County Air Quality Management District.	Life of project	
	AQ-3: Vegetation that is removed for any development must be properly disposed. The permit holder shall chip vegetation and spread the material for erosion control.	Applicant; project contractor	Applicant	Life of project	

	AQ-4: All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	Applicant; project contractor	Applicant	Life of the project	
	AQ-5: According to County Records, parcel number 013-028-82 may have known Serpentine soils. Therefore, prior to any ground disturbance and/or future development the applicant shall contact the Lake County Air Quality Management District as a Dust Mitigation Plan may be required.	Applicant; project contractor	Applicant; Lake County Air Quality Management District	Prior to ground disturbance	
	AQ-6: Work practices and/or future development shall minimize vehicular and fugitive dust to reduce the impact of fugitive dust emissions to a less than significant level in staging areas, work areas, and adjoining roads by use of water, paving or other acceptable dust palliatives to ensure that dust does not leave the property. Access to project areas shall be limited to authorized vehicles.	Applicant; project contractor	Applicant	During construction; Life of project	
	AQ-7: All vegetative waste from development activities shall be composted and/or chipped as a means of disposal. All vegetation removed shall be chipped and spread for ground cover and erosion control. Site development and vegetation disposal shall not create a nuisance odors, smoke or dust.	Applicant; project contractor	Applicant	Life of project	

	AQ-8: Burning of vegetative material is discourage, but if not alternative material is available, a Smoke Management Plan shall be submitted to the Lake County Air Quality Management District and the local fire protection District for review and approval.	Applicant; project contractor	Applicant; Lake County Air Quality Management District	Life of project	
Biological Resources					
Construction activities associated with the proposed Project have the potential to indirectly significantly impact habitat for sensitive species	BIO 1: All residential development and its access shall be emphasized within the central, valley portions of the project parcels and be accessed by existing ranch roads.	Applicant; project contractor	Applicant	Life of project	
	BIO-2: Development within the Douglas Fir Forest in the southern portions of the property shall be restricted to the margins of this habitat and/or to adjacent mixed oak woodlands along the eastern edge of the property within the 2.1 ace area on parcel four delineated as "Development Area, 2.1 Acres on final map.	Applicant; project contractor	Applicant; Community Development Department	Life of project	
	BIO-3: The use of fencing shall be restricted to residential yards and existing vineyard development.	Applicant; project contractor	Applicant	During construction	
	BIO-4: In order to avoid potential impacts to the Yellow Legged Frog, any development within the active channel of the creek extending along the northern property boundary, shall occur prior to April 1 or after June 15, by which time frog larvae and young are mobile and independent. Disturbance of the channel structure shall be limited to the immediate construction site. Alternatively, work may occur when the channel is naturally dry.	Applicant; project contractor	Applicant	Life of project	

	• In the event that work must occur within the active channel when water is present between April 1 and June 15, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event. • Any foothill yellow-legged adult or larval frogs within the work area shall be captured and transferred to an adjacent, unaffected stream segment. • In the event that eggs of this species are found during these surveys, in-channel activities shall be delayed for one week (eggs usually hatch within 5 days) and the site re-inspected to determine if eggs have hatched. If not, an additional delay shall be required until the eggs have hatched.				
	<u>BIO-5:</u> In order to avoid potential impacts to the Western Pond Turtle, all work within the channel of the creek extending along the northern edge of the property, or within ponds should occur after August 15 but before the onset of winter rains and the end of the grading season (October 15). Downed trees, stumps and other basking sites and refuges within these aquatic habitats shall remain undisturbed. • In the event that work must occur within the active channel between April 1 and	Applicant; project contractor	Applicant; Qualified Biologist	During construction	

	June 15, or within a pond, all such work shall be performed in as few events as possible and all required materials and equipment shall be on-site prior to the event in order to avoid delays which would prolong the disturbance period. The period of disturbance shall be held to the minimal amount of time necessary to accomplish the required tasks. A qualified biologist with a valid California Department of Fish and Wildlife collecting permit shall be on-site during each day of the active channel disturbance event. • In the event that western pond turtles are identified, a qualified biologist with a valid California Department of Fish and Wildlife collecting permit should be present during all construction activities at the crossing site.				
	BIO-6: To avoid any potential impacts to the White-tailed kites and/or Purple Martins any vineyard development, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31). • If construction during the nesting season cannot be avoided, any required vegetation removal shall be the minimal amount necessary for development and shall be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a Construction buffer shall be established in consultation with California Department of Fish and Wildlife staff.	Applicant; Project contractor	Applicant; California Department of Fish and Wildlife	During construction	

	Said buffer shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.				
	BIO-7: To avoid potential impacts to the Pallid Bat, any tress to be removed (outside of the dates listed below), that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen (14) days prior to tree removal. Suitable trees include those with hollows and/or shedding bark. • If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.	Applicant; Project contractor	Applicant; Qualified Biologist	During construction	
	BIO-8: Placement of any fill and/or any project improvements/ development that results in the discharge of dredged and/or fill material into potential jurisdictional areas on the project sites shall require authorization from the following agencies, which included but is not limited to the following: • U.S Army Corps of Engineers Nationwide Permit. • Regional Water Quality Control Board pursuant to Sections 404 and 401 of the Clean Water Act	Applicant; Project contractor	Applicant; U.S. Army Corps of Engineers; Regional Water Quality Control Board; California Dept. of Fish and Wildlife	During construction; Life of project	

	• California Department of Fish and Wildlife – 1601/1604 Stream Alteration Agreement.				
	BIO-9: Any development shall maintain a minimum of a thirty (30) foot or greater setback from top of bank for all waterways located on project parcels.	Applicant; Project contractor	Applicant; Qualified Biologist	Life of project	
	BIO-10: Prior to any work occurring in and/or near any waterway, the applicant shall submit Erosion and Sediment Control Plans and a Storm Water Management Plan to the Community Development Department for review and approval. Said Plans shall protect the local watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. [Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required]	Applicant; Project contractor	Applicant; Community Development Department; Regional Water Quality Control Board	Prior to work near any waterway	
	BIO-11: All manzanita Shrub Areas shown on the final parcel map may contain Jepson Navarretia and a survey of the area in question shall be performed by a qualified Botanist prior to development.	Applicant; Project contractor	Applicant; Qualified Botanist	Prior to development	

Cultural Resources and Tribal Cultural Resources					
Construction of the Project has the potential for accidental discovery of unknown, undiscovered cultural resources and tribal cultural resources.	CUL-1: Should any archaeological, paleontological, or cultural materials be discovered during site development, all activity shall be halted in the vicinity of the find(s), the applicant shall notify the local overseeing Tribe, and a qualified archaeologist to evaluate the find(s) and recommend mitigation procedures, if necessary, subject to the approval of the Community Development Director. Should any human remains be encountered, the applicant shall notify the Sheriff's Department, the local overseeing Tribe, and a qualified archaeologist for proper internment and Tribal rituals per Public Resources Code Section 5097.98 and Health and Safety Code 7050.5.	Project contractor; Qualified archaeologist	Applicant; Community Development Department	During site preparation and throughout construction activities	
	CUL-2: All employees shall be trained in recognizing potentially significant artifacts that may be discovered during ground disturbance. If any artifacts or remains are found, the local overseeing Tribe shall immediately be notified; a licensed archaeologist shall be notified, and the Lake County Community Development Director shall be notified of such finds.	Project contractor; Qualified archaeologist	Applicant; Community Development Department	Prior to site preparation and throughout construction activities	
Geology/Soils					
The project has the potential to result in substantial soil erosion	Implement Mitigation Measure AQ-5	See AQ-5	See AQ-5	See AQ-5	
	GEO-1: Prior to any ground disturbance, the permitted shall submit Erosion Control and Sediment Plans to the Community Development Department for review and approval. Said Erosion Control and Sediment Plans shall protect the local	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	

watershed from runoff pollution through the implementation of appropriate Best Management Practices (BMPs) in accordance with the Grading Ordinance. Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. All BMP's shall be maintained for life of the project.				
GEO-2: Prior to any ground disturbance, (if applicable), the permit holder shall submit and obtain a Grading Permit from the Community Development. The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage Regulations to the maximum extent practicable. The project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the County storm drainage system. BMPs typically include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance with Chapters 29 and 30 of the Lake County Code.	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	
GEO-3: Excavation, filling, vegetation clearing or other disturbance of the soil shall not occur between October 15 and April 15 unless authorized by the Community Development Director. The actual dates of this defined grading period may be adjusted according to weather and	Applicant; Project contractor	Applicant; Community Development Department	Prior to ground disturbance	

	soil conditions at the discretion of the Community Development Director.				
	GEO-4: The permit holder shall monitor the site during the rainy season (October 15 - May 15), including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed.	Applicant; Project contractor	Applicant; Project contractor	Life of project	
Hazards					
The project may result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	HAZ-1: All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material.	Applicant; Project contractor	Applicant; Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board	Life of project	
	HAZ-2: The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak onto the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials.	Applicant; Project contractor	Applicant; Project contractor	Life of project	
	HAZ-3: Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.	Applicant; Project contractor	Applicant; Project contractor	Life of project	

	HAZ- 4: The storage of hazardous materials equal to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.	Applicant; Project contractor	Applicant; Lake County Environmental Health Division; Regional Water Quality Control Board.	Life of project	
	HAZ-5: The project design shall incorporate appropriate BMPs consistent with County and State Storm Water Drainage regulations to prevent or reduce discharge of all construction or post-construction pollutants and hazardous materials offsite or into the creek. The site shall be monitored during the rainy season (October 15-April 15) and erosion controls maintained.	Applicant; Project contractor	Applicant; Regional Water Quality Control Board	Life of project	
Hydrology/Water Quality					
The project has the potential to violate water quality standards, degrade water quality and alter drainage patterns	Implement Mitigation Measures BIO-9, BIO-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	BIO-9, Bio-10, GEO-1 through GEO-4,HAZ-3 and HAZ-5	