



CH2MHILL

CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833
Tel 916-920-0300
Fax 916-920-8463

DOCKET

09-AFC-3

DATE MAR 05 2010

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March 5, 2010

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Mr. Craig Hoffman
Project Manager
California Energy Commission
1516 Ninth Street, MS 15
Sacramento, CA 95814-5512

Subject: Mariposa Energy Project (09-AFC-03)
Supplement B, Additional Laydown Area Analysis

Dear Mr. Hoffman:

Attached please find one hard copy and one electronic copy on CD-ROM of the Mariposa Energy Project's Supplement B, Additional Laydown Area Analysis.

If you have any questions about this matter, please contact me at (916) 286-0348.

Sincerely,

CH2M HILL

Doug Urry
AFC Project Manager

Attachment

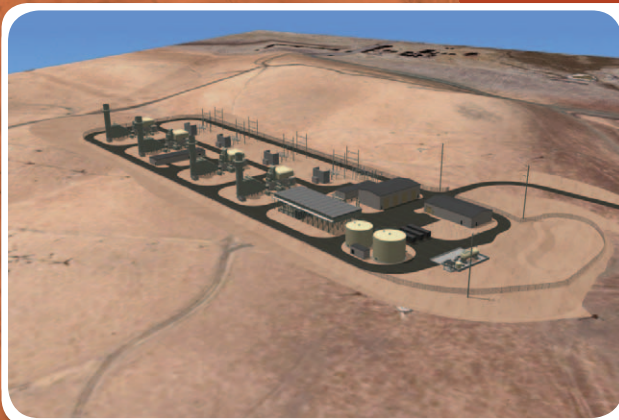
cc: B. Buchynsky, Mariposa Energy, LLC.

APPLICATION FOR CERTIFICATION
SUPPLEMENT B
ADDITIONAL LAYDOWN AREA ANALYSIS



SUBMITTED TO THE
California Energy Commission

FOR THE
Mariposa Energy Project



SUBMITTED BY


Mariposa Energy, LLC

TECHNICAL ASSISTANCE BY

 **CH2MHILL**

MARCH 2010

Supplement B

Additional Laydown Area Analysis

In support of the

Application for Certification

For the

Mariposa Energy Project
(09-AFC-03)

Submitted to

California Energy Commission

Submitted by

Mariposa Energy, LLC

With Assistance from

CH2MHILL

2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

March 2010

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1.0 Introduction

Following Mariposa Energy LLC's (Mariposa Energy) Application for Certification (AFC) submittal for the Mariposa Energy Project (MEP), Mariposa Energy began meeting with several potential project construction contractors and reviewing the project layout. As a result of input received from interested contractors, it was determined that additional space would be required to accommodate parking and material and equipment laydown.

Mariposa Energy prepared this supplement to provide California Energy Commission (CEC) staff with a detailed environmental analysis of an additional 4.2 acres of laydown area adjacent to the MEP site. This additional area includes the space directly between the MEP site and the original proposed laydown area, as well as a slight extension to the north. The construction laydown and parking area identified in the AFC, including the small laydown area access roads, totaled 5.0 acres. The additional 4.2-acre area proposed for laydown increases the total construction laydown and parking area size to 9.2 acres.

It should be underscored that the modification to the laydown area described in this supplement does not significantly affect most sections of the AFC.

2.0 Project Description Changes

Mariposa Energy is proposing changes to the construction laydown and parking area. The additional laydown area is adjacent to the project site and would increase the proposed 5.0-acre laydown area by approximately 4.2 acres, for a total of 9.2 acres (see Figure 1). This additional area effectively fills in the area between the project site and the originally proposed laydown area, and extends the northern boundary of the laydown area to line up with the project site. The additional laydown area will serve as a supplementary staging area during construction of the project. This addition to the laydown area will not significantly affect most sections of the AFC.

For ease of understanding the project changes, Table 2-1 identifies the figures that have been revised as a result of the project modification discussed above. All figures are provided at the end of this document.

TABLE 2-1
AFC Figure Modifications Made as a Result of Supplement

Modification	Reason for Change
Figures	
Figure 1.1-3R, Site Location	The Site Location has been revised to reflect the modification to the construction laydown area.
Figure 5.2-1R, Regional Biological Resources	The biological resources figure has been revised to reflect the modification to the construction laydown area.
Figure 5.2-2R, Biological Resources in the Project Area	The biological resources figure has been revised to reflect the modification to the construction laydown area.
Figure 5.2-4R, Special-Status Species Recorded in the Project Area	The biological resources figure has been revised to reflect the modification to the construction laydown area.
Figure 5.3-1R, Areas Surveyed for Cultural Resources	The cultural resources figure has been revised to reflect the modification to the construction laydown area.
Figure 5.4-1R, Surficial Geology Within Two Miles of Project Site	The geology figure has been revised to reflect the modification to the construction laydown area.
Figure 5.6-1R, Existing Land Use	The land use figure has been revised to reflect the modification to the construction laydown area.
Figure 5.6-2R, General Plan Designations	The general plan designations figure has been revised to reflect the modification to the construction laydown area.
Figure 5.6-3R, Zoning Districts	The zoning districts figure has been revised to reflect the modification to the construction laydown area.
Figure 5.6-4R, Important Farmland	The important farmland figure has been revised to reflect the modification to the construction laydown area.
Figure 5.7-1R, Noise Monitoring Locations	The noise monitoring locations figure has been revised to reflect the modification to the construction laydown area.
Figure 5.8-1R, Surficial Geology Within Two Miles of Project Site	The geology figure has been revised to reflect the modification to the construction laydown area.

TABLE 2-1
AFC Figure Modifications Made as a Result of Supplement

Modification	Reason for Change
Figure 5.11-1R, Soil Types	The soil types figure has been revised to reflect the modification to the construction laydown area.
Figure 5.13-1R, Key Observation Point Locations	The KOP locations figure has been revised to reflect the modification to the construction laydown area.
Figure 6.3-1R, Alternative Site Locations	The alternative site locations figure has been revised to reflect the modification to the construction laydown area.

3.0 Environmental Analysis of Proposed Change to the Project Description

The additional laydown area will serve as a supplementary staging area during project construction. An analysis of each of the environmental areas included in the AFC is presented below. Additionally, applicable laws, ordinances, regulations, and standards (LORS) have been reviewed to determine the additional laydown area's consistency with applicable LORS.

3.1 Air Quality

The additional 4.2-acre laydown area has been proposed primarily to increase the amount of area available for construction parking, staging, and storage. As a result, the additional area is not expected to increase the combustion emissions associated with the project, would not require a significant amount of earthmoving prior to use for construction laydown, and would only decrease the distance from the modeled fugitive dust area source to the nearest offsite receptor by less than 100 meters. Therefore, the additional 4.2-acre laydown area will not result in air quality impacts significantly greater than those analyzed in the AFC, and will comply with applicable LORS. Any potential air quality impacts associated with this Supplement will be less than significant.

3.2 Biological Resources

The additional laydown area will have no effect on the biological resources analysis provided in the AFC. The additional laydown area will temporarily affect an additional 4.2 acres of grassland habitat that is adjacent to the laydown area and project site described in the AFC. Please see Figures 5.2-1R, 5.2-2R, and 5.2-4R. The laydown area is located within the buffer analyzed in the AFC and, and no LORS will change as a result of the modification to the laydown area. No additional information beyond that described previously in the AFC is warranted. Therefore, any potential biological resources impacts associated with this Supplement will be less than significant.

3.3 Cultural Resources

The additional laydown area is located adjacent to the proposed MEP plant and current laydown area and is located in an agricultural area.

A literature search of the area was conducted during preparation of the AFC for Alameda County (provided by the Northwest Information Center [NWIC]) and San Joaquin County (from the Central California Information Center [CCIC]). CH2M HILL conducted a field survey of the project site, linears, and laydown area including at least a 50-foot buffer around each area, during preparation of the AFC. Figure 5.3-1R identifies the areas surveyed. No known resources exist within or near the additional laydown area.

The additional laydown area will not result in potential impacts greater than those analyzed in the AFC, and no LORS will change as a result of the modification to the laydown area. Therefore, any potential cultural resources impacts associated with this Supplement will be less than significant.

3.4 Geologic Resources and Hazards

The additional 4.2-acre laydown area is located adjacent to the MEP site and laydown area and has been used predominantly as grazing land. Figure 5.4-1R identifies the geology within 2 miles of the additional laydown area. Because the additional laydown area will not be subjected to significant excavation beyond what was originally proposed, the additional laydown area will not result in potential impacts greater than those analyzed in the AFC. No LORS will change as a result of the modification to the laydown area. Consequently, any potential impacts to geological resources associated with this Supplement will be less than significant.

3.5 Hazardous Materials Management

The chemical inventory for MEP (Table 5.5-2 in the Hazardous Materials section of the AFC) will not change with modification of the additional laydown area. The use of the additional laydown area will not result in any further modifications to the MEP chemical inventory, and will not result in any potential impacts greater than those analyzed in the AFC. No LORS will change as a result of the modification to the laydown area. Therefore, any potential hazardous materials management impacts associated with this Supplement will be less than significant.

3.6 Land Use

The additional laydown area will serve as a supplementary staging area during construction of the project. This additional laydown area, which is adjacent to the MEP site and proposed laydown area, will not create additional impacts to land use beyond those described in the AFC. Land use designations, zoning, and important farmlands designations are the same for the additional laydown area as those described in the AFC for the project site and proposed laydown area.

The additional laydown area is located entirely within Alameda County, on land currently used for agricultural purposes (see Figure 5.6-1R). Figure 5.6-2R shows the land use designations for the project area, including the additional laydown area.

The additional laydown area is zoned Agricultural (A-District), identical to that described in the AFC for the project site and laydown area. Figure 5.6-3R identifies the zoning designations for the additional laydown area.

A review of the “Important Farmlands” mapping by the Farmland Mapping and Monitoring Program (FMMP) concluded that the additional laydown area is located on grazing land, identical to both the project site and laydown area. Important farmlands are identified in Figure 5.6-4R.

As described in the Land Use section (Section 5.6) of the AFC, the Project Parcel is subject to a Williamson Act contract. All such lands in the vicinity of the project site are designated by the California Department of Conservation as “Williamson Act – Non-Prime Agricultural Land.” This is land that is enrolled under a Williamson Act contract but does not meet any of the criteria for classification as Prime Agricultural Land. It is defined as Open Space Land of Statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143). Most Non-Prime Land is expected to be in agricultural uses such as grazing or non-irrigated crops, although Non-Prime Land may also include other open space uses that are compatible with agriculture and consistent with local general plans (California Department of Conservation, 2008).

Construction of the additional laydown area would be compatible with uses allowed under Williamson Act contracts. Section 51238.1(a) of the Williamson Act states, “Uses approved on contracted lands shall be consistent with all of the following principles of compatibility:

1. The use will not significantly compromise the long-term productive agricultural capability of the subject contracted parcel or parcels or on other contracted lands in agricultural preserves.
2. The use will not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels or on other contracted lands in agricultural preserves.
3. The use will not result in the significant removal of adjacent contracted land from agricultural or open-space use.”

The AFC concluded that impacts associated with the conversion of farmland to nonagricultural uses will be less than significant based in part on the fact that 92 percent of the Project Parcel would remain in agricultural production and that the temporary laydown areas would be re-seeded with grasses designed to improve the food supply for cattle that graze on the property. The additional laydown area would be similarly re-seeded.

Use of the additional laydown area will not result in potential impacts greater than those analyzed in the AFC and will be consistent with applicable LORS. Therefore, any potential land use impacts associated with this Supplement will be less than significant.

3.7 Noise and Vibration

Use of the additional laydown area will not require the installation of any noise-producing equipment beyond that discussed in the AFC. Please see Figure 5.7-1R. Modification of the laydown area will not result in potential impacts greater than those analyzed in the AFC and will be consistent with applicable LORS. Therefore, any potential noise and vibration impacts associated with this Supplement will be less than significant.

3.8 Paleontology

The additional laydown area is located between the project site and the proposed laydown area, and has been previously disturbed by agricultural and grazing activities. Please see Figure 5.8-1R. The additional laydown area will not result in potential impacts greater than

those analyzed in the AFC, and will comply with applicable LORS. This is because soil disturbance will not exceed a depth of 2 feet (considered very shallow effects) during site preparation, and no subsurface disturbance will be associated with this laydown area. Therefore, any potential paleontological resources impacts associated with this Supplement will be less than significant.

3.9 Public Health

The additional 4.2-acre laydown area would not extend the overall construction schedule. Furthermore, the additional 4.2-acre laydown area is not expected to increase the combustion emissions associated with the project and would only decrease the distance from the modeled fugitive dust area source to the nearest offsite receptor by less than 100 meters. Therefore, the modification of the laydown area will not result in impacts greater than those analyzed in the AFC, and will comply with the applicable LORS. Any potential public health impacts associated with this Supplement will be less than significant.

3.10 Socioeconomics

Construction of the 4.2-acre additional laydown area would not substantially change the construction workforce. Modification of the laydown area will not result in potential impacts substantially different than those analyzed in the AFC and will be consistent with applicable LORS. Therefore, any potential socioeconomics impacts associated with this Supplement will be less than significant.

3.11 Soils

The additional laydown area will be built on a soil map unit described in the original AFC document (Altamont Clay, 3 to 15 percent slopes [AaC]). Soil map units for the additional laydown area are provided in Figure 5.11-1R.

Soil loss by water erosion during construction of the proposed project and additional laydown area were estimated using the Revised Universal Soil Loss Equation (RUSLE2). Results are summarized in Table 5.11-2R. Detailed calculations for soil loss estimates are presented in the attached Appendix A.

TABLE 5.11-2R
 Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation (RUSLE2)

Feature (acreage) ^b	Activity	Duration (months)	Estimates Using Revised Universal Soil Loss Equation ^a		
			Soil Loss (tons) without BMPs	Soil Loss (tons) with BMPs	Soil Loss (tons/yr) No Project
Site (9.7 acres estimated)	Grading	2	16.0	0.02	0.300
	Construction	14	5.2	0.15	---
Site Cut and Fill area (3.59 acres estimated)	Grading	3	13.0	0.17	0.15
	Construction	2	4.1	0.12	---
Site Access Road (0.6 acres estimated) (0.6 acres exposed; will be paved or graveled after grading)	Grading	1	0.9	0.0	0.029
	Construction	14	0.0	0.0	---
Site Laydown Area (9.2 acres estimated)	Grading	1	3.0	0.0	0.248
	Construction	14	0.0	0.0	---
Transmission Line (9.44 acres for construction; 0.0146 acre for pole footprints)	Grading	3	0.0385	0.019	0.00046
	Construction	6	1.37	0.038	---
Transmission Line Laydown Area (0.6 acres estimated)	Grading	0	0.000	0.000	0.009
	Construction	6	0.000	0.000	---
Water Supply Pipeline (1.38 acres for construction; 0.44 acre for trench)	Grading	6	1.806	0.010	0.0112
	Construction	8	0.458	0.013	---
Water Supply Laydown Area (1.0 acre estimated)	Grading	0	0.000	0.000	0.030
	Construction	8	0.000	0.000	---
Natural Gas Pipeline (0.99 acre for construction; 0.04 acre for trench)	Grading	2	0.05	0.0016	0.00258
	Construction	6	0.17	0.0049	---
Project Soil Loss Estimates	Construction Period	14	46.18	0.54	0.78

^aSoil losses (tons/acre/year) are estimated using RUSLE2 software available online [http://fargo.nserl.purdue.edu/rusle2_dataweb/].

- The soil characteristics were estimated using RUSLE2 soil profiles corresponding to the mapped NRCS soil unit.
- Soil loss (R-factors) were estimated using 2-year, 6-hour point precipitation frequency amount for the Mariposa Energy Facility project site found at [<http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>].
- Estimates of actual soil losses use the RUSLE2 soil loss times the duration and the affected area. The No Project Alternative estimate does not have a specific duration so loss is given as tons/year.

^b Acreages assume a 100 ft corridor for the transmission line, 75 ft corridor for the natural gas line, and a 30 ft corridor for the water pipeline construction. Trenches for the natural gas and water pipelines are assumed to be 3 ft and 2 ft wide, respectively. The transmission line pole holes each have a 10 ft diameter excavation footprint.

With the implementation of appropriate best management practices that will be required under the National Pollutant Discharge Elimination System (NPDES) permit, the total project soil loss of 0.54 ton is considered to be a minimal amount and would not constitute a significant impact. It should also be recognized that the estimate of accelerated soil loss by

water is very conservative (overestimate of soil loss) because it assumes only a single BMP (i.e., silt fencing); whereas, a SWPPP will require multiple soil erosion control measures.

Wind Erosion

Fugitive dust resulting from the wind erosion of exposed soil was calculated for the alternate water supply pipeline using the emission factor in AP-42 (EPA, 1995; also in Table 11.9-4 of BAAQMD, 2005).

Table 5.11-3R summarizes the mitigated total suspended particulates (TSP) predicted to be emitted from the site from grading and the wind erosion of exposed soil. Without mitigation, the maximum predicted erosion of material from the site is estimated at 1.306 tons over the course of the project construction cycle. This estimate would be reduced to approximately 0.457 ton by implementing basic mitigation measures, such as water application. These estimates are conservative because they make use of emission rates for a generalized soil rather than for site-specific soil properties.

TABLE 5.11-3R
Estimate of Total Suspended Particulates Emitted from Grading and Wind Erosion

Emission Source	Acreeage	Duration (months)	Unmitigated TSP (tons)	Mitigated TSP (tons)
Grading Dust:				
Project Site	9.69	2	0.333	0.117
Site Cut and Fill Area	3.59	3	0.185	0.065
Project Site Access Road	0.58	1	0.010	0.003
Project Site Laydown Area	4.60	1	0.079	0.028
Transmission Line Pole Holes	0.0146	3	0.00076	0.00026
Transmission Line Laydown Area	0.60	0	0.000	0.000
Water Supply Line Trench	0.44	6	0.045	0.016
Water Supply Line Laydown Area	1.00	0	0.000	0.000
Natural Gas Pipeline Trench	0.04	2	0.00137	0.00048
Wind Blown Dust:				
Project Site	0.97	12	0.368	0.129
Site Cut and Fill Area	3.59	2	0.227	0.080
Project Site Access Road	0.00	14	0.000	0.000
Project Site Laydown Area	0.00	14	0.000	0.000
Transmission Line Pole Holes	0.015	6	0.00278	0.00097
Transmission Line Laydown Area	0.00	6	0.000	0.000
Water Supply Line Corridor	0.14	8	0.035	0.012

TABLE 5.11-3R
 Estimate of Total Suspended Particulates Emitted from Grading and Wind Erosion

Emission Source	Acreage	Duration (months)	Unmitigated TSP (tons)	Mitigated TSP (tons)
Water Supply Line Laydown Area	0.00	8	0.000	0.000
Natural Gas Pipeline Corridor	0.0993	6	0.0189	0.0066
Estimated Total		14	1.306	0.457

Notes:

All linear feature impacts noted above are for portions outside of the project areas footprints.

Project Assumptions:

Grading for project site will be completed in a 2-month period and construction will extend an additional 12 months.

Approximately 1/10th of the project site will have bare soil exposure during the length of the construction period.

None of the laydown areas (except a portion of the project site laydown area) will be graded. It is expected that all roadway and laydown areas would be covered (graveled or paved) for all season use.

Excavation of transmission line pole holes will take 3 months followed by a 3-month construction period.

The transmission poles will have a 10 foot diameter area for a total impact permanent area of 0.0144 acre.

The natural gas line and water supply line will be installed in a 3-foot trench with a 75-foot construction corridor, and a 2-foot wide trench with a 30-foot construction corridor, respectively.

The natural gas and water supply trenches will be 100% exposed during the excavation period, with permanent vegetation restored after installation.

The construction corridors will remain in natural vegetation, with approximately 10% bare soil exposed

It is assumed grading activities will be limited to the project site and the project site access road.

Data Sources:

^a PM10 Emission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, Level 2 Analysis Procedure, March 1996

^b PM10 to TSP Conversion Factor Source: Bay Area Air Quality Management District CEQA Guidelines, Assessing the Air Quality Impacts of Projects, December 1999. SCAQMD CEQA Handbook (1993) Table 11-4 for mitigation efficiency rates (as summarized in Table 8.9-4)

Modification of the laydown area will not result in potential impacts significantly greater than those analyzed in the AFC and will be consistent with applicable LORS. As a result, any potential soil impacts associated with this Supplement will be less than significant.

3.12 Traffic and Transportation

The additional laydown area would not affect traffic beyond that described in the AFC. Modification of the laydown area will not result in potential impacts greater than those analyzed in the AFC and will be consistent with applicable LORS. As a result, any potential traffic and transportation impacts associated with this Supplement will be less than significant.

3.13 Visual Resources

The additional laydown area will not affect visual resources beyond that described in the AFC, and will comply with applicable LORS. Therefore, any potential visual resources impacts associated with this Supplement will be less than significant. Please see Figure 5.13-1R.

3.14 Waste Management

The additional laydown area would not affect waste management beyond that described in the AFC. Use of the additional laydown area would not result in a significant increase in waste. The additional laydown area will not result in potential impacts greater than those analyzed in the AFC, and will comply with applicable LORS. Therefore, any potential waste management impacts associated with this Supplement will be less than significant.

3.15 Water Resources

Construction of the additional laydown area would require additional water for dust suppression on the 4.2 acres of laydown area. The additional laydown area will serve as a supplementary staging area during construction of the project. However, this additional water use required for dust suppression and staging area acreage is minimal and is not anticipated to affect either groundwater or stormwater runoff quality. MEP would use water from the Byron Bethany Irrigation District irrigation canal system for dust suppression activities during laydown area construction. Construction of the additional laydown area will not result in potential impacts significantly greater than those analyzed in the AFC, and will comply with applicable LORS. As a result, any potential water resources impacts associated with this Supplement will be less than significant.

3.16 Worker Safety and Fire Protection

Implementation of worker safety plans and protocols would be the same for the construction of the additional laydown area as those described in the AFC. Construction of the additional laydown area will not result in potential impacts greater than those analyzed in the AFC, and will comply with applicable LORS. Therefore, any potential worker safety and fire protection impacts associated with this Supplement will be less than significant.

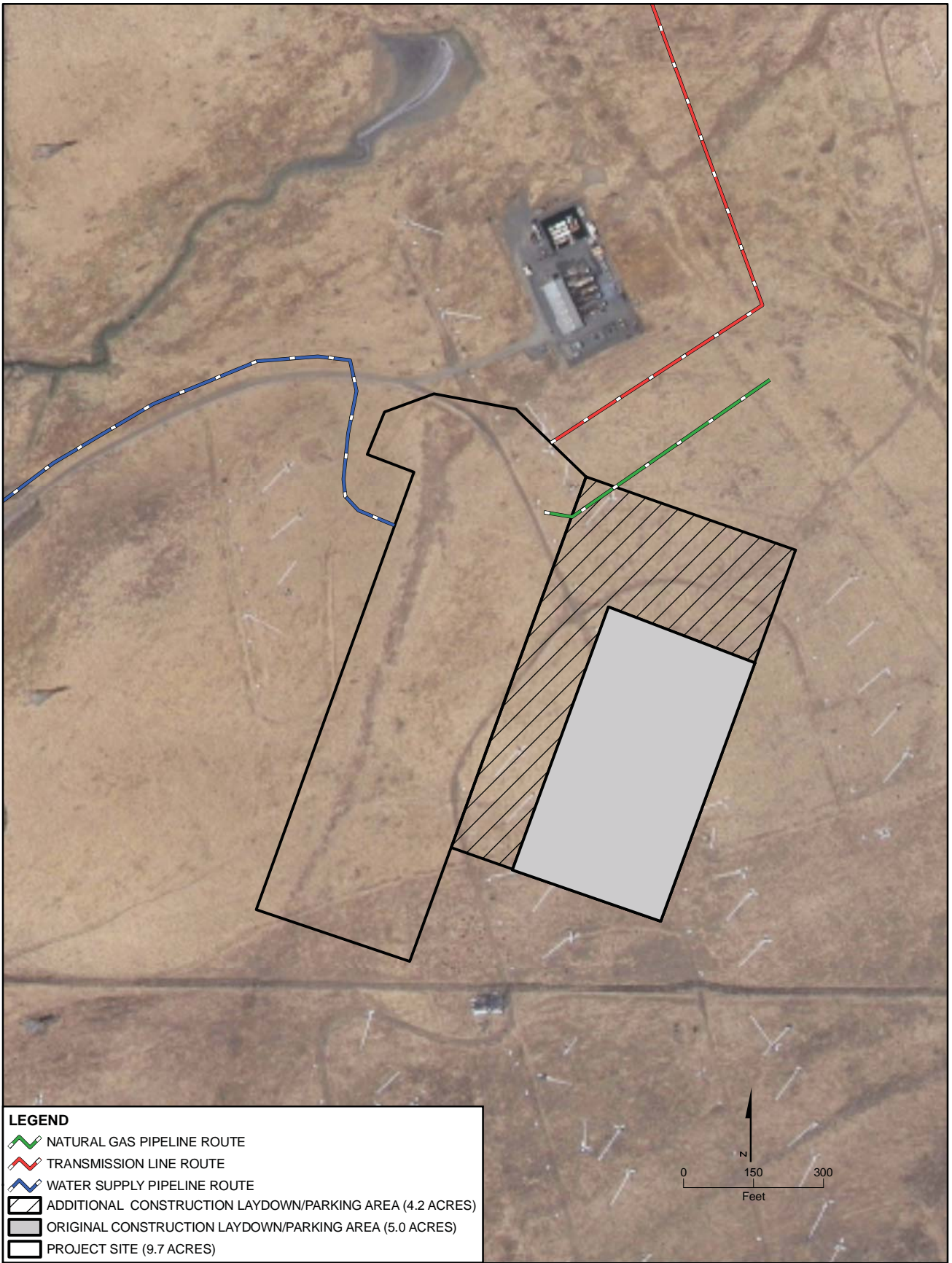
4.0 References

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California Department of Conservation. 2008. Alameda County Williamson Act Lands 2008. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/WA/Map%20and%20PDF/Alameda/>.

United States Environmental Protection Agency (EPA). 1995. Compilation of Air Pollutant Emission Factors AP 42. Volume I: Stationary Point and Area Sources, 5th edition (Online). Available at <http://www.epa.gov/ttn/chief/ap42/index.html>.

Figures











This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

FIGURE 1
ADDITIONAL LAYDOWN AREA
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

-  ACCESS ROAD
-  NATURAL GAS PIPELINE ROUTE
-  TRANSMISSION LINE ROUTE
-  WATER SUPPLY PIPELINE ROUTE
-  CONSTRUCTION LAYDOWN/PARKING AREA
-  TRANSMISSION LINE LAYDOWN AREA
-  WATER SUPPLY PIPELINE LAYDOWN AREA
-  PROJECT SITE

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

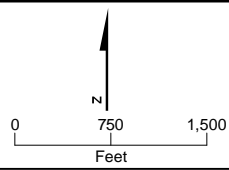
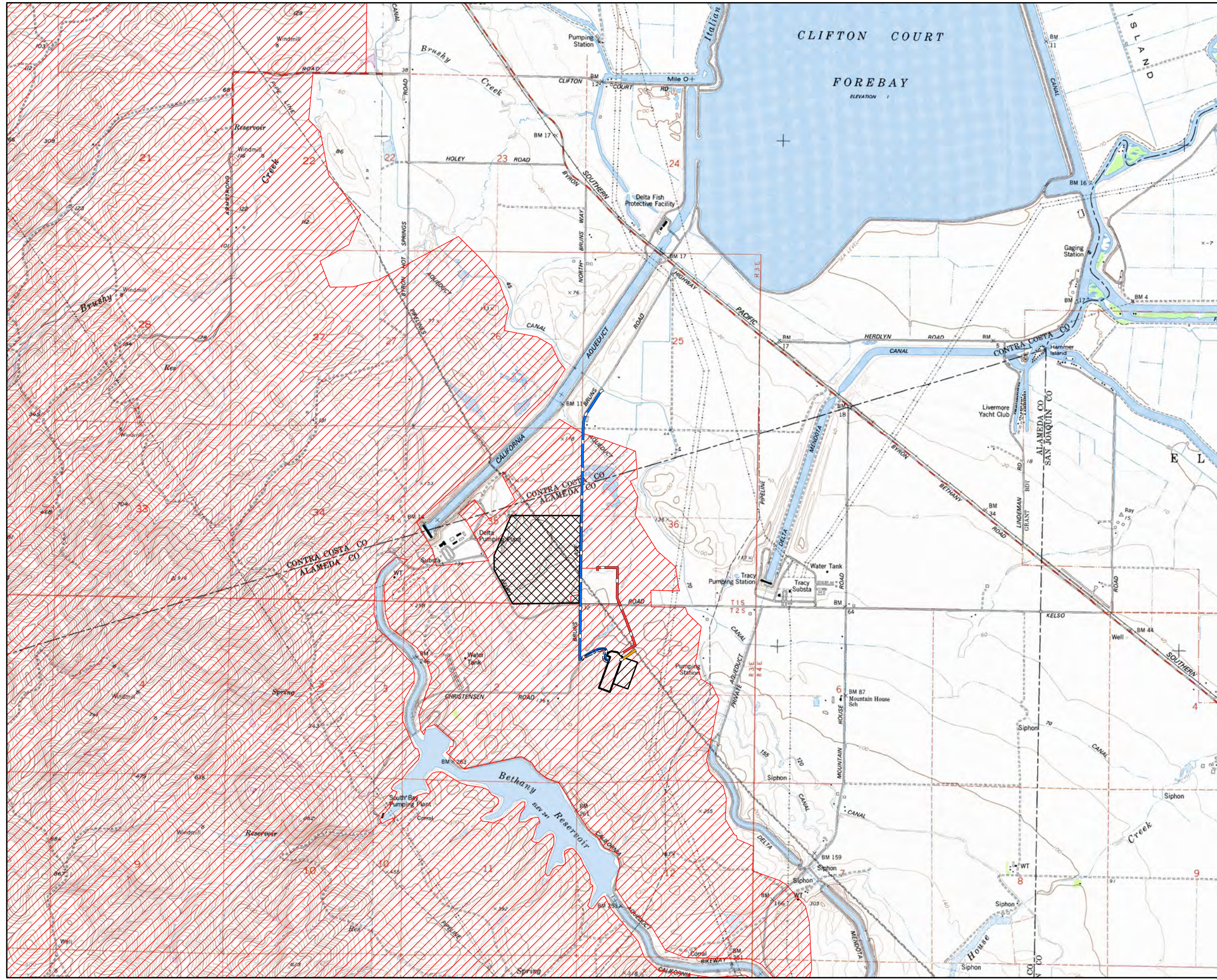


FIGURE 1.1-3R
SITE LOCATION
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- PROJECT SITE
- BYRON CONSERVATION BANK

PROPOSED CRITICAL HABITAT

- CALIFORNIA RED-LEGGED FROG

Notes:
 1. Source: U.S. Fish and Wildlife Service Critical Habitat Data, June 2003, Commission for Environmental Cooperation, 1997, U.S. Environmental Protection Agency, 2005. California Dept. of Fish and Game, California Natural Diversity Database (CNDDB) March, 2009.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

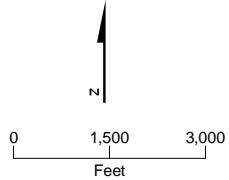
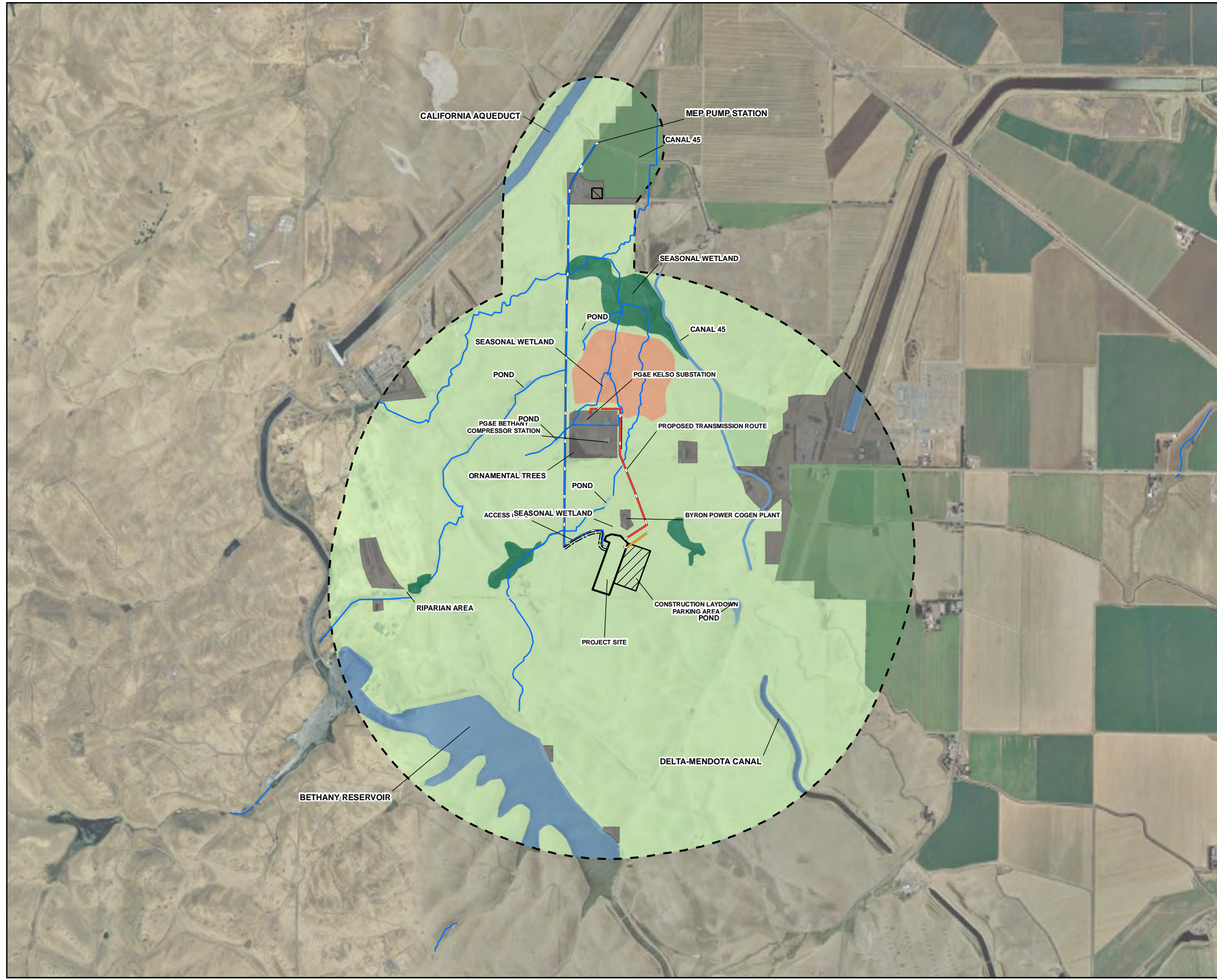


FIGURE 5.2-1R
REGIONAL BIOLOGICAL RESOURCES
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

HABITAT COMMUNITIES

- AGRICULTURAL
- ALKALINE MEADOW
- GRASSLAND
- INDUSTRIAL, LANDSCAPE, URBAN

POTENTIAL WATERS OF THE U.S.

- CANALS AND AQUEDUCTS
- POND
- WETLANDS

Note:
1. 1 Mile Buffer around Project Site, 1/4 Mile Buffer around waterline.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

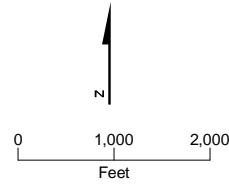
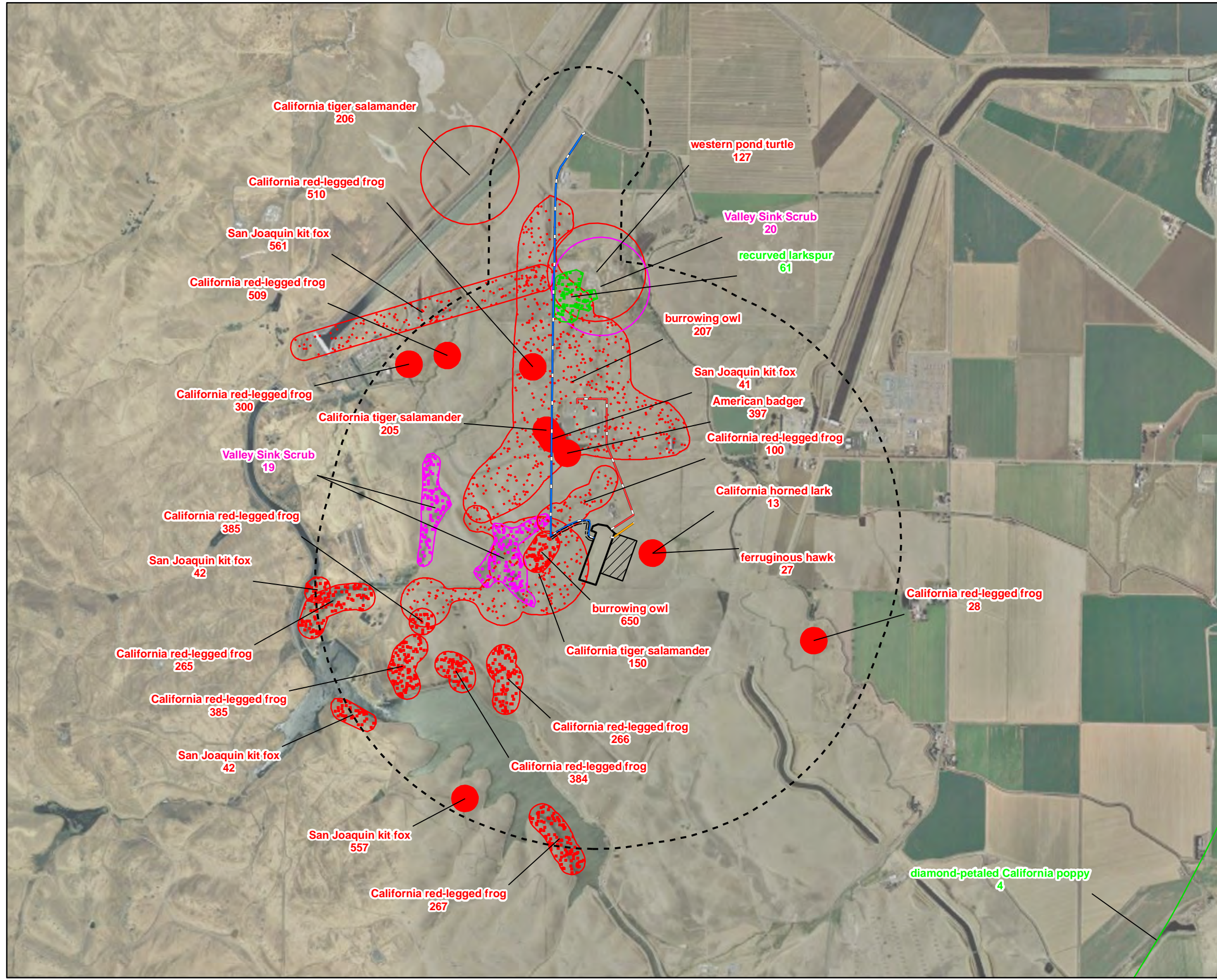


FIGURE 5.2-2R
BIOLOGICAL RESOURCES
IN THE PROJECT AREA
MARIPOSA ENERGY PROJECT
ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- PROJECT SITE
- BUFFER

CNDDDB DATA

- PLANTS (80m)
- PLANTS (SPECIFIC)
- PLANTS (NON-SPECIFIC)
- PLANTS (CIRCULAR)
- ANIMAL (80m)
- ANIMAL (SPECIFIC)
- ANIMAL (NON-SPECIFIC)
- ANIMAL (SPECIFIC)
- TERRESTRIAL COMMUNITY (80m)
- TERRESTRIAL COMMUNITY (SPECIFIC)
- TERRESTRIAL COMMUNITY (NON-SPECIFIC)
- TERRESTRIAL COMMUNITY (CIRCULAR)

Note:

1. Source - California Dept. of Fish and Game, California Natural Diversity Database (CNDDDB) March, 2009.
2. The number next to each occurrence name corresponds to the CNDDDB online datasheet.
3. 1 mile buffer around project site, 1/4 mile buffer around water supply line.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

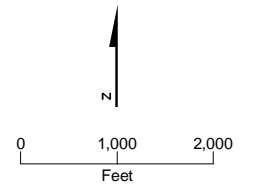
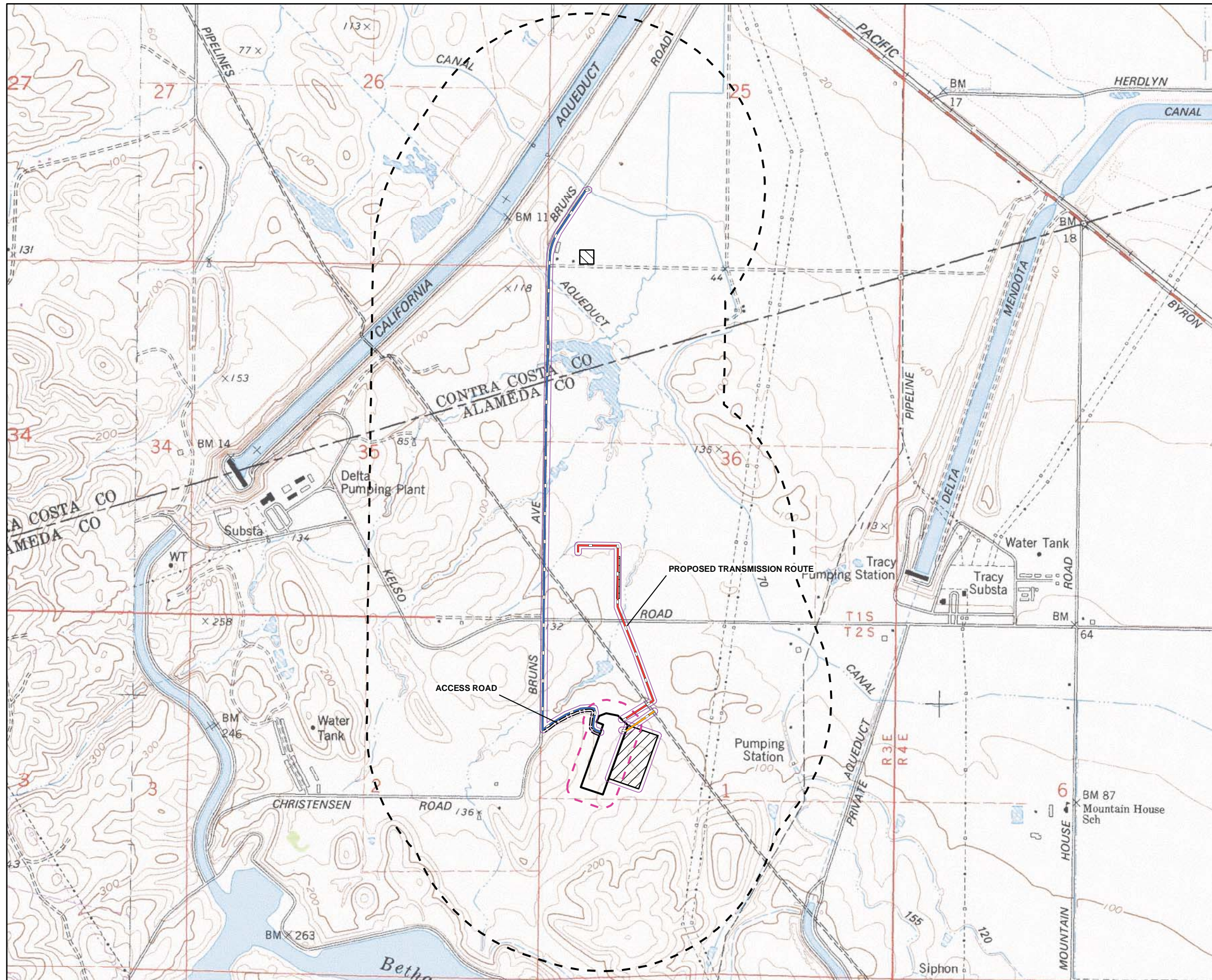


FIGURE 5.2-4R
SPECIAL-STATUS SPECIES
RECORDED IN THE PROJECT AREA
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE

SURVEY FOR ARCHEOLOGICAL RESOURCES

- 50 FT BUFFER
- 200 FT BUFFER

SURVEY FOR HISTORIC BUILT RESOURCES

- 1/2 MI BUFFER

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

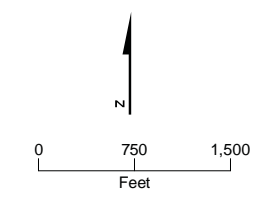
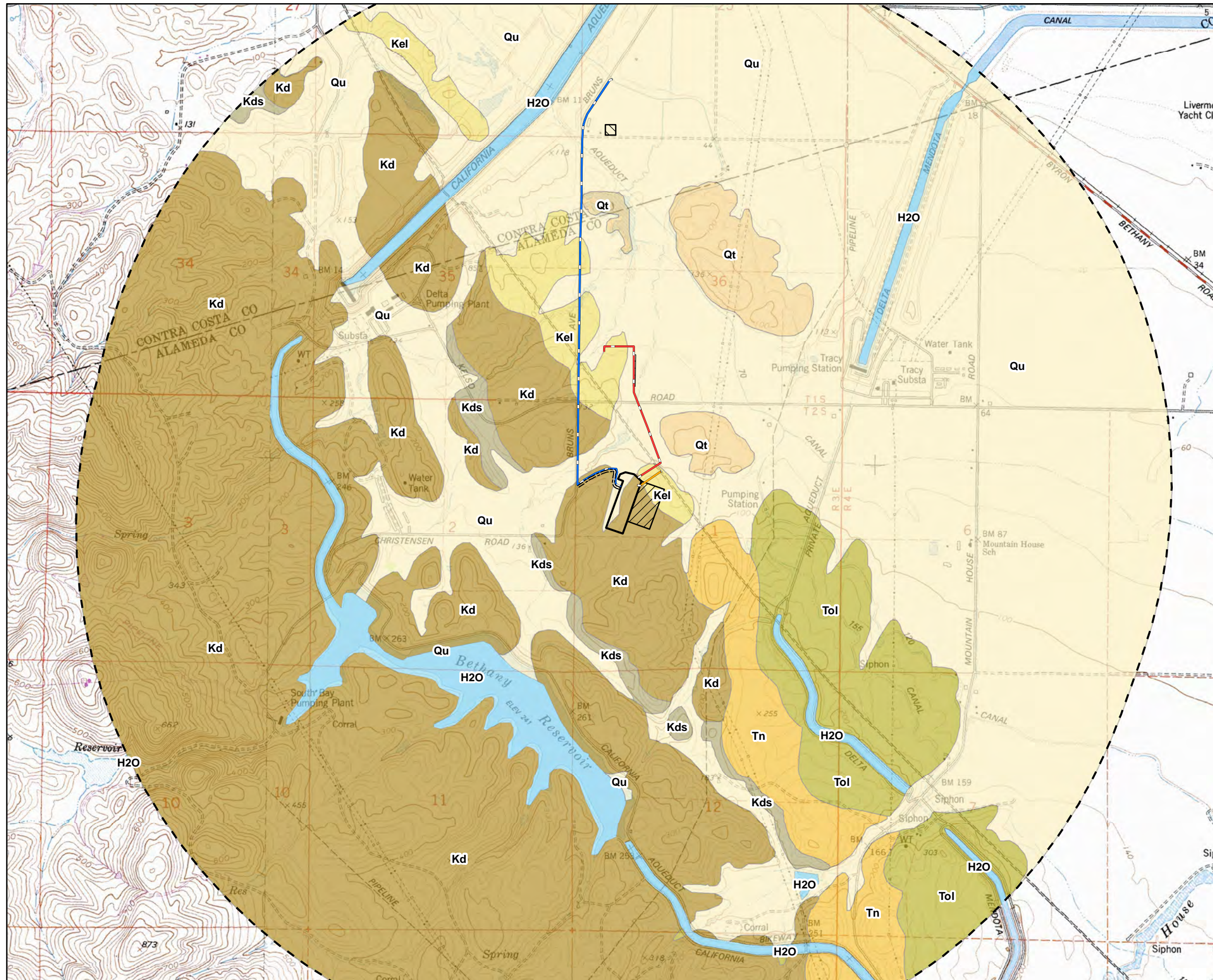


FIGURE 5.3-1R
AREAS SURVEYED FOR
CULTURAL RESOURCES
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- TWO MILE BUFFER
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE

GEOLOGY TYPES

- H2O, WATER
- Kd, UNIT D SANDSTONE
- Kds, UNIT D SHALE MEMBER
- Kel, LOWER UNIT D SILTSTONE
- Qt, TERRACE DEPOSITIS
- Qu, UNDIFFERENTIATED
- Tn, NEROLY FM. BLUE SANDSTONE
- Tol, ORO LOMA FORMATION - REDDISH SILT, SAND AND GRAVEL

Notes:
 1. Source: USGS OFR 94-622. Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County, California: A Digital Database, 1994. USGS OFR 96-252 Preliminary Geologic Map Emphasizing Bedrock Formations in Alameda County, California: A Digital Database, 1996.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

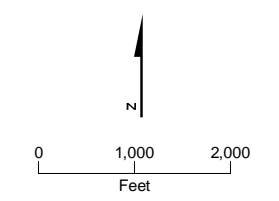
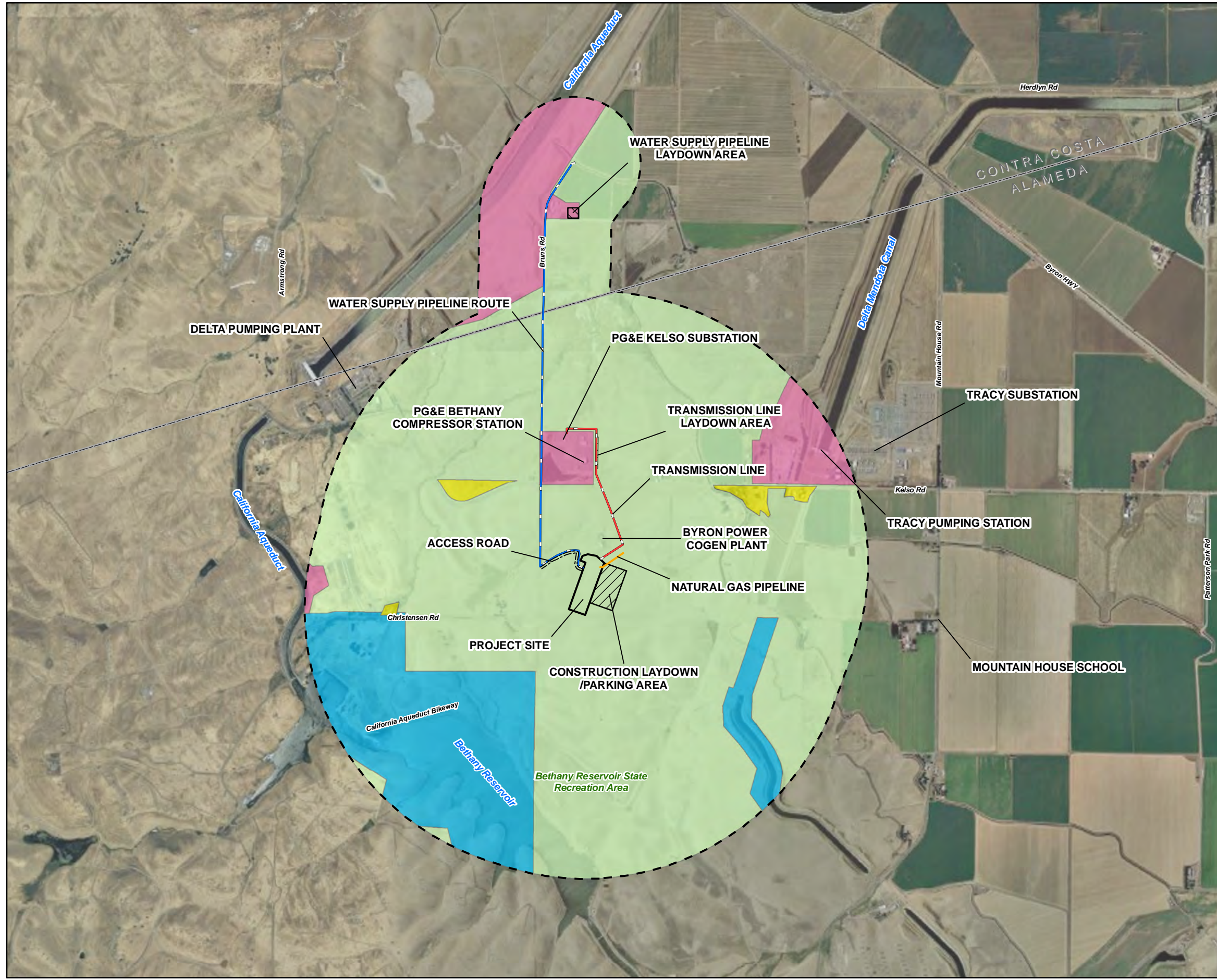


FIGURE 5.4-1R
SURFICIAL GEOLOGY WITHIN
TWO MILES OF PROJECT SITE
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- EXISTING NATURAL GAS PIPELINES
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

EXISTING LAND USE

- AGRICULTURAL
- PUBLIC/UTILITIES
- RESIDENCES
- WATER MANAGEMENT

Notes:
 1. 1 mile around Project Site, 1/4 mile around Pipeline Corridor.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

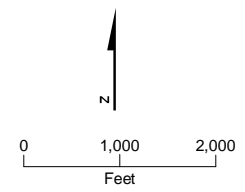
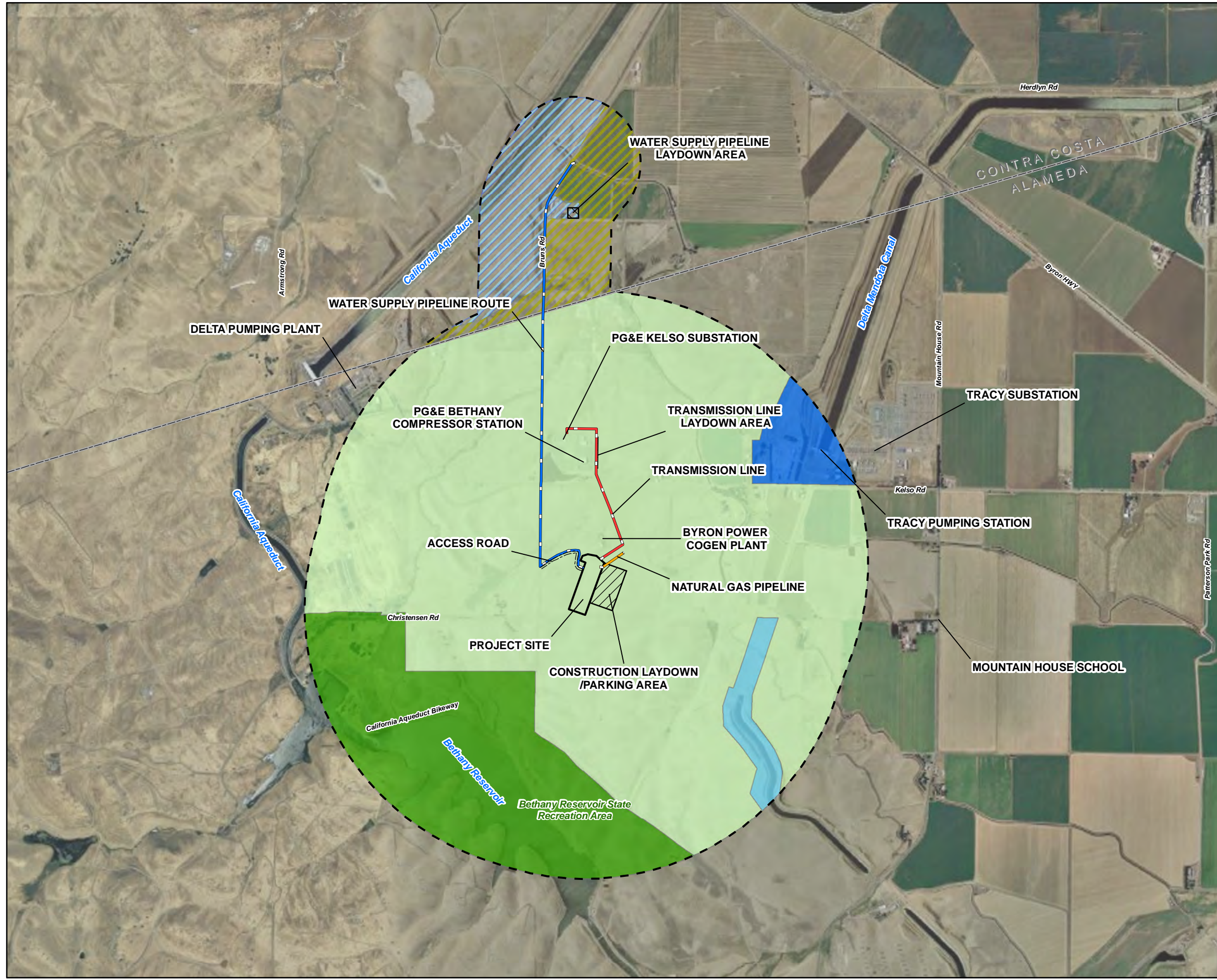


FIGURE 5.6-1R
EXISTING LAND USE
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- RECYCLED WATER SUPPLY PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

EAST COUNTY AREA PLAN - ALAMEDA

- LARGE PARCEL AGRICULTURE
- MAJOR PUBLIC
- PARKLANDS
- WATER MANAGEMENT

CONTRA COSTA GENERAL PLAN

- AGRICULTURE LANDS
- PUBLIC / SEMI-PUBLIC

Notes:
 1. 1 mile around Project Site, 1/4 mile around Pipeline Corridor.
 2. Source: East County Area Plan - Land Use Diagram, Alameda County Agency, May 2002. Contra Costa General Plan Land Use Element, Contra Costa County Community Development, 2004.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

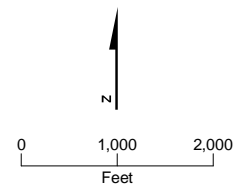
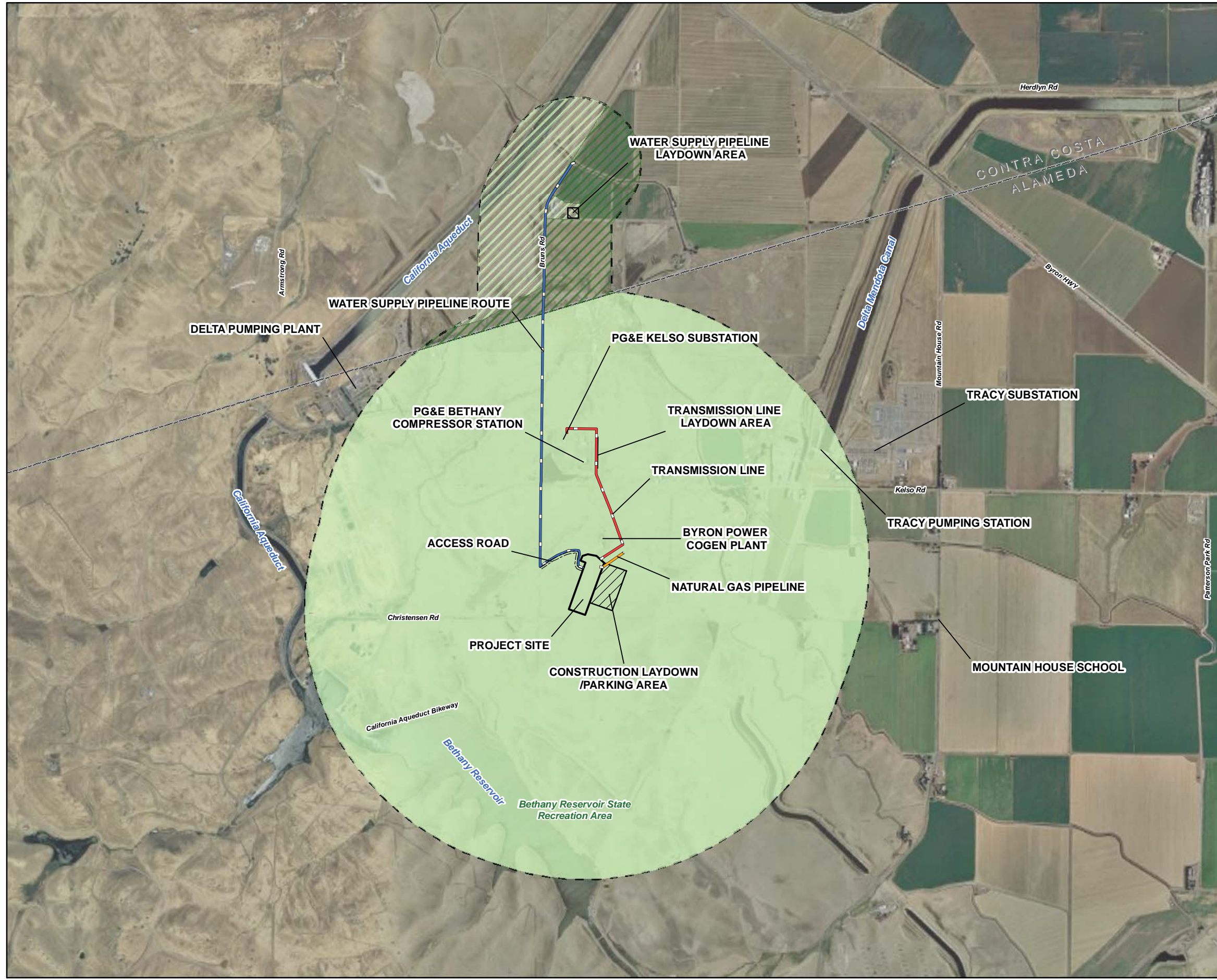


FIGURE 5.6-2R
GENERAL PLAN DESIGNATIONS
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

ALAMEDA COUNTY ZONING

- AGRICULTURE (A DISTRICT)

CONTRA COSTA COUNTY ZONING

- AGRICULTURE PRESERVE
- HEAVY AGRICULTURE

Notes:
 1. 1 mile around Project Site, 1/4 mile around Pipeline Corridor.
 2. Source: East County Area Plan - Land Use Diagram, Alameda County Agency, May 2002. Contra Costa Zoning Map, Contra Costa County Community Development, 2007.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

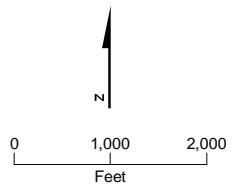
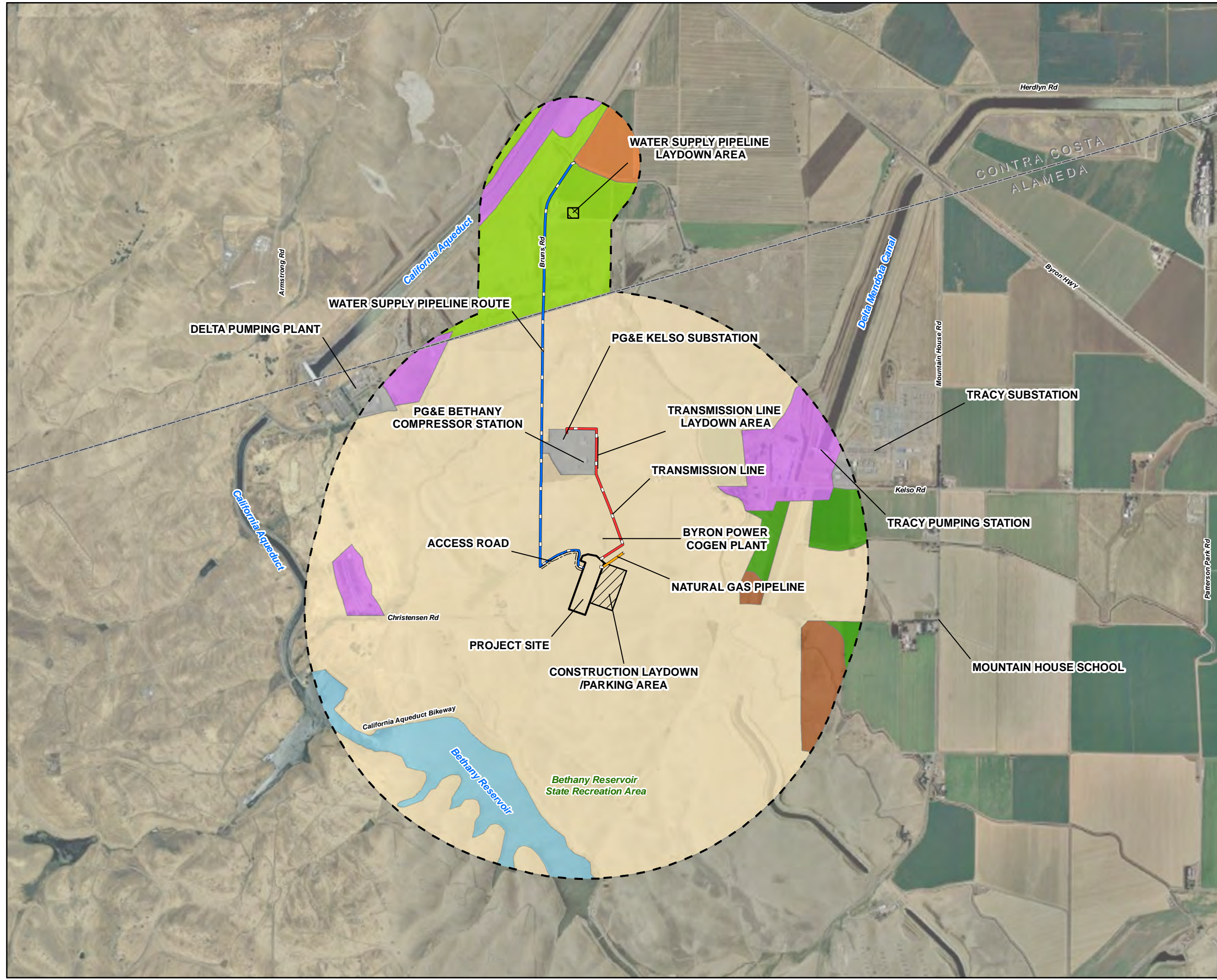


FIGURE 5.6-3R
ZONING DISTRICTS
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

IMPORTANT FARMLAND

- URBAN AND BUILT-UP LAND
- GRAZING LAND
- FARMLAND OF LOCAL IMPORTANCE
- PRIME FARMLAND
- FARMLAND OF STATEWIDE IMPORTANCE
- UNIQUE FARMLAND
- WATER
- OTHER LAND

Notes:
 1. 1 mile around Project Site, 1/4 mile around Pipeline Corridor.
 2. Source: California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP), Alameda and Contra Costa Counties, 2006.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

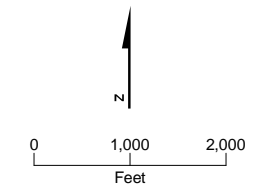
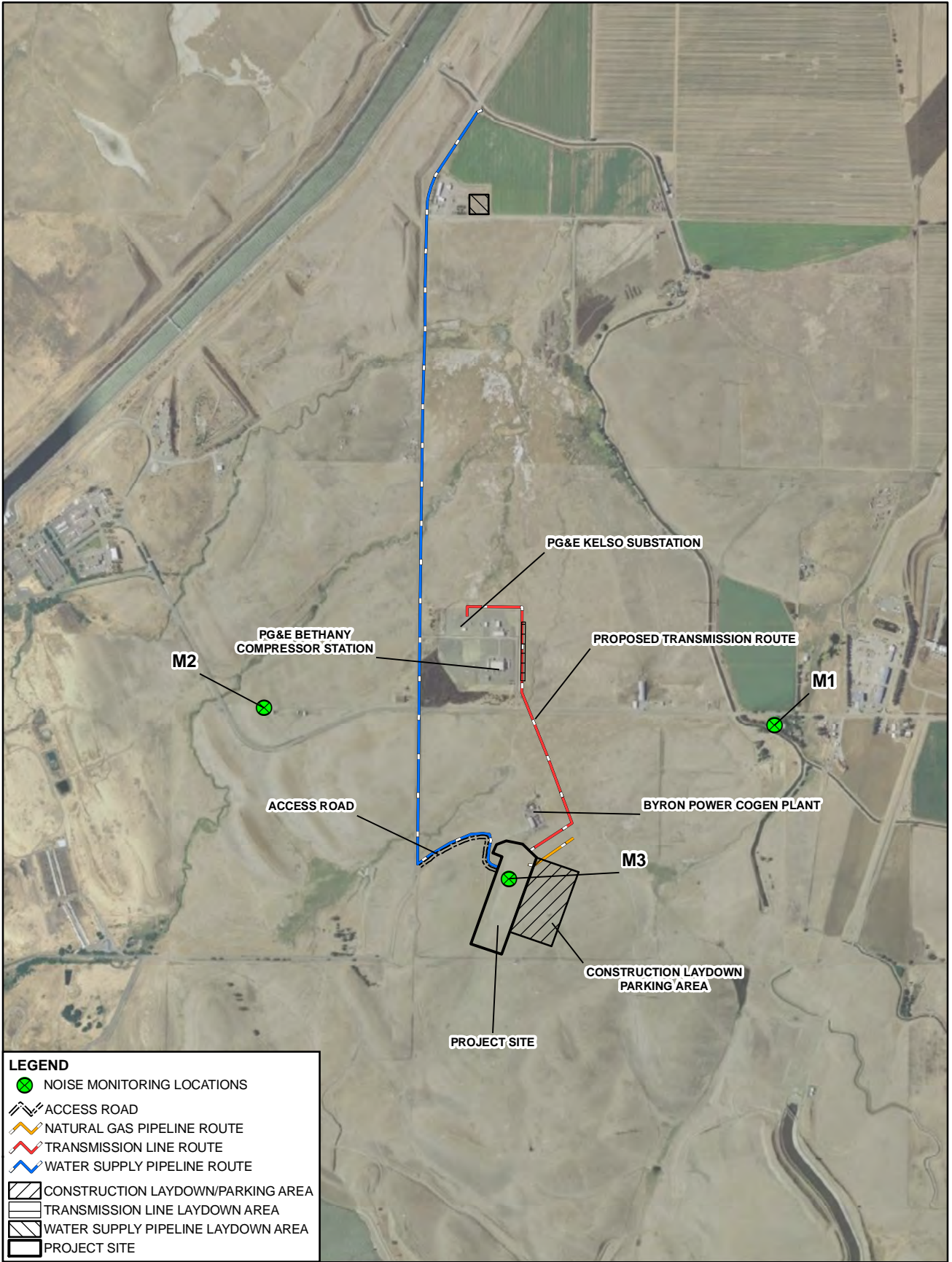


FIGURE 5.6-4R
IMPORTANT FARMLAND
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

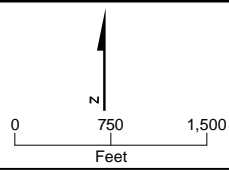
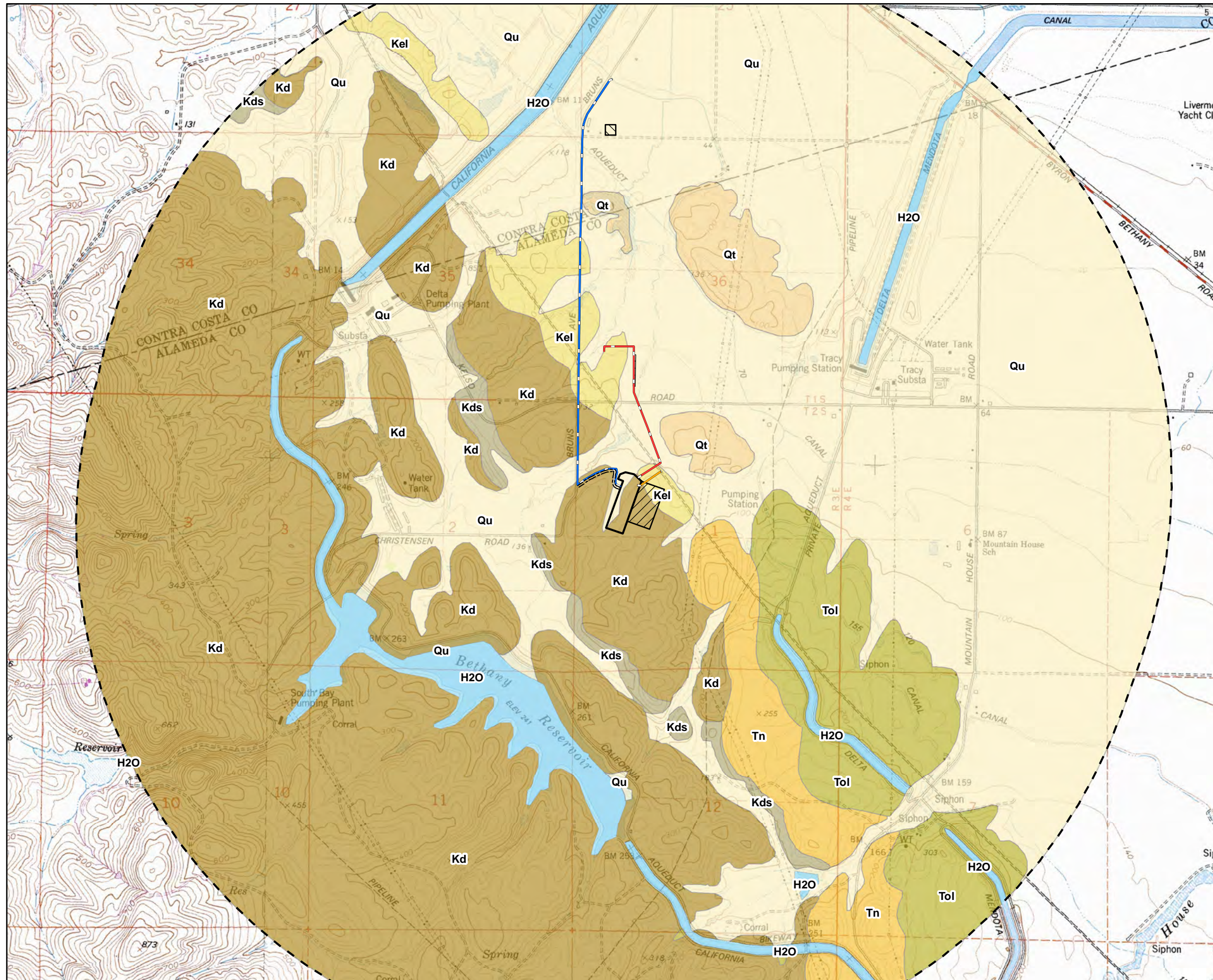


FIGURE 5.7-1R
NOISE MONITORING LOCATIONS
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- TWO MILE BUFFER
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE

GEOLOGY TYPES

- H2O, WATER
- Kd, UNIT D SANDSTONE
- Kds, UNIT D SHALE MEMBER
- Kel, LOWER UNIT D SILTSTONE
- Qt, TERRACE DEPOSITIS
- Qu, UNDIFFERENTIATED
- Tn, NEROLY FM. BLUE SANDSTONE
- Tol, ORO LOMA FORMATION - REDDISH SILT, SAND AND GRAVEL

Notes:
 1. Source: USGS OFR 94-622. Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County, California: A Digital Database, 1994. USGS OFR 96-252 Preliminary Geologic Map Emphasizing Bedrock Formations in Alameda County, California: A Digital Database, 1996.

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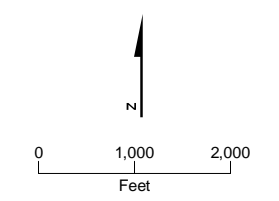
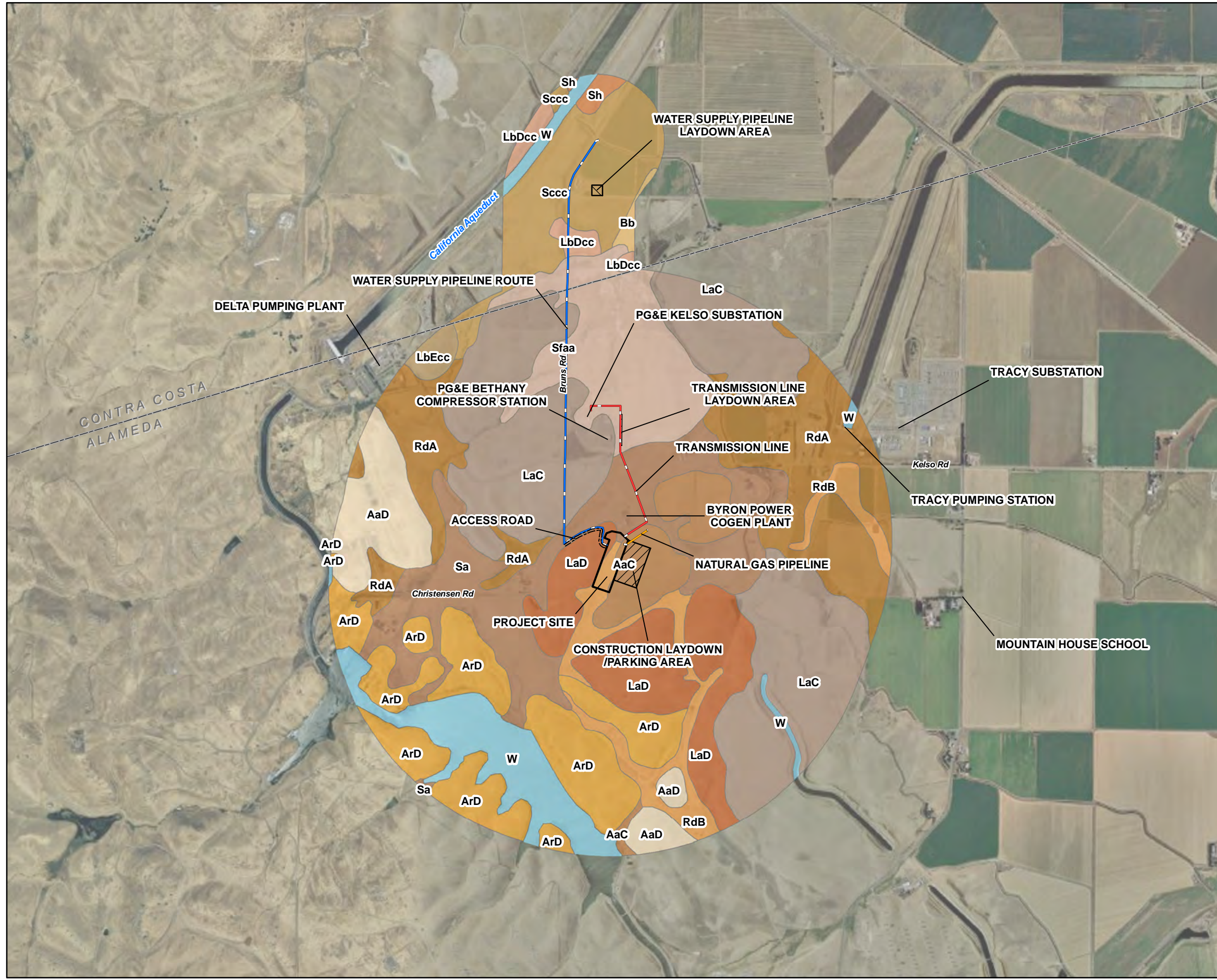


FIGURE 5.8-1R
SURFICIAL GEOLOGY WITHIN
TWO MILES OF PROJECT SITE
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



LEGEND

- ACCESS ROAD
- NATURAL GAS PIPELINE ROUTE
- TRANSMISSION LINE ROUTE
- WATER SUPPLY PIPELINE ROUTE
- CONSTRUCTION LAYDOWN/PARKING AREA
- TRANSMISSION LINE LAYDOWN AREA
- WATER SUPPLY PIPELINE LAYDOWN AREA
- PROJECT SITE
- BUFFER

SOIL TYPE

- AaC, ALTAMONT CLAY, 3 TO 15 PERCENT SLOPES
- AaD, ALTAMONT CLAY, 15 TO 30 PERCENT SLOPES
- ArD, ALTAMONT ROCKY CLAY, 7 TO 30 PERCENT SLOPES
- Bb, BRENTWOOD CLAY LOAM
- LaC, LINNE CLAY LOAM, 3 TO 15 PERCENT SLOPES
- LaD, LINNE CLAY LOAM, 15 TO 30 PERCENT SLOPES
- LbDcc, LINNE CLAY LOAM, 5 TO 15 PERCENT SLOPES
- LbEcc, LINNE CLAY LOAM, 15 TO 30 PERCENT SLOPES
- RdA, RINCON CLAY LOAM, 0 TO 3 PERCENT SLOPES
- RdB, RINCON CLAY LOAM, 3 TO 7 PERCENT SLOPES
- Sa, SAN YSIDRO LOAM
- Sccc, SAN YSIDRO LOAM
- Sf, SOLANO FINE SANDY LOAM
- Sfaa, SOLANO FINE SANDY LOAM
- Sh, SOLANO LOAM
- W, WATER

Notes:
 1. 1 Mile Buffer around Project Site, 1/4 Mile Buffer around all Linears.
 2. Source: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) Database for Contra Costa and Alameda County, California, 2005.

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

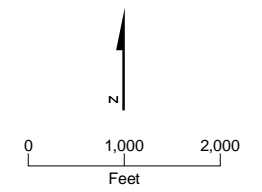
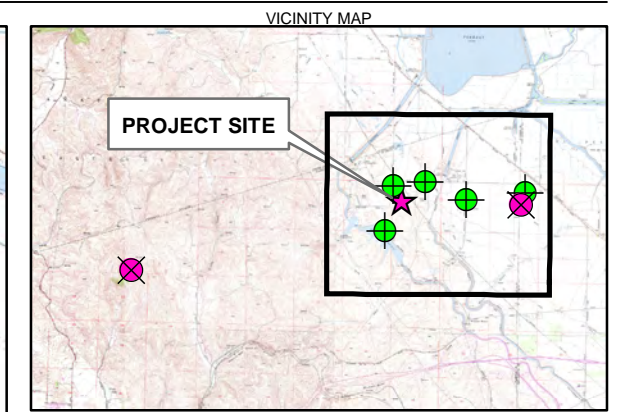
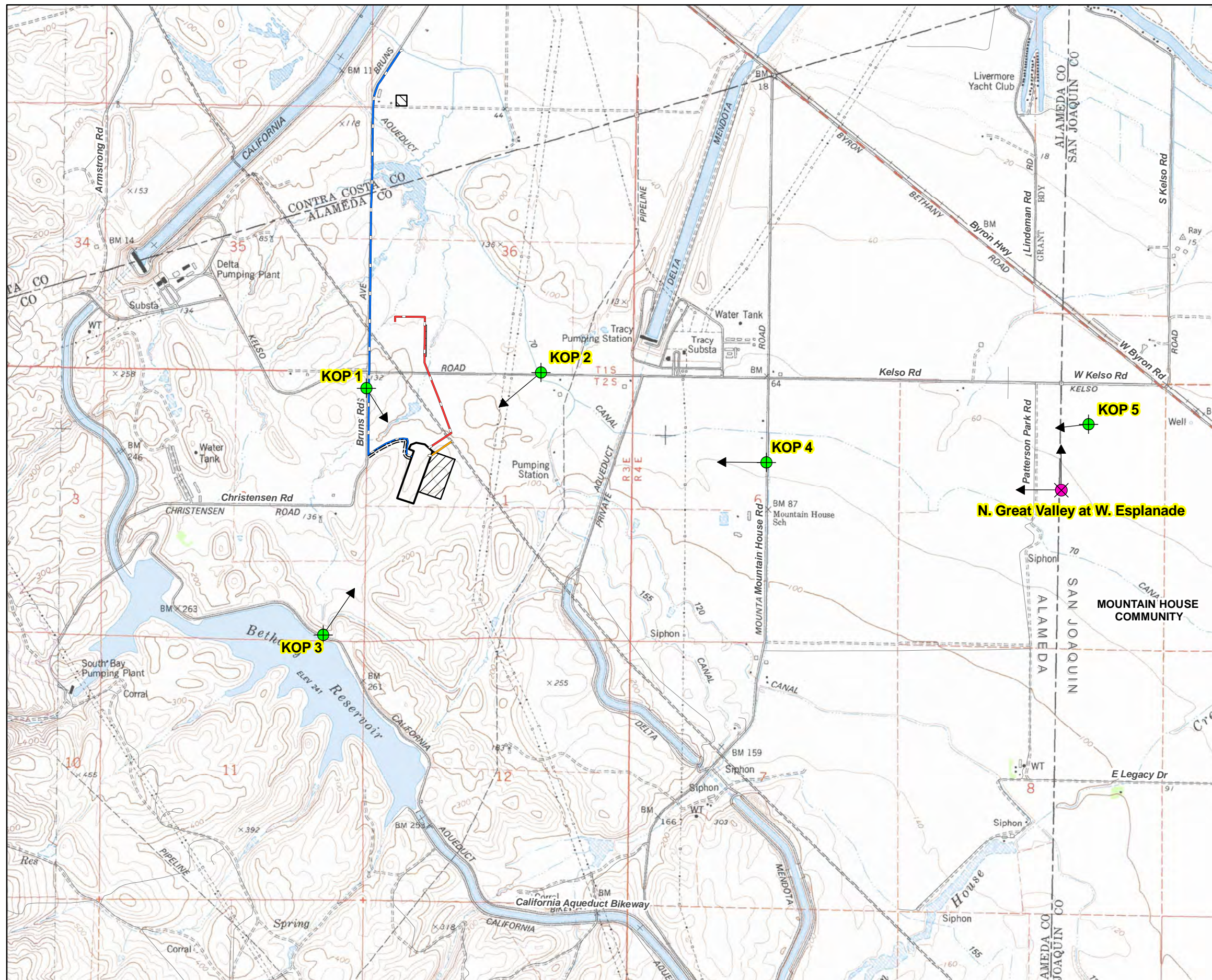


FIGURE 5.11-1R
SOIL TYPES
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



- LEGEND**
- KEY OBSERVATION POINT (KOP) LOCATIONS
 - ✕ VISUAL CHARACTER VIEW
 - ➔ VIEW DIRECTION
 - ROADS
 - ACCESS ROAD
 - NATURAL GAS PIPELINE ROUTE
 - TRANSMISSION LINE ROUTE
 - WATER SUPPLY PIPELINE ROUTE
 - ▨ CONSTRUCTION LAYDOWN/PARKING AREA
 - ▨ TRANSMISSION LINE LAYDOWN AREA
 - ▨ WATER SUPPLY PIPELINE LAYDOWN AREA
 - ▨ PROJECT SITE

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

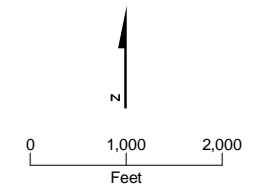
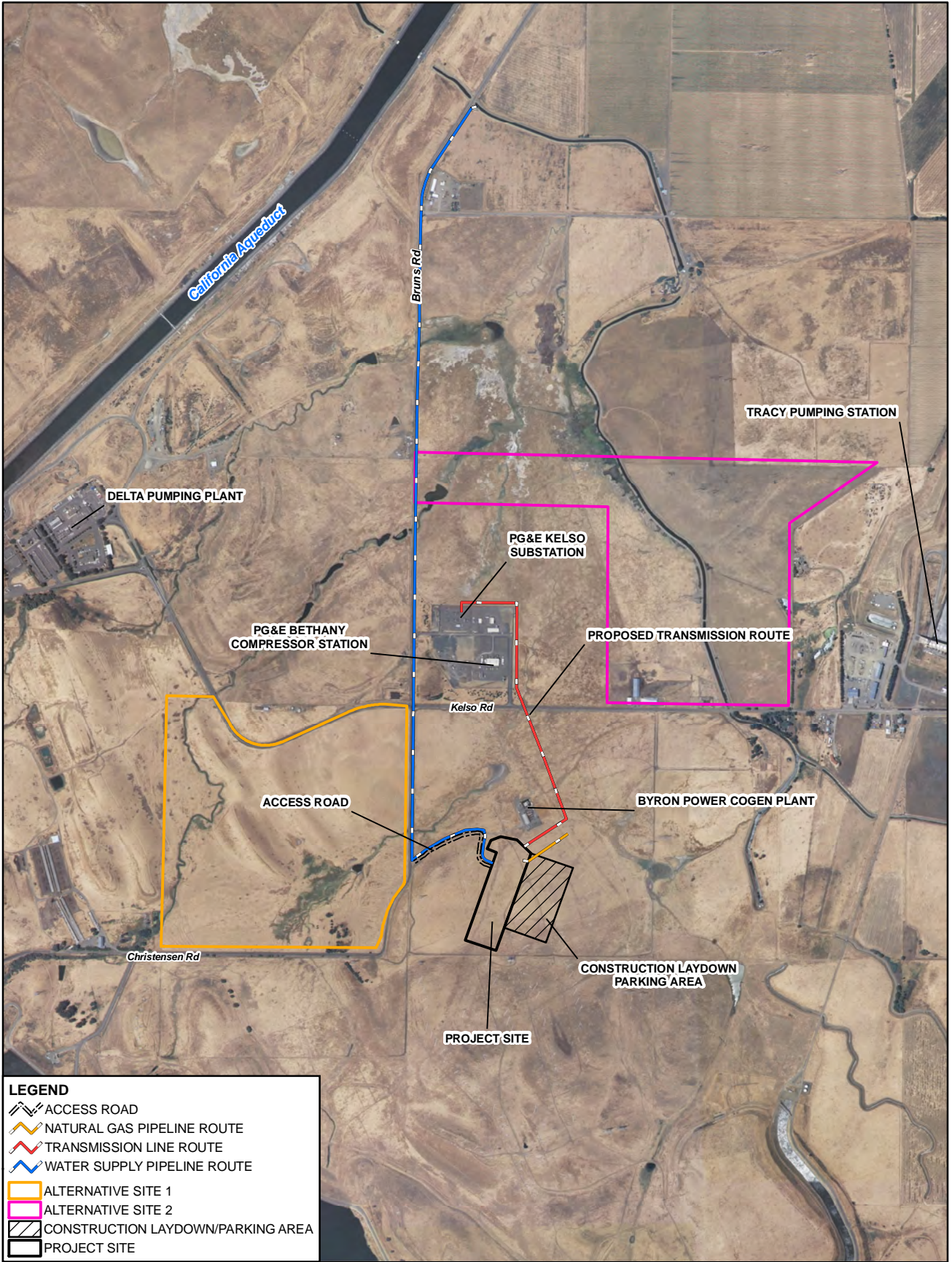


FIGURE 5.13-1R
KEY OBSERVATION POINT
LOCATIONS
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

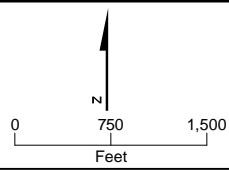


FIGURE 6.3-1R
ALTERNATIVE SITE LOCATIONS
 MARIPOSA ENERGY PROJECT
 ALAMEDA COUNTY, CALIFORNIA

Appendix A
Soil Loss Estimates

Table 5.11-2. Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation (RUSLE2)

Table 5.11-2. Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation (RUSLE2)

Feature (acreage) ²	Activity	Duration (months)	Estimates Using Revised Universal Soil Loss Equation ¹		
			Soil Loss (tons) without BMPs	Soil Loss (tons) with BMPs	Soil Loss (tons/yr) No Project
Site (9.7 acres estimated)	Grading	2	16.0	0.02	0.300
	Construction	14	5.2	0.15	---
Site Cut and Fill area (3.59 acres estimated)	Grading	3	13.0	0.17	0.15
	Construction	2	4.1	0.12	---
Site Access Road (1.2 acres estimated) (1.2 acres exposed; will be paved or gravelled after grading)	Grading	1	0.9	0.0	0.029
	Construction	14	0.0	0.0	---
Site Laydown Area (9.2 acres estimated)	Grading	1	3.0	0.0	0.248
	Construction	14	0.0	0.0	---
Transmission Line (5.15 acres for construction; 0.0144 acre for pole footprints)	Grading	3	0.0385	0.019	0.00046
	Construction	6	1.37	0.038	---
	Grading	0	0.000	0.000	0.009
Transmission Line Laydown Area (0.6 acres estimated)	Construction	6	0.000	0.000	---
	Grading	6	1.806	0.010	0.0112
Water Supply Pipeline (1.38 acres for construction; 0.44 acre for trench)	Construction	8	0.458	0.013	---
	Grading	0	0.000	0.000	0.030
Water Supply Laydown Area (1.0 acre estimated)	Construction	8	0.000	0.000	---
	Grading	2	0.05	0.0016	0.00258
Natural Gas Pipeline (0.99 acre for construction; 0.04 acre for trench)	Construction	6	0.17	0.0049	---
	Grading	2	0.05	0.0016	0.00258
Project Soil Loss Estimates	Construction Period	14	46.18	0.543	0.78

Notes:

- Soil losses (tons/acre/year) are estimated using RUSLE2 software available online [http://fargo.nserl.purdue.edu/rusle2_dataweb/].
 - The soil characteristics were estimated using RUSLE2 soil profiles corresponding to the mapped NRCS soil unit.
 - Soil loss (R-factors) were estimated using 2-year, 6-hour point precipitation frequency amount for the Mariposa Energy Facility project site found at [<http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>].
 - Estimates of actual soil losses use the RUSLE2 soil loss times the duration and the affected area. The No Project Alternative estimate does not have a specific duration so loss is given as tons/year.
- Acreages assume a 100 ft corridor for the transmission line and a 75 ft corridor for the natural gas line and a 30 ft corridor for the water pipeline construction. Trenches for the natural gas and water pipelines are assumed to be 3 ft and 2 ft wide, respectively. The transmission line pole holes each have a 10 ft diameter excavation footprint.

Other Project Assumptions as follows:

- It is assumed that 100% of the MEP project site will be exposed during grading, and approximately 10% of the site will be bare soil during construction.
- It is assumed that only the project site, a portion of the project site laydown areas, and project site access roads will be graded; all other areas will be 100% covered, either through natural vegetation or graveling/paving.
- It is assumed that grading the project site will take 2 months and construction will take a total of 14 months.
- It is assumed that site cut and fill grading will occur over a 3 month period and will take an additional 2 months before permanent vegetation is established
- It is assumed that none of the laydown areas will be graded and that natural cover will be maintained (yielding negligible runoff).
- The overhead transmission line poles will have 10-foot diameter footprints.
- It is assumed that the grading/excavation for the pole holes will be completed within 3 months and the entire installation will be completed within 6 months.
- It is assumed that the natural gas and water supply pipelines will be installed within a 3 ft wide trench and a 75 ft construction corridor.
- It is assumed that the natural gas pipeline will take 4 months to construct and will take another 2 months before permanent cover is established.
- It is assumed that the water supply pipeline will take 6 months to construct and an additional 2 months before permanent cover is established.
- It is assumed that the majority of the water supply pipeline construction will occur within Bruns Rd.
- It is assumed that an on-site septic system will be constructed and a sanitary sewer line will not be constructed.

RUSLE2 Assumptions as follows:

- 100-ft slope length. Estimated soil unit slope is the midpoint of the minimum and maximum of the unit slope class.
- Construction** soil losses assume the following inputs: Management - Bare ground; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.
- Grading** soil losses assume the following inputs: Management - Bare ground/rough surface; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.
- Construction with BMP** soil losses assume the following inputs: Management - Silt fence; Contouring - Perfect, no row grade; Diversion/terracing - None; Strips and Barriers - 2 fences, 1 at end of RUSLE slope.
- No Project** soil losses assume the following inputs: Management - Dense grass, not harvested; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Soil Type	Acreage	Soil Loss Estimates Using RUSLE2 software (tons/ac/year)				
		Slope	Grading	Construction w/o BMPs	Construction with BMPs	No Project
Project Site						
Sa/Sccc	0.57	4.5	7.8	3.5	0.098	0.026
LaD	1.67	23.0	25.0	12.0	0.34	0.064
AaC	1.67	9.0	7.8	3.7	0.10	0.027
RdB	5.78	5.0	6.4	2.9	0.081	0.023
	0.97	Subtotal	96.20	4.50	0.13	0.30
Site Cut and Fill Area						
AaC	1.77	9.0	7.8	3.7	0.10	0.027
LaD	1.41	23.0	25.0	12.0	0.34	0.064
RdB	0.25	5.0	6.4	2.9	0.081	0.023
Sa	0.16	4.5	7.8	3.5	0.098	0.026
	3.59	Subtotal	51.90	24.75	0.69	0.15
Site Access Road						
Sa/Sccc	0.21	4.5	7.8	3.5	0.098	0.026
LaD	0.37	23.0	25.0	12.0	0.34	0.064
	0.00	Subtotal	10.89	0.0	0.0	0.029
Site Laydown Area						
AaC	4.60	9.0	7.8	3.7	0.10	0.027
	9.20	Subtotal	35.9	0.0	0.0	0.248
Transmission Line						
Sf/Sfaa	0.0055	2.0	3.6	1.6	0.045	0.015
Sa/Sccc	0.0037	4.5	7.8	3.5	0.098	0.026
LaD	0.0037	23.0	25.0	12.0	0.34	0.064
AaC	0.0018	9.0	7.8	3.7	0.10	0.027
	0.94	Subtotal	0.154	2.746	0.077	0.00046
T-Line Laydown						
Sf/Sfaa	0.60	2.0	3.6	1.6	0.045	0.015
	0.00	Subtotal	0.00	0.00	0.00	0.009
Water Supply Pipeline						
Sf/Sfaa	0.08	2.0	3.6	1.6	0.045	0.015
LaC	0.17	9.0	8.0	3.7	0.10	0.024
LaD	0.03	23.0	25.0	12.0	0.34	0.064
LbDcc/LbD	0.03	10.0	9.3	4.4	0.12	0.028
Sa/Sccc	0.13	4.5	7.8	3.5	0.098	0.026
	0.14	Subtotal	3.61	0.69	0.02	0.011
Water Supply Laydown						
Sc	1.00	4.5	9.1	4.0	0.11	0.03
	0.00	Subtotal	0.00	0.00	0.00	0.030
Natural Gas Pipeline						
Sa/Sccc	0.04	4.5	7.8	3.5	0.098	0.026
	0.10	Subtotal	0.31	0.35	0.01	0.003
Sewer Line						
On-site connection	0.00	Subtotal	0.00	0.00	0.00	0.00

Assumptions:

Assumes slope is the mid-point of the slope class

Assumes no grading at any of the laydown areas or access roads, with the exception of the project site laydown area and access road).

Project site is currently 10% bare soil and would have same proportion during construction.

100% of project site would be bare soil during grading.

100% of pole holes will be bare soil during grading/excavation.

100% of the cut and fill area will be bare soil during grading/excavation

Transmission pole impact area assumes a 10 ft diameter footprint times the number of poles

The No Project soil loss assumes a 'dense grass, not harvested' management scenario.

Table 5.11-3. Estimate of Total Suspended Particulates (TSP) Emitted from Grading and Wind Erosion

Table 5.11-3. Estimate of Total Suspended Particulates (TSP) Emitted from Grading and Wind Erosion				
Emission Source	Acreage	Duration (months)	Unmitigated TSP (tons)	Mitigated TSP (tons)
Grading Dust:				
Project Site	9.69	2	0.333	0.117
Site Cut and Fill Area	3.59	3	0.185	0.065
Project Site Access Road	0.58	1	0.010	0.003
Project Site Laydown Area	4.60	1	0.079	0.028
Transmission Line Pole Holes	0.0146	3	0.00076	0.00026
Transmission Line Laydown Area	0.60	0	0.000	0.000
Water Supply Line Trench	0.44	6	0.045	0.016
Water Supply Line Laydown Area	1.00	0	0.000	0.000
Natural Gas Pipeline Trench	0.04	2	0.00137	0.00048
Wind Blown Dust:				
Project Site	0.97	12	0.368	0.129
Site Cut and Fill Area	3.59	2	0.227	0.080
Project Site Access Road	0.00	14	0.000	0.000
Project Site Laydown Area	0.00	14	0.000	0.000
Transmission Line Pole Holes	0.015	6	0.00278	0.00097
Transmission Line Laydown Area	0.00	6	0.000	0.000
Water Supply Line Corridor	0.14	8	0.035	0.012
Water Supply Line Laydown Area	0.00	8	0.000	0.000
Natural Gas Pipeline Corridor	0.0993	6	0.0189	0.0066
Estimated Total		14	1.306	0.457

Notes:

All linear feature impacts noted above are for portions outside of the project areas footprints.

Project Assumptions:

Grading for project site will be completed in a 2 month period and construction will extend an additional 12 months.

Approximately 1/10th of the project site will have bare soil exposure during the length of the construction period.

None of the laydown areas (except a portion of the project site laydown area) will be graded. It is expected that

all roadway and laydown areas would be covered (gravelled or paved) for all season use.

Excavation of transmission line pole holes will take 3 months followed by a 3 month construction period.

The transmission poles will have a 10 foot diameter area for a total impact permanent area of 0.0144 acre.

The natural gas line and water supply line will be installed in a 3-ft trench with a 75-ft construction corridor.

The natural gas and water supply trenches will be 100% exposed during the excavation period, with permanent vegetation restored after installation.

The construction corridors will remain in natural vegetation, with approximately 10% bare soil exposed

It is assumed grading activities will be limited to the project site and the project site access road.

Data Sources:

^a PM10 Emission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, Level 2 Analysis Procedure, March 1996

^b PM10 to TSP Conversion Factor Source: Bay Area Air Quality Management District CEQA Guidelines, Assessing the Air Quality Impacts of Projects, December 1999.

SCAQMD CEQA Handbook (1993) Table 11-4 for mitigation efficiency rates (as summarized in Table 8.9-4)

Project: Mariposa Energy Facility SSM 02/26/2010
Dust from Wind Erosion - With and Without Mitigation

Grading		MRI factor of 0.011 tons/acre/month is based on 168 hours per month of construction activity. Fact Sheet, 4/26/2007.
PM10 Emission Factor (ton/acre/month) ^a	0.011	
Project Site		
Duration (months):	2	Assumes 2 months of active grading.
Site Acreage:	9.69	Assumes 100% of site is graded
PM10 Emitted (tons):	0.21	
TSP Emitted (tons) ^b :	0.333	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.117	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Site Cut and Fill Area		
Duration (months):	3	Assumes 3 months of active grading
Site Acreage:	3.59	Assumes 100% of area will be graded
PM10 Emitted (tons):	0.12	
TSP Emitted (tons) ^b :	0.185	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.065	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Project Site Access Road		
Duration (months):	1	Assumes one month to grade
Site Acreage:	0.58	Assumes 100% of access road is graded
PM10 Emitted (tons):	0.01	
TSP Emitted (tons) ^b :	0.010	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.003	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Project Site Laydown Area		
Duration (months):	1	Assumes project site laydown area will be partially graded (1/2 estimated).
Site Acreage:	4.60	
PM10 Emitted (tons):	0.05	
TSP Emitted (tons) ^b :	0.079	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.028	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Holes		
Duration (months):	3	Assumes 3 months to grade
Site Acreage:	0.0146	
PM10 Emitted (tons):	0.0005	
TSP Emitted (tons) ^b :	0.0008	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0003	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Laydown Area		
Duration (months):	0	Assumes transmission line laydown area WILL NOT be graded.
Site Acreage:	0.60	
PM10 Emitted (tons):	0.00	
TSP Emitted (tons) ^b :	0.000	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Water Supply Line Trench		
Duration (months):	6	Assumes 6 months to grade pipeline
Site Acreage:	0.437	
PM10 Emitted (tons):	0.0288	
TSP Emitted (tons) ^b :	0.0451	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0158	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Water Supply Line Laydown Area		
Duration (months):	0	Assumes water supply line laydown area WILL NOT be graded.
Site Acreage:	1.00	
PM10 Emitted (tons):	0.0000	
TSP Emitted (tons) ^b :	0.0000	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Natural Gas Pipeline Trench		
Duration (months):	2	Assumes 2 months to grade pipeline
Site Acreage:	0.040	
PM10 Emitted (tons):	0.0009	
TSP Emitted (tons) ^b :	0.0014	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0005	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sanitary Sewer Line		
Duration (months):	0	Assumes on-site connection
Site Acreage:	0.000	
PM10 Emitted (tons):	0.0000	
TSP Emitted (tons) ^b :	0.0000	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Unmitigated TSP Emitted (tons):	0.654	
Total Mitigated TSP Emitted (tons):	0.229	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

^aEmission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, March 1996, Level 2 Analysis Procedure

^b Conversion Factor Source: Bay Area Air Quality Management District (BAAQMD) BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans. December 1999

Wind Blown Dust		
TSP Emission Factor (ton/acre/year)	0.38	Emission Factor Source: AP-42, Section 11.9 Western Surface Coal Mining Table 11.9-4, January 1995.
Project Site		
Acres exposed	0.97	Assumes that only 10% of the project area is exposed during construction
Duration (months)	12	Assumes 12 months of construction after grading
TSP Emitted for Site (tons):	0.368	
Mitigated TSP Emitted (tons):	0.129	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Site Cut and Fill Area		
Duration (months):	2.00	Assumes it will take 2 months for revegetation
Site Acreage:	3.59	100% of the cut and fill area will be disturbed
PM10 Emitted (tons):	0.227	
TSP Emitted (tons) ^b :	0.080	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Project Site Access Road		
Acres exposed	0.00	Assumes project site access road is completely covered with gravel or other material after grading
Duration (months)	14	Assumes 14 months of construction traffic
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Project Site Laydown Area		
Acres exposed	0.00	Assumes project site laydown area is completely covered (natural veg, gravelled or paved) during construction
Duration (months)	14	Assumes 14 months of construction traffic
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Footprints		
Acres exposed	0.0146	Assumes pole holes are unprotected until pole installed
Duration (months)	6	Assumes 6 months of excavation & installation
TSP Emitted for Site (tons):	0.00278	
Mitigated TSP Emitted (tons):	0.000974	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Laydown Area		
Acres exposed	0.000	Assumes transmission line laydown area is completely covered (natural veg, gravelled or paved) during construction
Duration (months):	6	Assumes 6 months of construction
TSP Emitted (tons) ^b :	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Water Supply Line Corridor		
Acres exposed	0.138	Assumes corridor is 10% exposed during construction
Duration (months):	8	Assumes 8 months of construction
TSP Emitted (tons) ^b :	0.035	
Mitigated TSP Emitted (tons):	0.012	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Water Supply Line Laydown Area		
Acres exposed	0.000	Assumes water supply line laydown area is completely covered (natural veg, gravelled or paved) during construction
Duration (months)	8	Assumes 8 months of construction
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Natural Gas Pipeline Corridor		
Acres exposed	0.099	Assumes corridor is 10% exposed during construction
Duration (months)	6	Assumes 6 months of construction
TSP Emitted for Site (tons):	0.019	
Mitigated TSP Emitted (tons):	0.007	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sanitary Sewer Line		
Acres exposed	0.000	Assumes on-site construction
Duration (months)	0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Wind Blown Dust (tons) without mitig	0.652	
Total WBD (tons) with mitigation	0.228	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Project total without mitigation	1.306	
Project total with mitigation	0.457	



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE **MARIPOSA ENERGY PROJECT**
(MEP)

Docket No. 09-AFC-3

PROOF OF SERVICE
(Revised 2/8/2010)

APPLICANT

Bo Buchynsky
Diamond Generating Corporation
333 South Grand Avenue, #1570
Los Angeles, California 90071
b.buchynsky@dgc-us.com

APPLICANT'S CONSULTANTS

Doug Urry
2485 Natomas Park Dr #600
Sacramento, CA 95833-2975
Doug.Urry@CH2M.com

COUNSEL FOR APPLICANT

Gregg Wheatland
Ellison, Schneider & Harris L.L.P.
2600 Capitol Avenue, Suite 400
Sacramento, CA 95816-5905
glw@eslawfirm.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

INTERVENORS

Mr. Robert Sarvey
501 W. Grantline Road
Tracy, California 95376
Sarveybob@aol.com

*Rajesh Dighe
395 W. Conejo Avenue
Mountain House, CA 95391
dighe.rajesh@gmail.com

Morgan K. Groover
Development Director
Mountain House Community
Services District
230 S. Sterling Drive, Suite 100
Mountain House, CA 95391
mgroover@sjgov.org

ENERGY COMMISSION

JEFFREY D. BYRON
Commissioner and Presiding Member
jbyron@energy.state.ca.us

*ROBERT B. WEISENMILLER
Commissioner and Associate Member
rweisenm@energy.state.ca.us

Kristy Chew
Advisor to Commissioner Byron
kchew@energy.state.ca.us

Kenneth Celli
Hearing Officer
kcelli@energy.state.ca.us

Craig Hoffman
Siting Project Manager
choffman@energy.state.ca.us

Kerry Willis
Staff Counsel
kwillis@energy.state.ca.us

*Jennifer Jennings
Public Adviser's Office
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Stephanie Moore, declare that on March 5, 2010, I served and filed copies of the attached Mariposa Energy Project Supplement B. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

<http://www.energy.ca.gov/sitingcases/mariposa/index.html>.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

 x sent electronically to all email addresses on the Proof of Service list;

 by personal delivery or by depositing in the United States mail at Sacramento, California, with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

 x **sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);**

OR

 depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 09-AFC-3
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original signed by: _____
Stephanie Moore