Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name:	Brunswick Commons
Responsible Entity:	County of Nevada, California
Grant Recipient (if different than Responsible Entity):	Regional Housing Authority 1455 Butte House Road Yuba City, CA 95993
State/Local Identifier:	n/a
Preparer:	Neil O'Hara
Certifying Officer Name and Title:	Mike Dent, Director of Housing and Community Services
Consultant (if applicable):	Neil O'Hara RNC Environmental, LLC 151 Nursery Street Ashland, OR 97520 (888) 485-3330 neil@rnc-enviro.com
Direct Comments to:	Tyler Barrington, Principal Planner County of Nevada 950 Maidu Ave. Suite 170 Nevada City CA 95959

Project Location:

Brunswick Commons will be located at 936 Old Tunnel Road (APN 035-400-054) in the city of Grass Valley, Nevada County, California. The vacant, irregularly shaped, 5.00± acre parcel is on the west side of Old Tunnel Road, north of the junction of Town Talk Road.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

Brunswick Commons is a proposed 41-unit affordable rental apartment project, designed to provide housing targeting the homeless and mentally ill. A single residential building, plus off-street parking, a community garden, a barbecue/picnic area, bicycle lockers, and a playground area, will occupy 2.32± acres of the 5-acre parcel. The project will include a mix of 33 one-bedroom units and 8 two-bedroom units. A community center also located in the building will provide an office, maintenance room, computer learning center, exercise room, community room with a communal kitchen, and laundry facilities. Supportive services for residents will be provided within the community center facility.

Construction will be wood frame supported by perimeter foundations with concrete slab flooring. Due to the slope of the site, the east (uphill) side of the building will be two stories, and the west (downhill) side will be three stories.

The project applicant has requested a density bonus, based on a restriction of all units (except the manager's) to homeless households earning40% of the AreaMedianIncome(AMI) or below. This will allow the third story, a maximum height of 42', and a unit density of 17.67 per acre, compared to zoning limits of 2 stories, 35 feet, and 15 units per acre.

As a separate but related project, a 1± acre portion or the parcel, south of the apartments, will be the site of a County Resource Center, intended to provide social services to project residents as well as other members of the community in need.

A 20' by 275' strip of land extend from the west side of the site to Sutton Way. A pedestrian path will be constructed within this strip, connecting the apartments and the resource center to Sutton Way. A 1.7± acre portion of the parcel will remain undeveloped at this time.

The site is owned by Nevada County, who will retain ownership and lease the property for a period of 99 years pursuant to a disposition and development agreement with developer. The County Board of Supervisors will retain responsibility for reviewing and approving the design and development of the project, which will be built and operated by applicant on behalf of the County. +

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

According to the City of Grass Valley General Plan Housing Element, there are an estimated 120 homeless persons currently living in the city. Among the goals in the Housing Element is to address special housing needs as defined by state law and local conditions (GOAL B). Policy 5 under that goal states that the City shall allow overnight shelters and transitional housing facilities for homeless individuals and families in appropriate zoning districts.

Existing Conditions and Trends [24 CFR 58.40(a)]:

In 2018, the State of California Department of Finance estimated that unincorporated Nevada County had a population of 66,207 and consisted of 31,182 housing units. Grass Valley is the largest city in western Nevada County, with a population of 12,785 with 6,696 housing units. Small towns and rural development that is largely integrated into the natural environment characterize the remainder of the County. Almost half of the housing units in Grass Valley are multi-family.

Funding Information

Grant Number	HUD Program	Funding Amount
TBD	Project Based Vouchers, Section 8 40 Vouchers	$5,740,800

Estimated Total HUD Funded Amount:

$5,740,800

The actual subsidy amount will depend on the incomes of actual households assisted and the approved Nevada County Fair Market Rents. Regional Housing Authority estimates the first year Section 8 subsidy to be approximately $287,040, and the total 20-year commitment to be approximately $5,740,800, with an annul maximum of $510,660.

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]:

$14,500,000

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?		Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6			
Airport Hazards 24 CFR Part 51 Subpart D	Yes —	No X	***The project is not within an FAA-designated civilian airport Runway Clear Zone (RCZ), Runway Protection Zone, or within a military airfield Clear Zone (CZ) or Approach Protection Zone (APZ), based on information from the civilian airport or military airfield administrator identifying the boundaries of such zones.*** The project is located 1.5 miles NW of the Nevada County Airport, a general aviation airport. The project site is not located within a safety zone. The are no commercial or military airports in Nevada County. Beale Air Force Base, near Marysville, is more than 20 miles to the west of the project site. • **Nevada County Airport Land Use Compatibility Plan; September 2011; Exhibit 3-5. (Appendix C)**
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes —	No X	***Coastal Barrier Resources do not apply to California.***
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes —	No X	***The project does not involve property acquisition, land management, construction or improvement within a 100 year floodplain (Zones A or V) identified by FEMA maps, and does not involve a "critical action" (e.g., emergency facilities, facility for mobility impaired persons, etc. within a 500-year floodplain (Zone B).*** The site is in Zone "X". Flood insurance is not required. • **Flood Insurance Rate Map #06057C-0631E, February 3, 2010 (Appendix C)**

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.5			
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes —	No X	***Western Nevada County is designated by the U.S. EPA as in Non-Attainment for ozone, and in Attainment for all criteria air pollutants.*** The Northern Sierra Air Quality Management District (NSAQMD) is responsible for implementation of air quality regulations in the project area. The project will be required to comply with NSAQMD Rule 226, which requires dust control measures during construction. An analysis of the project using the California Emissions Estimation Model (CalEEMod) shows that emissions associated with the project will not exceed NSAQMD standards of significance. **Construction Air Quality Impacts** **Pollutant** / **NSAQMD Threshold*** / **Project Impact** **NOx** 24-136 lbs/day 8.73 lbs/day **ROG** 24-136 lbs/day 4.75 lbs/day **PM10** 79-136 lbs/day 0.86 lbs/day **CO** N/A 7.73 lbs/day **Operation Air Quality Impacts** **Pollutant** / **NSAQMD Threshold*** / **Project Impact** **NOx** 24-136 lbs/day 3.98 lbs/day **ROG** 24-136 lbs/day 2.84 lbs/day **PM10** 79-136 lbs/day 2.22 lbs/day **CO** N/A 14.25 lbs/day • **US EPA Air quality maps (Appendix D)** • **California Emissions Estimation Model (Appendix D)**
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes —	No X	***The project does not involve the placement, erection, or removal of materials, nor an increase in the intensity of use in the Coastal Zone (CZ) per certified coastal plan, California Coastal Commission, SF BCDC, etc.*** The subject property is located in the Sierra foothills of northern California, approximately 125 miles from the Pacific Ocean. It is not in a Coastal Zone, and is not located within a local coastal plan or within the jurisdiction of the San Francisco Bay Conservation and Development Commission. • **State Location Map, Appendix A**

Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes —	No X	***The project does involve new development for habitation. It is not located within one mile of an NPL ("Superfund") site, or within 2,000 feet of a CERCLIS site.*** A Phase I environmental site assessment found no evidence of recognized environmental conditions on the subject property. A Phase II environmental site assessment further found that historical mining activities in the region have not resulted in the presence of elevated concentration of arsenic in the site soils. • **RNC Environmental, Phase I Environmental Site Assessment, Brunswick Commons, April 19, 2019; (Appendix H)**
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes —	No X	***The County of Nevada has determined that the project will have "No Effect" on any federally protected (listed or proposed) Threatened or Endangered Species, nor adversely modify critical habitats.*** A Biological Resources Assessment was conducted for the project site by ECORP, Inc., of Rocklin, CA. The Assessment identified two species listed as threatened under both state and federal endangered species acts, with a low potential to occur on the project site, due to the presence of marginal habitat. They are the fisher *(Pekania pennanti)* and the Sierra Nevada red fox *(Vulpes vulpes necator)*. The ECROP report recommends that prior to construction activities, a pre-construction Fisher and Sierra Nevada red fox den survey should be conducted within the Project site. If potential den sites are located, consultation with CDFW prior to initiation of construction activities may be required. If no potential den sites are found during the survey, no further measures are necessary. • **Ecorp, Inc; Biological Assessment, Brunswick Commons Apartments; May 15, 2019. (Appendix E)**
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes —	No X	***The project is located an Acceptable Separation Distance from (ASD) from any above-ground explosive or flammable fuels or chemical containers according to "Siting of HUD-Assisted Projects Near Hazardous Facilities".*** No above-ground tanks are present in the project vicinity. • **Field Observations by Neil O'Hara, RNC Environmental; February 9, 201**

Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes —	No X	***The project site includes prime or unique farmland, but is dedicated to urban uses and is not subject to the Farmland Protection Policy Act.*** Three soil types are present on the project site — Cohasset loam, shoulders, 3 to 20 percent slopes; Cohasset loam, backslopes, 5 to 30 percent slopes; and Secca-Rock outcrop complex, 2 to 50 percent slopes. The Cohasset loam, shoulders, soil is considered "Farmland of statewide importance;" the other soils are "Not prime farmland." The Nevada County Important Farmland map for 2016 shows that the project site is located in an area designated as "Urban and Built-Up Land." • **USDA Natural Resources Conservation Service; Custom Soil Resource Report for Nevada County, California (Appendix J)** • **Nevada County Important Farmland map 2016; California Department of Conservation (Appendix C)**
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes —	No X	***The project does not involve property acquisition, land management, construction or improvement within a 100 year floodplain (Zones A or V) identified by FEMA maps, and does not involve a "critical action" (e.g., emergency facilities, facility for mobility impaired persons, etc. within a 500-year floodplain (Zone B).*** The site is in Zone "X", outside of the 500-year flood zone. • **Flood Insurance Rate Map #06057C-0631E, February 3, 2010 (Appendix C)**

Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes —	No X	***The County of Nevada and SHPO agree that the undertaking will have No Effect on Historic Properties within the Area of Potential Effect, per 36 CFR 800.4.*** A Cultural Resources Assessment, dated March 28, 2019, was prepared by Peak & Associates, Inc. Based on a Record Search performed by the CHRIS regional information center, correspondence with the Native American Heritage Commission and Tribal Agencies, and a site survey, Peak and Associates determined that the project will have no effect on historical or cultural resources. A section of the grade associated with the former Nevada County Narrow Gauge Railroad was identified within the project area. The former railroad grade parallels Old Tunnel Road about 30 to 50 feet west of the road embankment. Generally, the grade is about a 10' – 12' wide clearing with a gentle grade increasing from south to north. The grade no longer has tracks, ties, trestles, or other indicators of previous rail activity within this inspected segment; it is basically indistinguishable from an unimproved dirt road. A second historic period resource consists of a low, concrete barrier located along a southwestern facing hillside. It appears to have been installed to control surface erosion and protect the excavated hillside below. The barrier was likely originally installed to protect a group of homes below the excavated face. A more modern modification was added to the system at some point, probably when the commercial development below was constructed. Neither resource meets criteria to be considered an eligible historic property. A letter documenting this finding was submitted to the State Historic Preservation Office, on April 12, 2019. In a letter dated May 13, 2019, SHPO concurred with this finding. • **Peak & Associates, Inc., Determination of Eligibility and Effect for the Brunswick Commons Project. (Appendix F)** • **SHPO letter, May 13, 2019. (Appendix F)**

Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes —	No X	***Ambient noise levels are documented to be 65 LDN (CNEL) or less, based on the HUD Noise Assessment Guidelines (NAG) for calculating noise levels and Airport Noise Contour Map.*** A noise assessment was completed using the HUD Noise Assessment Guidelines. The assessment found that the only traffic noise source potentially impacting the site is the State Route 20/49 freeway, located 500 feet from the site. The noise level from this freeway at the project site is projected to be 63.4 dB LDN. The site is not impacted by noise from the general aviation airport 1.5+ miles to the southeast. The nearest railroad is more than 10 miles to the southeast. • **Location maps. (Appendix A)** • **HUD Noise assessment. (Appendix I)**
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes —	No X	***This project is not located within a U.S. EPA-designated sole source aquifer watershed area, per the EPA Ground Water Office, Region IX.*** http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_reg9.pdf • **USEPA Sole Source Aquifer maps. (Appendix C)**

Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes X No — Yes — No X	***The project does involve new construction within or adjacent to wetlands.*** A wetland delineation was prepared by ECORP consulting. One ephemeral drainage, of 0.038 acre in area, occurs in the southeastern portion of the Project site. Ephemeral drainages are linear features that exhibit a bed and bank and an ordinary high-water mark. These features typically convey runoff for short periods of time during and immediately following rain events and are not influenced by groundwater sources at any time during the year. This feature is a steep, narrow, deeply incised channel that enters the property via a culvert under Old Tunnel Road. It is primarily unvegetated due to scour. Due to the lack of vegetation, this feature does not qualify as a wetland, and the requirements of Executive Order 11990 do not apply. It does qualify as a "Water of the United States," and a permit under Section 404 of the Clean Water Act will be required. ***Required Mitigation: A Section 404 fill permit must be obtained from the U. S. Army Corp of Engineers for impacts to the drainage channel prior to start of construction.*** • **Biological Assessment, Appendix E.**
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes — No X	***The project is not located within one mile of a listed Wild and Scenic River.*** The project not located within one mile of any river. (http://www.rivers.gov/wildriverslist.html) • **Wild and Scenic River list and map. (Appendix C)**
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes — No X	***The project site is suitable for its proposed use, and the project will not be adversely affected by existing environmental conditions.*** The project is consistent with the general plan designation and zoning for the area. There are no identified adverse environmental conditions that would affect the project. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

(1) Minor beneficial impact

(2) No impact anticipated

(3) Minor Adverse Impact – May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	**2**	The project site is located within the City of Grass Valley. The City has designated the site as OP- Office Professional. According to Thomas Last, Community Development Director, new construction of Permanent Supportive Housing, is a permitted use, with a Use Permit. The project will be consistent with both the Grass Valley General Plan, the Nevada County General Plan, and state and local Density Bonus regulations. A density bonus requested by the applicant includes a density of 17.67 units per acre. The current zoning allows 15 units per acre; a maximum density bonus of 35% would allow 23.8 units per acre. Also, the maximum allowable height in the Office Professional zone is 35ft and 2- stories. The proposed project , with density bonus, is a 3 story building with a height of 41'-11⅛". The project site is located on land owned by the County of Nevada, but is within the limits of the City of Grass Valley. As a result, the County will be approving and authorizing development of the proposed project, while making every effort to comply with the City of Grass Valley policies. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	**3**	<u>Soil Suitability</u> According to the Natural Resources Conservation Service, Web Soil Survey, the property is underlain by Cohasset loam, shoulders, 3 to 20 percent slopes; Cohasset loam, backslopes, 5 to 30 percent slopes; and Secca-Rock outcrop complex, 2 to 50 percent slopes. The Cohasset soils consist of residuum weathered from volcanic breccia and/or conglomerate. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Shrink-swell potential is low. The Secca soil consists of basic colluvium derived from igneous and metamorphic rock and/or residuum weathered from igneous and metamorphic rock. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Shrink-swell potential is high. The Soil Survey notes that the slope of both soils and the shrink-swell potential of the Secca soil are limiting factors for construction of "small commercial buildings." It will be important to conduct a geotechnical study of the site to assure that foundation design, slab and pavement specifications, and similar details, are compatible with the soil type. As a mitigation measure: • ***Prior to issuance of building permits, a geotechnical report be prepared, and reviewed and approved by the Nevada County Building Department. Its recommendations will be incorporated into the design and construction of the project.*** • **Natural Resources Conservation Service, Web Soil Survey (Appendix J)**
	3	<u>Slope</u> The project is located on a parcel with an average 20% slope. While the apartment building is designed to fit onto the slope, with an additional story on the lower side of the building, site grading will be required for driveways, parking, foundations, and level outdoor use areas. A grading permit will be required, and the project will comply with all requirements of both the Nevada County and City of Grass Valley grading ordinances. As noted above, grading specifications will be determined by a geotechnical study. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

		<u>Erosion</u> There is a potential for soil erosion during construction due to the slope of the site. The project development will require a Storm Water Pollution Prevention Plan in compliance with the National Pollutant Discharge Elimination System because the improvements would exceed one gross acre. The County has identified a CEQA mitigation measure to require the approval of Storm Water Pollution Prevention Plan (SWPPP), and an Erosion and Sediment Control Plan prior to issuance of a Grading Permit or other improvement permit. No additional NEPA mitigation measure is required. • **Natural Resources Conservation Service, Web Soil Survey (Appendix J)** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff (continued)	**2**	<u>Drainage and Stormwater</u> There is currently a roadway cross culvert that conveys upstream drainage from east to west across Old Tunnel Road onto the site. Drainage then flows in the southwesterly direction through a season drainage swale. The project proposes to extend the existing culvert across the site and connecting it to the existing City storm drain system located in Sutton Way. A preliminary Drainage Plan was prepared for the apartment site. The proposed apartment building will have a footprint of approximately 18,956 square feet and adjacent impervious areas will total 55,142 sf. The project will include three on-site bio-retention basins, designed to effectively detain or "hold back" the necessary volume of water, only releasing the pre-project 2-year storm peak flow rate. In addition, the project proposes to improve storm water quality by including the following components within the bio-retention basin: Installation of an 18" layer of highly permeable planting material located at the bottom of the basin to allow for percolation into the underlying soils; Installation of appropriate plant species that will allow for evapotranspiration of storm water; Installation a 4" perforated pipe set in a 12" thick section of drain rock (underdrain) to transport any filtered water that the underlying soil strata will not accept to the outlet structure. The underdrain will also help keep the basin dry and fee of any standing water. • **Location maps and site photos, Appendix B.** • **Site plan, Appendix A.** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Hazards and Nuisances including Site Safety and Noise	**2**	Seismic Risks The County's Master Environmental Inventory shows the project site as being in an area of low potential for landslide activity and does not map the site as being near a known earthquake fault (Nevada County 1991). The Alquist-Priolo Earthquake Fault Zoning Act was adopted in 1972 to prevent the construction of buildings in areas where active faults have surface expression. Ground or fault rupture is generally defined as the displacement that occurs along the surface of a fault during an earthquake. The project site is not within an Alquist-Priolo Earthquake Fault Zone, and there are no known faults that cross through the project site. Generally, western Nevada County is located in the low intensity zone for earthquake severity.
Hazards and Nuisances including Site Safety and Noise (continued)	**2**	Tsunamis and Seiche The site is not located near the ocean or any large bodies of water. There is no risk of tsunami or seiche hazard. Wildland Fire The project site is within the Very High Fire Hazard Severity Zone as mapped by CalFire. As a new construction site, the project will meet emergency vehicle accessibility standards and have a defensible space around structures where brush and flammable vegetation is reduced or removed. The project will be designed to meet Grass Valley Fire Department (GVFD) standards, and will be reviewed for compliance with these standards prior to building permit issuance, as well as during building inspections during construction and at its completion. GVFD will also require an on site hydrant and vegetation management plan. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** Noise The nearest sensitive receptors to the project site are low-density residential uses east of the project area. Other surrounding properties are retail, commercial and office spaces, and are not considered noise sensitive. Construction would result in temporary noise impacts at the nearest residences. The project will be required to comply with City and County noise standards, which limit construction work to the hours of 7 AM to 7 PM Monday through Saturday. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Energy Consumption	**2**	The proposed buildings will be new construction and will therefore be required to meet all current building standards including but not limited to the 2016 California Building Code, 2016 California Electrical Code, 2016 California Energy Code (Title 24) as well as the City of Grass Valley Building Code. As shown on the submitted floor plan and elevation drawings, the buildings would be designed to be as energy efficient as possible and would include LED lighting, double pane aluminum windows with Low "E" glazing which are designed to maintain energy efficiency as well as other requirements required by the 2016 California Energy Code. • **Project description** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	**1**	As the project is a residential development, it will provide temporary employment for construction workers, but once complete will have no significant impact on employment and income patterns. • **Project description** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**
Demographic Character Changes, Displacement	**1**	The project is intended to provide housing and services for persons already living in the Nevada County area, but who are lacking permanent housing. According to the City of Grass Valley General Plan Housing Element, there are an estimated 120 homeless persons currently living in the city. The project will have a potential beneficial impact by providing a permanent or transitional housing solution to those without housing. The project site is presently vacant. No residents will be displaced. • **Location maps and site photos, Appendix A** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	**2**	The Grass Valley Elementary School District and the Nevada Joint Union High School District serve this site. As the project is intended to serve persons already residing in the area, but without permanent housing, no impact to student populations is anticipated. Grass Valley has a rich historical heritage from the California gold rush of 1849, through the tumultuous mining period which followed. The last active gold mine (until the 1990's) closed in 1956, ending 107 years of continuous production. Many valuable historical resources still remain as a reminder of the City's legacy. Rather than setting aside historic structures and districts as quaint relics or museum pieces, Grass Valley prides itself on the continued use and enjoyment of old homes, hotels, saloons, and other structures as part of the community "fabric". Grass Valley's historical mining town atmosphere is an important economic generator, luring tourists and local residents. Improvements at the Empire Mine State Park will heighten Grass Valley's attractiveness to the growing historical tourism industry. Residents also have access to the Center for the Arts, a regional concert venue; a public library; and city parks with meeting facilities. It is within an hour drive of Sacramento, the state capital and site of numerous cultural opportunities. The project will have no significant impact on the usage of these facilities. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** • **Grass Valley General Plan**
Commercial Facilities	**2**	The proposed site is directly adjacent to a shopping center with supermarket, pharmacy, and an assortment of other retail facilities. Residents will be able to meet most of their basic needs within walking distance. No new commercial facilities will be required.. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Health Care and Social Services	**2**	Western Sierra Medical Clinic offers medical, dental, pediatrics, behavioral and maternity health, including an urgent care clinic, at a location about 500 feet south of the project site, at 844 Old Tunnel Road. Sierra Nevada Memorial Hospital is less that two miles away 155 Glasson Way. • **Western Sierra Medical Clinic** https://wsmcmed.org/grass-valley/ • **Sierra Nevada Memorial Hospital** https://locations.dignityhealth.org/sierra-nevada-memorial-hospital-grass-valley-ca Hospitality House operates an existing homeless shelter on Sutton Way, near the project site, and will operate a new Resources Center to be located adjacent to the proposed project on the same county-owned parcel. The project will not create a significant need for new services. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** • **Hospitality House** https://hhshelter.org
Solid Waste Disposal / Recycling	**2**	The project will result in a small, incremental, and less than significant addition in solid waste generation. Solid wastes generated by the project will consist of typical household refuse. Trash collection facilities will be located on the property. Solid waste generated either during the development of the site or after occupancy, is processed at the McCourtney Road Transfer Site, which is maintained by the County of Nevada, who contracts with a solid waste disposal company to haul material to a permitted sanitary landfill. **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**
Waste Water / Sanitary Sewers	**2**	The project will result in an incremental addition in wastewater generation. Effluent from the project will consist of typical domestic sewage. The City of Grass Valley will provide sewer service to the project. The City has provided a will-serve letter, which includes a statement that "[t]he owner of the Property must pay all applicable fees, charges, and assessments by COGV; submitting to COGV, and COGV's approval thereof, appropriate plans and specifications for sewer facilities serving the Property consistent with COGV's standards; and complying with applicable rules and regulations, including those of COGV." • **Project Description, Appendix B.** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Water Supply	**2**	The proposed project will be served by the Nevada Irrigation District (NID). The NID has provided a will-serve letter. The letter states that "the referenced parcel is located within the boundaries of the Nevada Irrigation District. Per District records, this parcel has a standby account (#35873) and treated water service is available to this parcel from the Loma Rica Treatment Plant upon proper application and payment of the applicable connection fees. A water demand estimate is required for evaluation of capacity charges to be collected and size of meter to be installed. The District has adequate capacity for the consumptive needs of the parcel." • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** • **County of Nevada 2014 Consumer Confidence Report (Appendix L)**
Public Safety - Police, Fire and Emergency Medical	**2**	The project will be served by the Grass Valley Fire Department and the Grass Valley Police Department. The Grass Valley Fire Department also provides emergency medical services to the community with the help of Sierra Nevada Ambulance. The project will be required to pay developer fees, which will offset the cumulative impacts to physical facility needs for each of these services; and will be required to cover any costs directly required for development of the project site. • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** • **Grass Valley Fire Department** https://grassvalleyfire.com/services

Parks, Open Space and Recreation	**2**	There are several recreational facilities near the proposed project. The parcel is within the Grass Valley Community Region and just over a mile from Empire Mine State Historic Park. The current city parks system is comprised of approximately 108 acres of park land consisting of seven developed park sites and one undeveloped park site. Facilities contained within these parks include 2 baseball fields, 1 softball field, 1 soccer field, 1 skatepark, 1 disc golf course, 2 outdoor basketball courts, 4 tennis courts, 1 volleyball court, 4 playgrounds, several picnic areas, a museum and a swimming pool. The City parks also contain 3 public meeting rooms of varying size. People without permanent housing often rely on public parks and other public facilities to meed many of their basic needs - restroom facilities, picnic areas, and informal campsites. The project will provide permanent housing for a portion of this population, and should result in reduced use of parks for these purposes. The project also includes basic recreational facilities for residents, including a barbecue /picnic area, and a children's play structure.. • **Project description** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**
Transportation and Accessibility	**2**	The site is approximately a quarter mile northeast of the intersection of Highway 49/20 and Brunswick Road in Grass Valley. The primary access to the site would from Brunswick Road via Old Tunnel Road. Gold Country Stage provides public transit throughout western Nevada County, with connections to Auburn. Route 4BB serves the vicinity of the project, with two stops located along Sutton Way, and two stops on Old Tunnel Road; the nearest stop is at the Nevada City Senior Apartments, 500 feet south of the project site. According to a traffic analysis prepared by K.D. Anderson & Associates, the City of Grass Valley has determined that a project causing fewer than 63 p.m. peak hour trips is judged to have traffic impacts that are less than significant. The traffic analysis indicates that the apartments can be expected to generate 23 p.m. peak hour trips, and the resource center 22. A total of 45 project-related p.m. peak hour trips is below the 63-trip threshold. The project will be required to pay City of Grass Valley traffic mitigation fees, and the Nevada County Regional Transportation Mitigation Fee; which will further reduce any cumulative impact on traffic.

Transportation and Accessibility, Continued		The Grass Valley Development Code has no specific parking requirements for Permanent Supportive Housing projects. The project proposes 28 parking spaces, which equates to roughly 0.68 spaces per unit. The low-income target tenants are somewhat less likely to own cars, plus the availability of public transportation and directly adjacent shopping facilities will make carless living feasible. It is therefore expected that the proposed number of parking spaces will be sufficient. • **Project Plan, Appendix A** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)**

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	**2**	The proposed project is sited on sloping terrain within an elevation range of about 2,650 and 2,750 feet above Mean Sea Level. Vegetation on most of the site is ponderosa pine forest. This type of forest vegetation is common through the Sierra foothills. No unique natural features are present. NID collects water on 70,000 acres of high mountain watershed. The district holds valuable water rights to these supplies and does not have to purchase water from other agencies. The water supplied to NID customers originates on the upper reaches of the Middle Yuba River, South Yuba River, Bear River, Canyon Creek, Deer Creek and several tributaries. Water from the mountain snowpack flows into seven reservoirs in NID's mountain division and is transported to three additional foothill reservoirs and district customers through an extensive water transmission system. NID uses over 400 miles of canals and another 300 miles of pipeline to transport water to customers. • **Location maps and site photos, Appendix A** • **County of Nevada; CEQA Initial Study; May 22, 2019. (Appendix G)** • **Ecorp, Inc; Biological Assessment, Brunswick Commons Apartments; May 15, 2019. (Appendix E)** • **Nevada Irrigation District, "About your Water" https://nidwater.com/water-service/about-your-water/** • **Nevada Irrigation District; Annual Water Quality Report 2017**

Vegetation, Wildlife	**2**	The ponderosa pine forest community is characterized by a tall tree canopy dominated primarily by ponderosa pine. Other tree species present in the overstory include incense cedar and California black oak. The understory of this plant community is sparsely vegetated with blue wild rye, pink honeysuckle, Himalayan blackberry, and Scotch broom. Openings in the tree canopy are dominated by white leaf manzanita, and buck brush, and blue wild rye. The biological survey identified several rare or unusual wildlife species with the potential to occur in the Grass Valley area, though the likelihood of any occurring on the project site is low. Seasonally-timed field surveys will be conducted to prevent unanticipated impacts to rare species. • **Location maps and site photos, Appendix A** • **Ecorp, Inc; Biological Assessment, Brunswick Commons Apartments; May 15, 2019. (Appendix E)**
Other Factors	**2**	None identified.

Additional Studies Performed:

- Ecorp, Inc; Biological Assessment, Brunswick Commons Apartments; May 15, 2019. (Appendix E)
- Peak & Associates, Inc., Determination of Eligibility and Effect for the Brunswick Commons Project. (Appendix F)
- RNC Environmental, Phase I Environmental Site Assessment, Brunswick Commons, April 19, 2019; (Appendix H)

Field Inspection (Date and completed by):

Neil O'Hara, principal, RNC Environmental, LLC., February 9, 2019.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

AMG & Associates, LLC; (818) 380-2600; Cameron Johnson and Alexis Gevorgian

California Air Resources Board, ambient air quality attainment designations; http://www.arb.ca.gov/desig/adm/adm.htm

California Department of Conservation, Important Farmland Maps; Nevada County 2016

California Department of Toxic Substances Control

California Division of Forestry, Fire Hazard Severity Zone Map, Nevada County, 2007

California State Office of Historic Preservation

CalRecycle

City of Grass Valley General Plan

Flood Insurance Rate Map #06057C-0631E, February 3, 2010.

Nevada County Environmental Health Department

Nevada County General Plan

Nevada County Airport Land Use Compatibility Plan; September 2011; Exhibit 3-5.

Friends of the River – Wild & Scenic Rivers maps; http://www.friendsoftheriver.org

Google Earth; http://earth.google.com/

National Park Service – Wild & Scenic Rivers list; http://www.rivers.gov/wildriverslist.html

Natural Resources Conservation Service – Web Soil Survey; http://websoilsurvey.nrcs.usda.gov/app/

U.S. Environmental Protection Agency, Region IX

US Census Bureau, American FactFinder

US Environmental Protection Agency, Sole Source Aquifer program; http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_reg9.pdf

US Fish and Wildlife Service – National Wetland Inventory Maps; http://wetlandsfws.er.usgs.gov/

US Fish and Wildlife Service – Sacramento office

List of Permits Obtained:

- The project site is crossed by an ephemeral drainage, which enters the property through a culvert under Old Tunnel Road, and enters the city storm drain system beneath the adjacent shopping center. Due to site grading restrains, this channel will need to be placed in a culvert for its entire length. A permit will be required from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act for placement of fill into Waters of the United States. The project is expected to qualify under Nationwide Permit 39, as an impact of less than one-half acre. Water Quality Certification, under Section 401 of the Clean Water Act, will be required from the Regional Water Quality Control Board in order to validate the permit.

Public Outreach [24 CFR 50.23 & 58.43]:

The Nevada County Board of Supervisors gave final approval on the project at a public meeting on Jan. 22, 2019. An informational public meeting was held on April 25.

A FONSI notice will be published and circulated consistent with the requirements of 24 CFR 58.43.

Cumulative Impact Analysis [24 CFR 58.32]:

The project is consistent with the City of Grass Valley General Plan. The cumulative impacts of the project are addressed by the mitigation measures identified in than plan. Developer Fees will offset the cumulative impacts to air quality, transportation, schools and parks, and related city services.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

As described by Hospitality House on their web site about the project, "extensive time and research was invested to determine the most logical place for the day services center and housing, which needs to be in a centralized location for accessibility to services. The Brunswick Basin was carefully determined to be the best suited location for a number of reasons, including safety. Community safety is critical, and it was highly considered when brainstorming sessions for this project first began. Since its inception, plans for this development have included security, patrolling, and fencing. Homeless neighbors are already in the Brunswick Basin and this project provides an opportunity to supervise them. This adds safety to an

element that already exists, and gives people who are already in the neighborhood a welcoming place to go during the day where they can be proactive and get help."

There were no alternative sites identified which met the above criteria, were presently vacant and appropriately zoned, and available for purchase.

No Action Alternative [24 CFR 58.40(e)]:

Without the proposed project, there will continue to be a significant unmet need for transitional and permanent housing for homeless individuals and families in the Grass Valley area. The subject property would likely be eventually developed as a professional office space, consistent with the zoning, and comparable to several other medical and professional offices presently located on Old Tunnel Road and Sutton Way.

Summary of Findings and Conclusions:

The proposed project will help to fill a significant and urgent need for affordable rental housing in the Grass Valley area. The City of Grass Valley has the capacity to serve the project, with the consideration that street and utility improvements will be required to connect the project to existing infrastructure at Martin and Bevins Streets. The project has been designed to minimize wetland impacts to the extent practical. City of Grass Valley CEQA mitigation requirements will address all other potential and cumulative impacts of the project.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Wetlands Protection	***A Section 404 fill permit must be obtained from the U. S. Army Corp of Engineers for impacts to the drainage channel prior to start of construction.***
Soil Suitability	***Prior to issuance of building permits, a geotechnical report be prepared, and reviewed and approved by the Nevada County Building Department. Its recommendations will be incorporated into the design and construction of the project.***

Determination:

__XX__ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

_____ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: _____ Date: 5/23/19

Name/Title/Organization: Neil O'Hara, consultant

RNC Environmental, LLC

Certifying Officer Signature:

_____ Date: 5/28/19

Name/Title: Mike Dent, Director of Housing and Community Services

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

APPENDICES

A. Proposed Site Plan
B. Site Maps and Photos
C. Geographic Information
D. Air Quality
E. Biological Resources
F. Cultural Resources
G. City Planning / CEQA
H. Hazardous Substances
I. Noise
J. Soils
K. Community Services

A. Proposed Site Plan

SCHEMATIC SET / NOT FOR CONSTRUCTION

PROJECT

BRUNSWICK COMMONS

OLD TUNNEL ROAD

GRASS VALLEY, CA

-A1.1

REVISIONS

Project no.	12-018
Date	
Drawn by	DE
Approved by	AM/218-sht

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APARTMENTS

ACCESSIBILITY	# OF UNITS	PERCENTAGE
ADAPTABLE UNITS (ALL GROUND FLOOR UNITS REQ.)	34	13.28 %
ACCESSIBLE UNITS (10% TOTAL)	5	19.53 %
REMAINING UNITS (TYPE A UNITS)	17	

UNIT MIX SUMMARY		CONDITIONED SQ. FOOTAGES
(13) 1 BEDROOM UNITS	(13) x 697 S.F. =	20,061 S.F.
(91) 2-BEDROOM UNITS	(91) x 1769 S.F. =	6,398 S.F.
(41) UNITS TOTAL		20,061 S.F. + 6,398 S.F. = 26,459 S.F.
COMMUNITY CENTER		20,001 S.F. + 6,392 S.F. = 26,403 S.F.
		1,600 S.F.
TOTAL		28,003 S.F.

PARKING SUMMARY

PROPOSED	
0.9 SPACES PER UNIT = 41 * 0.9 = 22 SPACES	
PROVIDED	
22 SPACES + 4 ACCESSIBLE SPACES	
TOTAL PARKING SPACES PROVIDED= 26 SPACES	

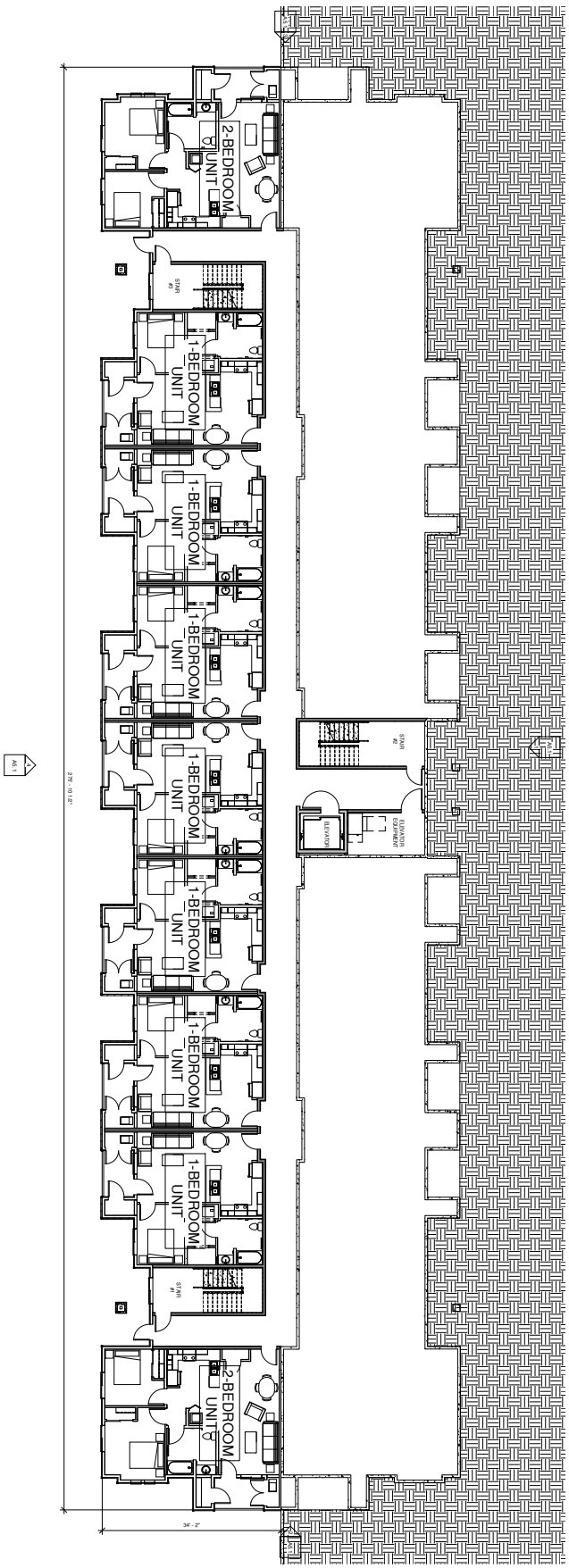
SITE SIZE

10 CITE (M.S.F.) (2.29 ACRES+)
11.57 UNITS PER ACRE

1 TRASH ENCLOSURE
1/4" = 1'-0"

2 TRASH ENCLOSURE SECTION A-A
1/2" = 1'-0"

OLD TUNNEL ROAD
SUTTON WAY
APARTMENTS
RESOURCE CENTER
NOT A PART
SITE PLAN
SCALE 1" = 40'-0"
6' HT. WROUGHT IRON PERIMETER FENCING, TYP.
COMMUNITY CENTER
BICYCLE LOCKERS
ELEVATOR
TRASH ENCLOSURE
COVERED PICNIC TABLE AND BBQ, PERGOLA, AND BENCHES WITH NON-COMBUSTIBLE MATERIAL
6' WIDE SIDEWALK W/ 2% MAX. CROSS SLOPE, TYP.
BIKE RACKS
ACCESSIBLE PARKING SPACES
ACCESSIBLE PATH OF TRAVEL
ACCESSIBLE RAMP
ACCESSIBLE ENTRY
ACCESSIBLE PARKING SIGN
ACCESSIBLE PARKING STALL
ACCESSIBLE PARKING SPACES
ACCESSIBLE PARKING SPACES
ACCESSIBLE PARKING SPACES



A3.1A

PROJECT

BRUNSWICK COMMONS

OLD TUNNEL ROAD GRASS VALLEY, CA

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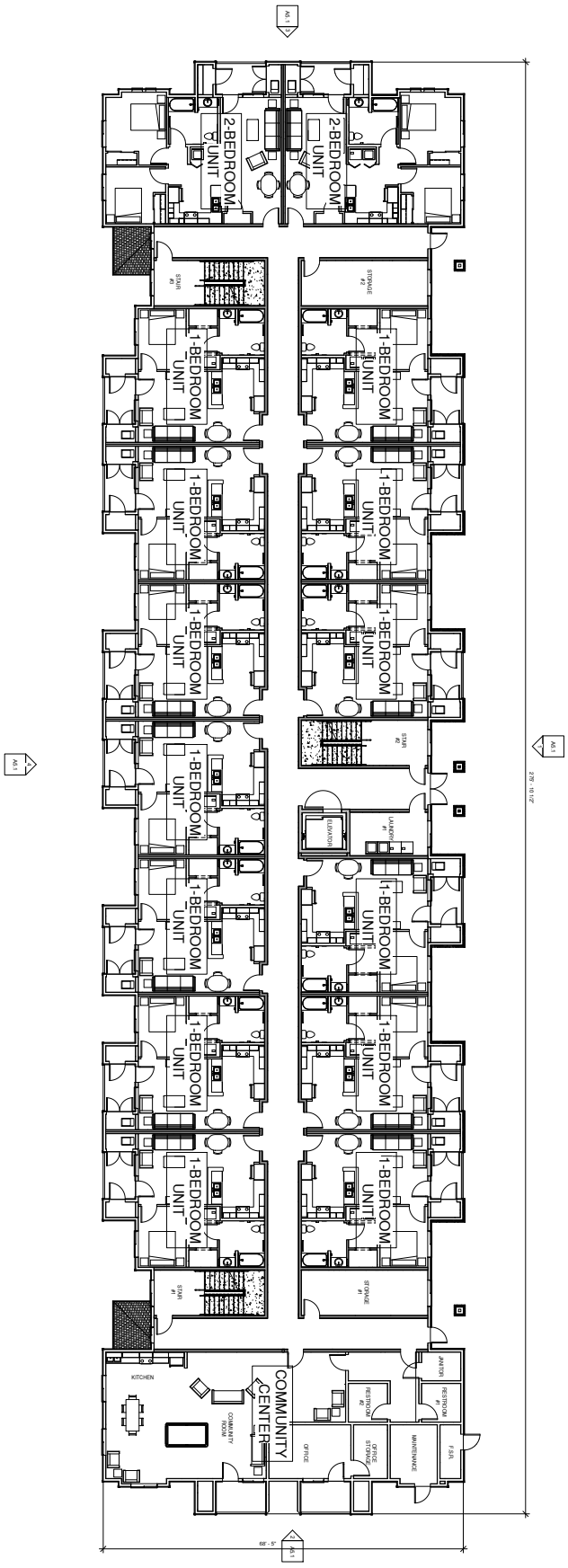
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1 2ND FLOOR PLAN
1/8" = 1'-0"



A3.1B

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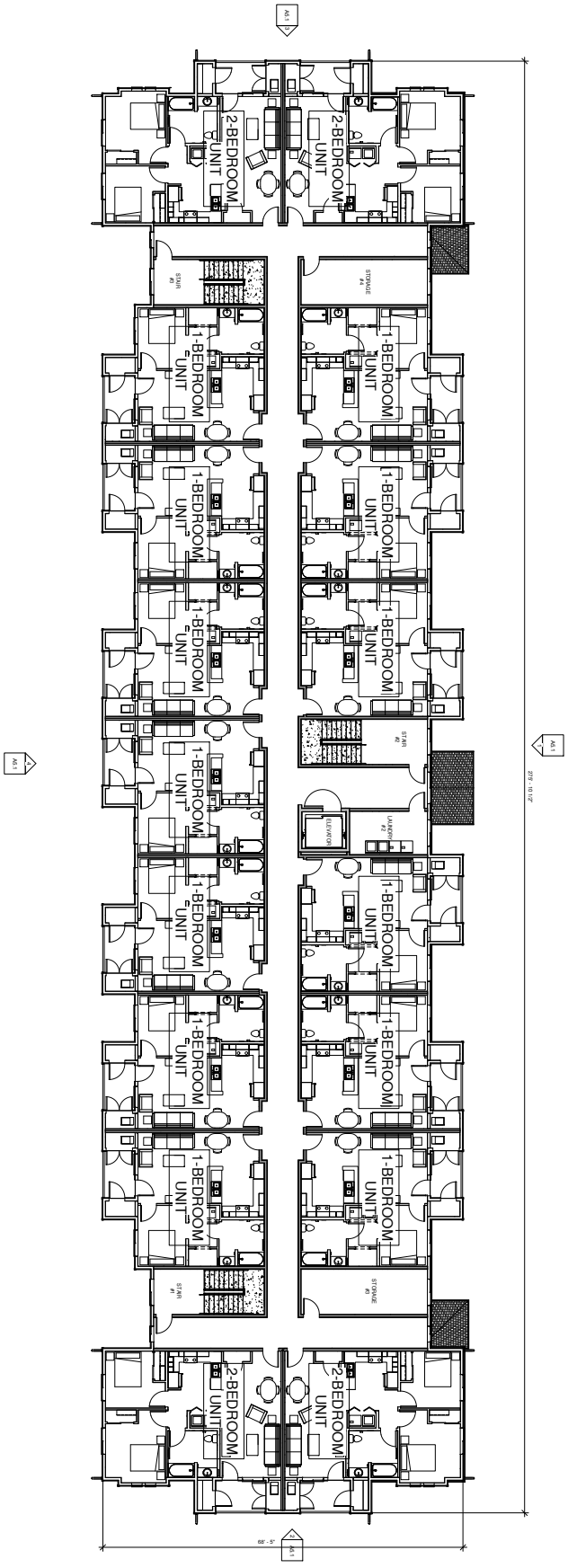
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3RD FLOOR PLAN
1/8" = 1'-0"



A3.1C

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OLD TUNNEL ROAD — GRASS VALLEY, CA

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PROJECT

BRUNSWICK COMMONS

OLD TUNNEL ROAD

GRASS VALLEY, CA

A5.1

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GRASS VALLEY, CA

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ARCHITECT

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DATE
1.9.19

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4 WEST ELEVATION
1 1/2" = 1'-0"

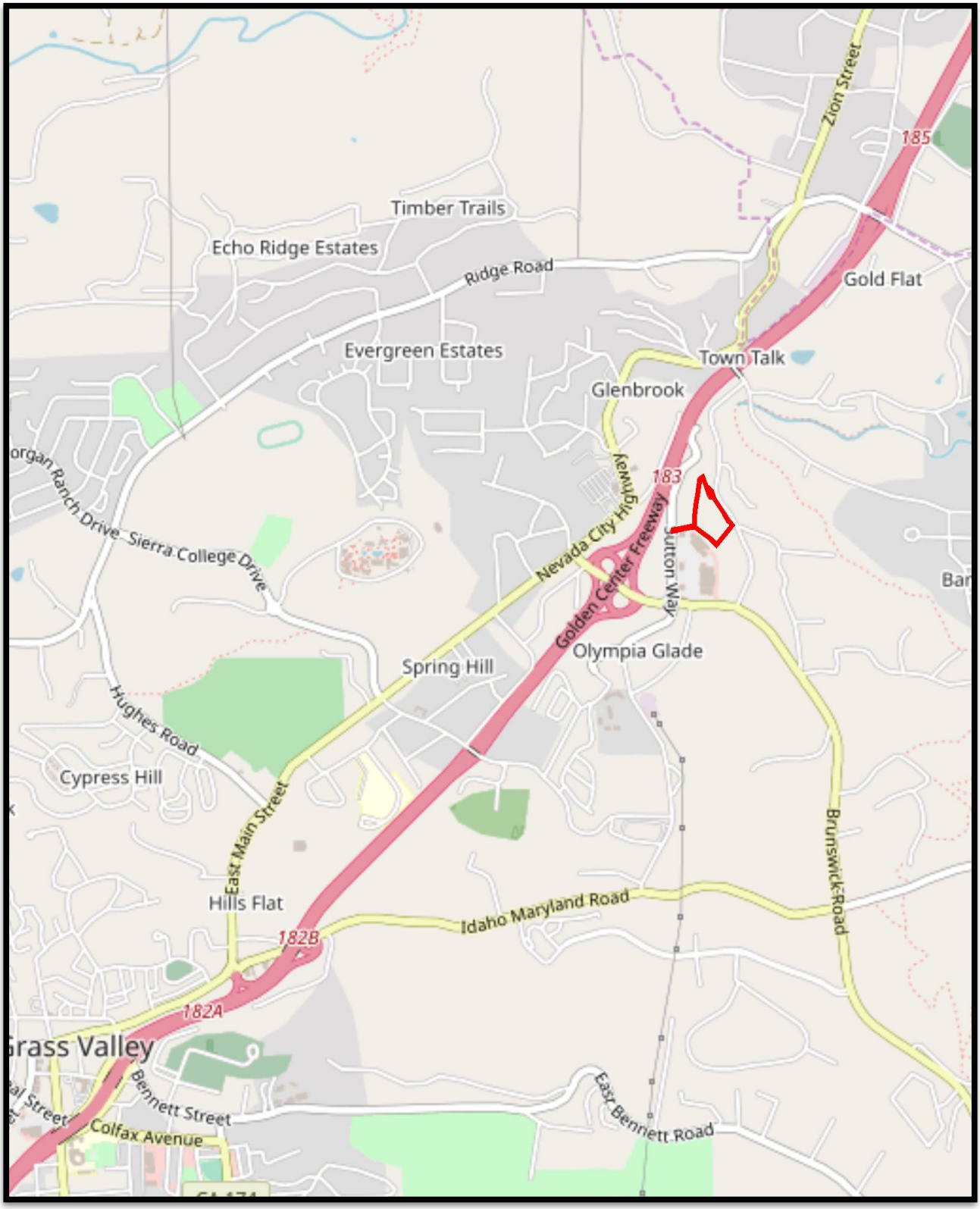
3 NORTH ELEVATION
N.T.S.

2 SOUTH ELEVATION
N.T.S.

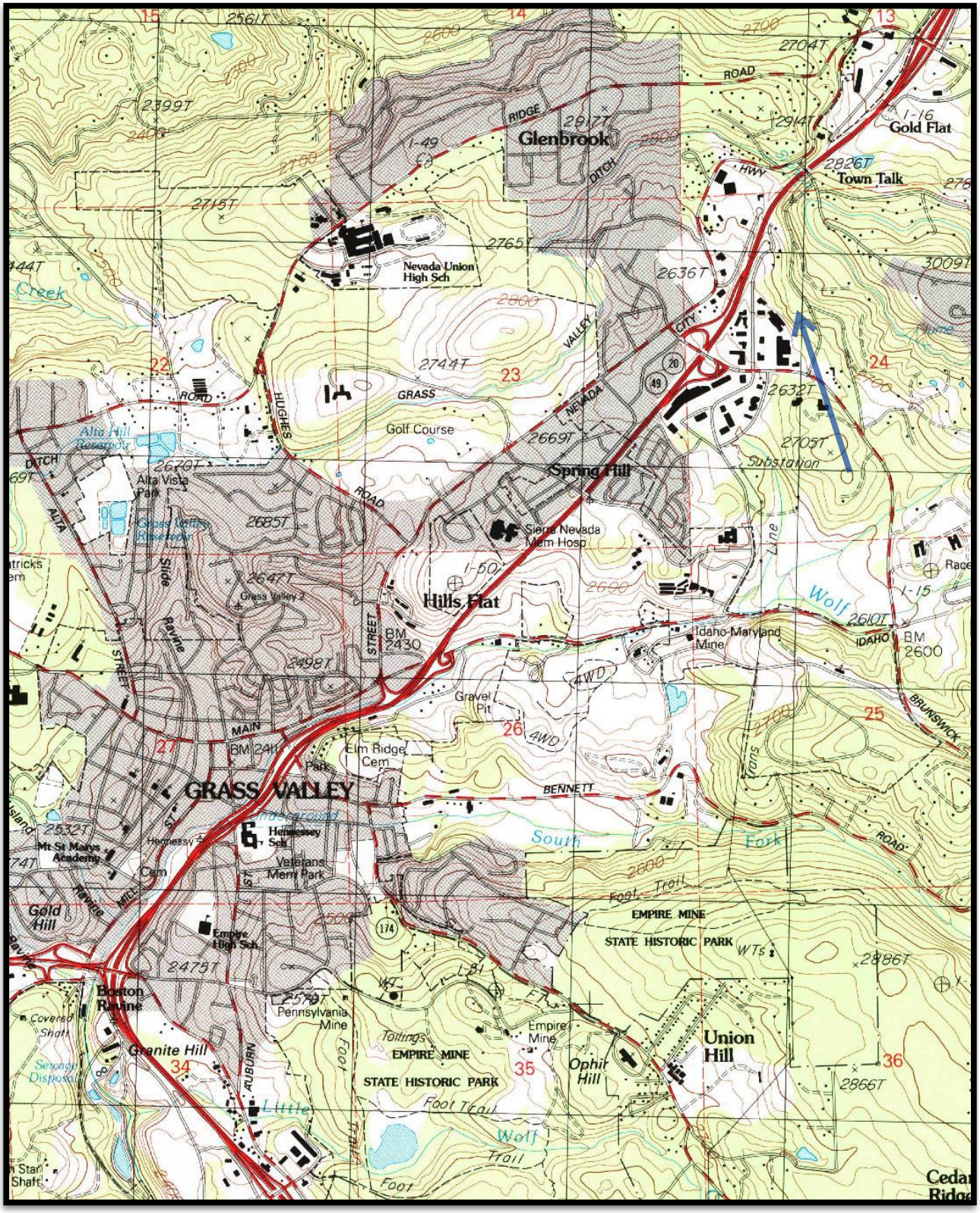
1 EAST ELEVATION
1 1/2" = 1'-0"

B. Site Maps and Photos

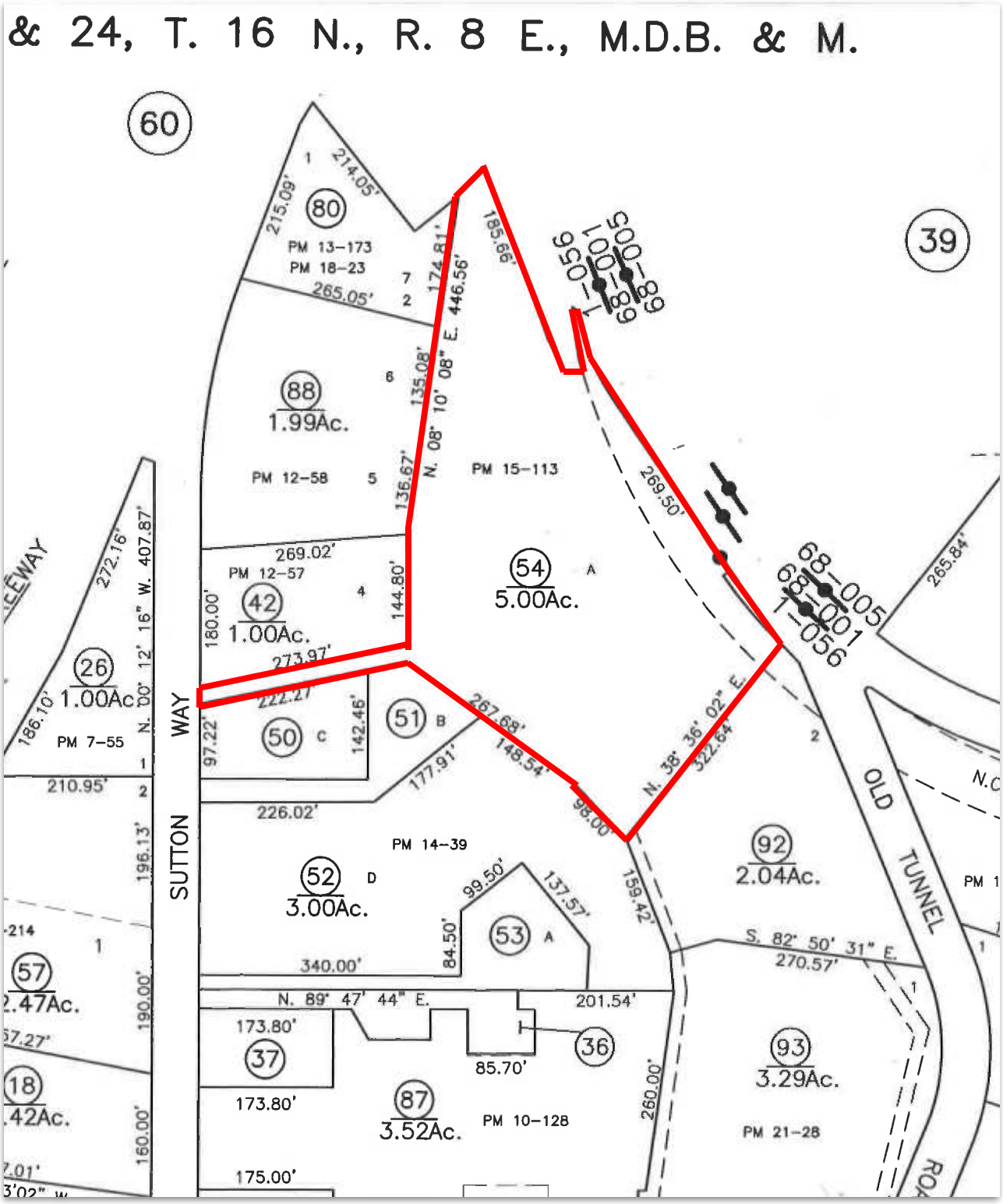

Fort Dick
Crescent City
Klamath
Clear Creek
Yreka
Montague
Dorris
Tulelake
Willow Ranch
Bray
Lake City
Hackamore
Alturas
Likely
Etna
Weed
Mount Shasta
Orick
Orleans
Callahan
Dunsmuir
Trinidad
Arcata
Eureka
Blue Lake
Big Bar
Weaverville
Lamoine
Nubieber
Hat Creek
Termo
Shasta Lake
Ferndale
Fortuna
Redding
Rio Dell
Platina
Anderson
Mineral
Susanville
Honeydew
Blocksburg
Red Bluff
Westwood
Milford
Taylorsville
Whitethorn
Leggett
Paskenta
Corning
Quincy
Portola
Dos Rios
Orland
Chico
Paradise
Loyalton
Willows
Oroville
Downieville
Fort Bragg
Willits
Biggs
Gridley
Live Oak
Nevada City
Truckee
Colusa
Elk
Ukiah
Williams
Marysville
Grass Valley
Yuba City
Wheatland
Colfax
South Lake Tahoe
Lakeport
Clearlake
Lincoln
Auburn
Point Arena
Cloverdale
Roseville
Rocklin
Placerville
Folsom
Markleeville
Woodland
Windsor
Calistoga
Davis
Sacramento
Colevile
Santa Rosa
Saint Helena
Dixon
Ione
Sutter Creek
Sebastopol
Napa
Vacaville
Galt
Jackson
Rohnert Park
Fairfield
San Andreas
Bridgeport
Petaluma
Novato
Vallejo
Rio Vista
Lodi
Angels City
Sonora
San Rafael
Martinez
Concord
Le Vining
Berkeley
Stockton
Tuolumne City
San Francisco
Oakland
Lathrop
Manteca
Ripon
Oakdale
Yosemite Village
Daly City
Alameda
Livermore
Riverbank
Mammoth Lakes
San Mateo
Hayward
Modesto
Waterford
Redwood City
Fremont
Patterson
Turlock
Mariposa
Sunnyvale
Milpitas
Livingston
Atwater
Bishop
Santa Clara
San Jose
Newman
Merced
Coarsegold
Lakeshore
Los Gatos
Morgan Hill
Chowchilla
Santa Cruz
Capitola
Gilroy
Los Banos
Madera
Dos Palos
Watsonville
Hollister
Firebaugh
Trimmer
Clovis
Fresno
Independence
Marina
Salinas
Mendota
Sanger
Owenyo
Monterey
Seaside
San Joaquin
Parlier
Reedley
Gonzales
Soledad
Selma
Kingsburg
Dinuba
Death Valley
Greenfield
Woodlake
Big Sur
Hanford
Visalia
Cantua
King City
Lemoore
Tulare
Exeter
Coalinga
Huron
Corcoran
Lindsay
Hawiee
Avenal
Porterville
Johnsondale
Shoshone
Delano
Tecopa
San Simeon
El Paso de Robles
McFarland
Searles Valley
Wasco
Ridgecrest
Atascadero
Shafter
Mountain Mesa
Morro Bay
Buttonwillow
Bakersfield
Saltdale
California City
San Luis Obispo
Arvin
Cima
Grover Beach
Arroyo Grande
Taft
Tehachapi
Boron
Aron
Guadalupe
Santa Maria
Maricopa
Barstow
Frazier Park
Helendale
Needles
Lancaster
Ludlow
Essex
Lake Hughes
Adelanto
Apple Valley
Bagdad
Lompoc
Solvang
Buellton
Palmdale
Victorville
Santa Barbara
Fillmore
Santa Clarita
Hesperia
Chubbuck
Santa Paula
Simi Valley
La Canada Flintridge
Big Bear Lake
San Buenaventura
Oxnard
Glendale
Pasadena
San Bernardino
Yucca Valley
Twentynine Palms
Thousand Oaks
Agoura Hills
Fontana
Rice
Los Angeles
Riverside
Desert Hot Springs
Torrance
Anaheim
Moreno Valley
Corona
Palos Verdes Estates
Santa Ana
Hemet
Cathedral City
Long Beach
Irvine
Palm Desert
Indio
Desert Center
Huntington Beach
Lake Elsinore
Costa Mesa
Blythe
Laguna Niguel
Oasis
Avalon
Borrego Springs
Oceanside
Vista
San Marcos
Calipatria
Carlsbad
Escondido
Westmorland
Encinitas
Poway
Brawley
Santee
El Cajon
Imperial
Holtville
San Diego
Lemon Grove
El Centro
Coronado
Calexico
Imperial Beach
Chula Vista
California



Location Map



USGS Topographic Map, Grass Valley quad, 1998



Assessor's Parcel Map



Aerial Photo. 2018



Looking north along Old Tunnel Road



Looking south along Old Tunnel Road



Old railroad grade



Typical view, north end of property



Typical view, looking south across property



South end of property



Mine/prospect tailings



Steep bank below Old Tunnel Road



Strip of land extending west to Sutton Way



Small creek drainage crossing south portion of property



Adjacent properties to north



Steep bank and rear of shopping center to west



Typical trash pile



End of Town Talk Road to southeast of property, across Old Tunnel Road



Professional office to west, facing Sutton Way



Shopping center to west, facing Sutton Way



Sutton Way



Forest land to east, across Old Tunnel Road



Subject property is the forested slope behind shopping center



Hotel/conference center across Sutton Way

C. Geographic Information

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/25/2019 at 2:44:56 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

OMB Control No. 1660-0040
Expires: 10/31/18

SECTION I - LOAN INFORMATION

1. LENDER/SERVICER NAME AND ADDRESS	2. COLLATERAL DESCRIPTION (Building/Mobile Home/Property) (See instructions for more information.)
HUD Office of Public Housing 1 Sansome St #1200 San Francisco, CA 94104	Proposed Brunswick Commons Apartments 936 Old Tunnel Road Grass Valley, Nevada County, California 95945

3. LENDER/SERVICER ID #	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
Grass Valley, City of	Nevada	CA	60211

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective / Revised Date	3. Is there a Letter of Map Change (LOMC)?
06057C-0631E (Nevada County and Incorporated ar	February 3, 2010	◉ NO ○ YES (If yes, and LOMC date/no. is available, enter date and case no. below). Date Case No.
4. Flood Zone Zone X	5. No NFIP Map	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply.)

1. ☒ Federal Flood Insurance is available (community participates in the NFIP). ☒ Regular Program ☐ Emergency Program of NFIP

2. ☐ Federal Flood Insurance is not available (community does not participate in the NFIP).

3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ YES ☒ NO

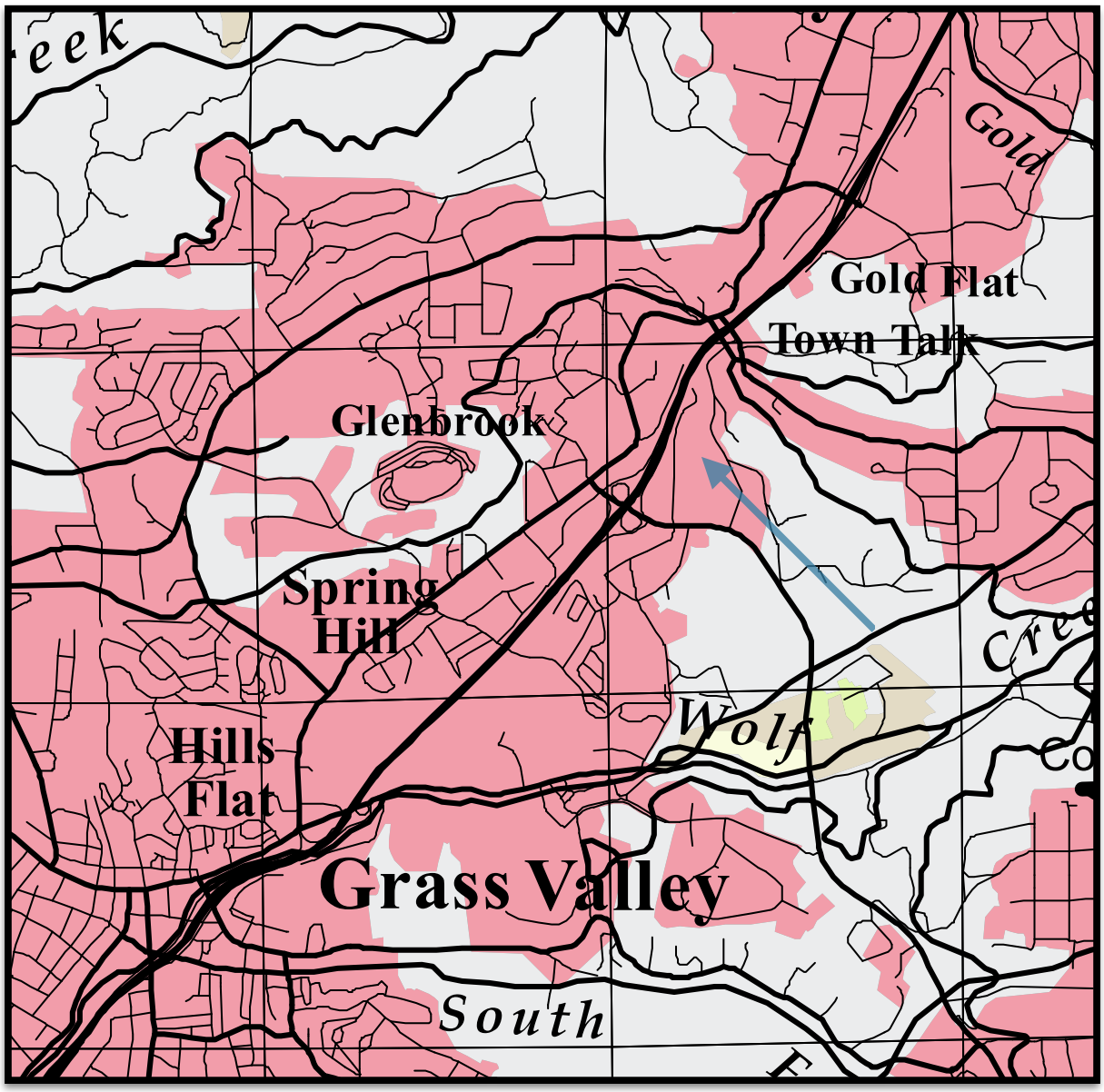
If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973. Please note, the risk of flooding in this area is only reduced, not removed.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building /mobile home on the NFIP map.

E. COMMENTS (Optional)

F. PREPARER'S INFORMATION

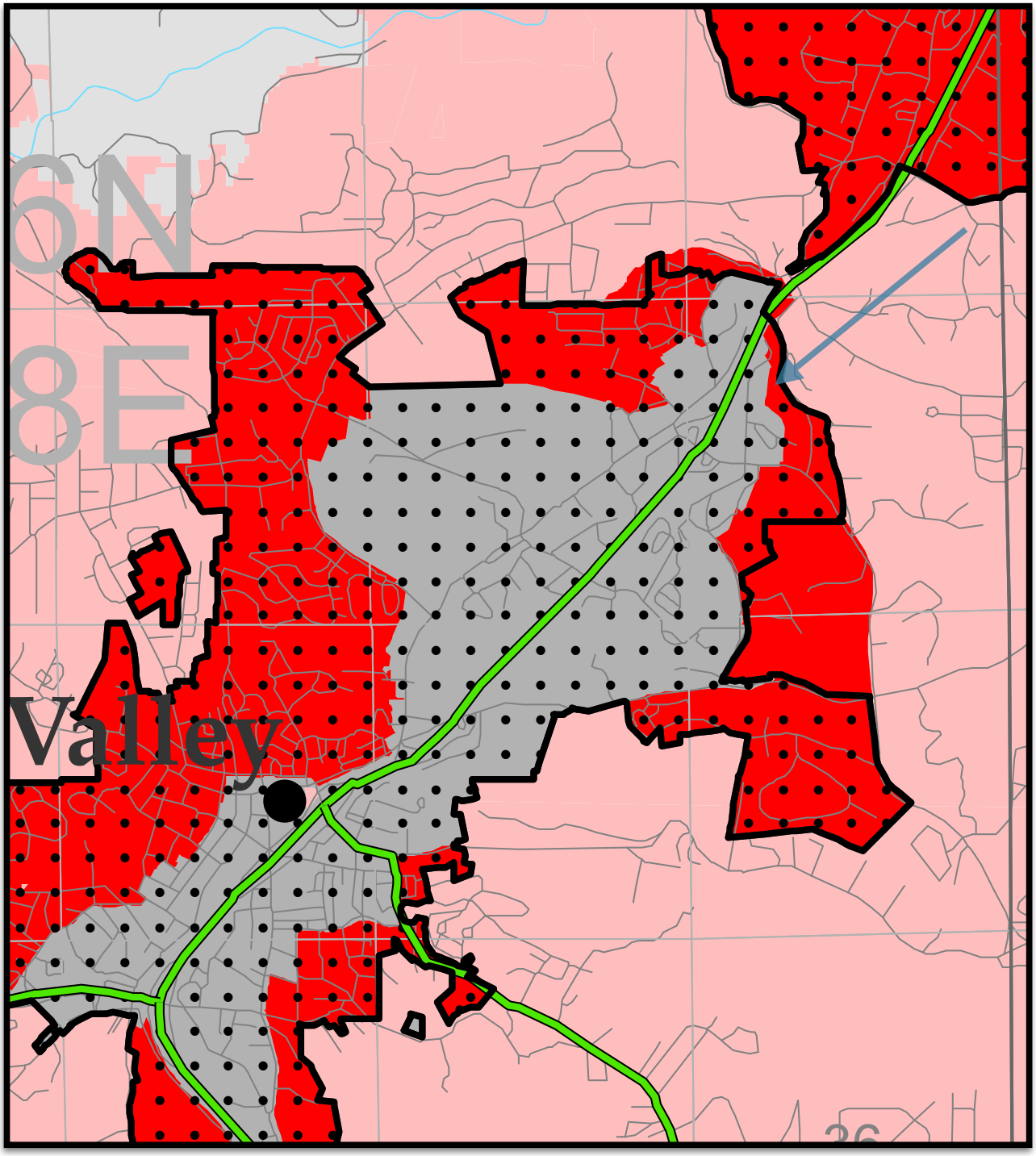
NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Neil O'Hara RNC Environmental, LLC 151 Nursery St. Ashland, OR 97520	4/11/2019



URBAN AND BUILT-UP LAND

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

NEVADA COUNTY IMPORTANT FARMLAND 2016

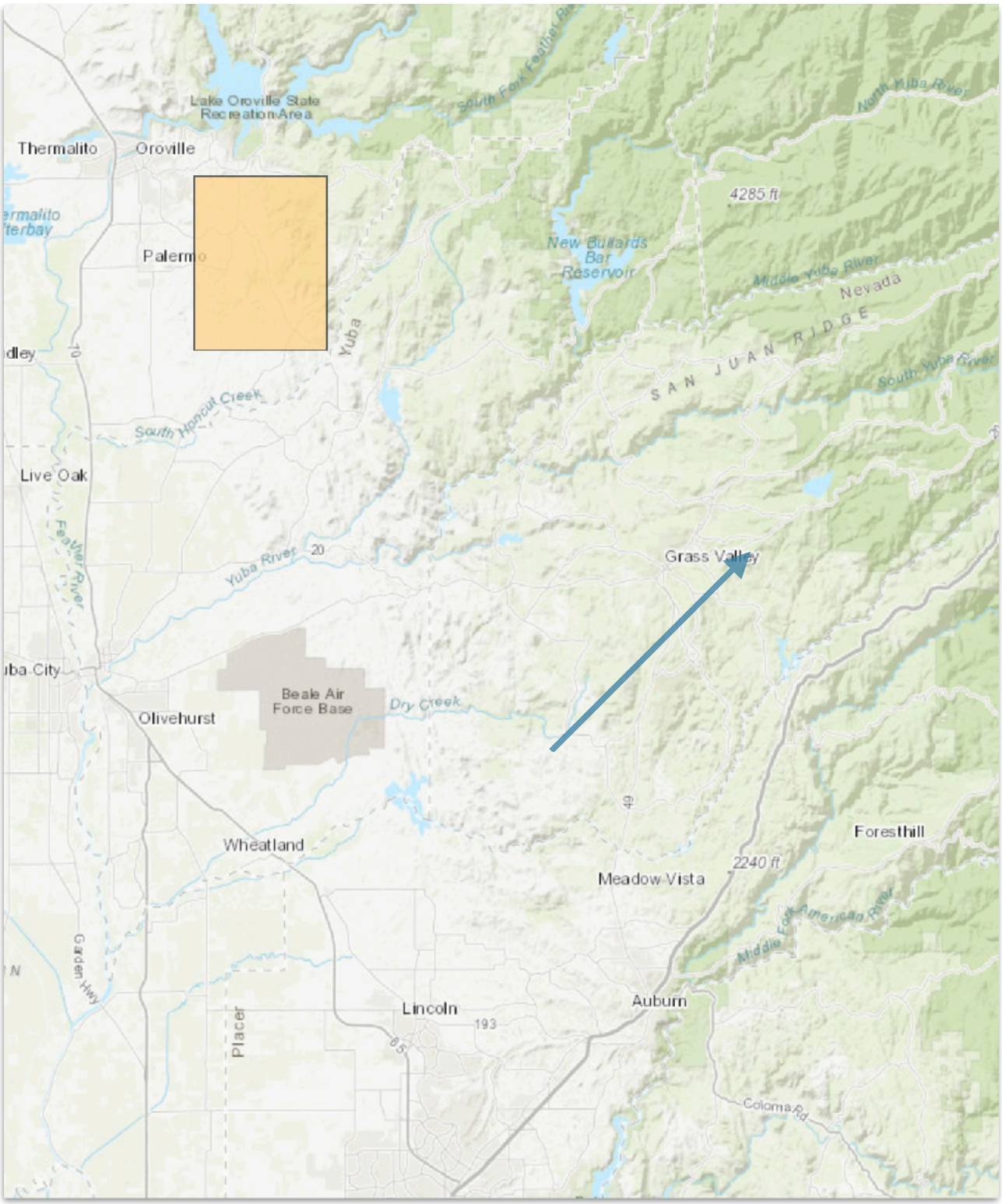


Draft Fire Hazard Severity Zones, Nevada County
Cal Fire, 2007

Local Responsibility Area

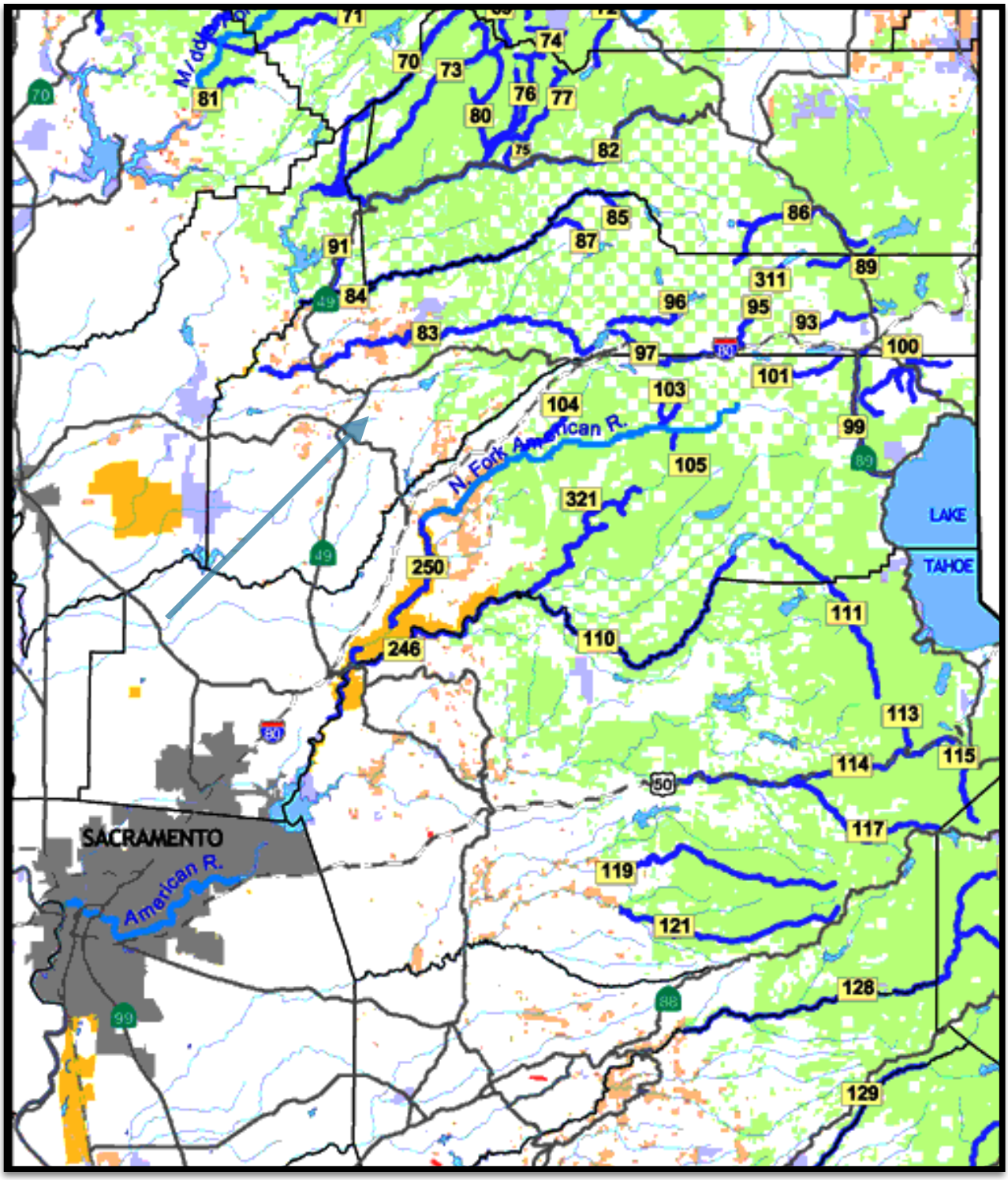
VHFHSZ

Brunswick Commons



Alquist-Priolo Fault Zones

Brunswick Commons



Wild and Scenic Rivers

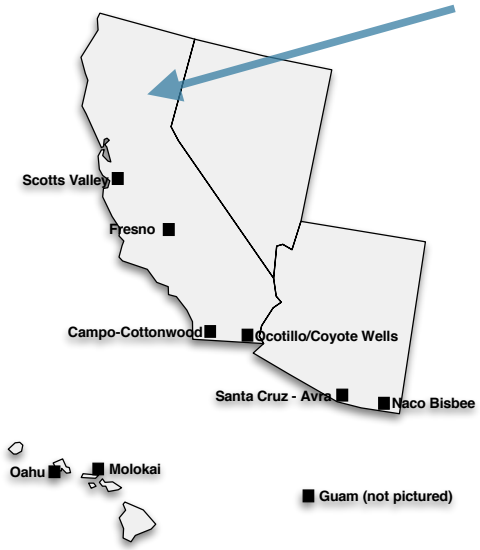
EPA

United States
Environmental
Protection Agency

Region 9 Ground Water
Office (WTR-9)

JUNE 2000

Sole Source Aquifer Designations in EPA, Region 9



The U.S. EPA's Sole Source Aquifer Program was established under Section 1424(e) of the U.S. Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources.

How did this program start? SDWA regulations implementing the sole source aquifer statute were first proposed in 1977 for the Edwards Underground Reservoir in San Antonio, Texas. These regulations guided U.S. EPA in the subsequent designation of 64 sole source aquifers across the United States.

What does the Sole Source Aquifer Program do? The Sole Source Aquifer program allows for EPA environmental review of any project which is financially assisted by federal grants or federal loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer. If there is such a potential, the project should be modified to reduce or eliminate the risk, or federal financial support may be withdrawn. This doesn't mean that the Sole Source Aquifer program can delay or stop development of landfills, roads, publicly owned wastewater treatment works or other facilities. Nor can it impact any direct federal environmental regulatory or remedial programs, such as permit decisions.

The Sole Source Aquifer Program's review authority extends only to projects funded with **federal assistance** that are to be implemented in designated sole source aquifer areas. (For regulations applicable to new private development, you should consult with your local, county or state environmental health agency.)

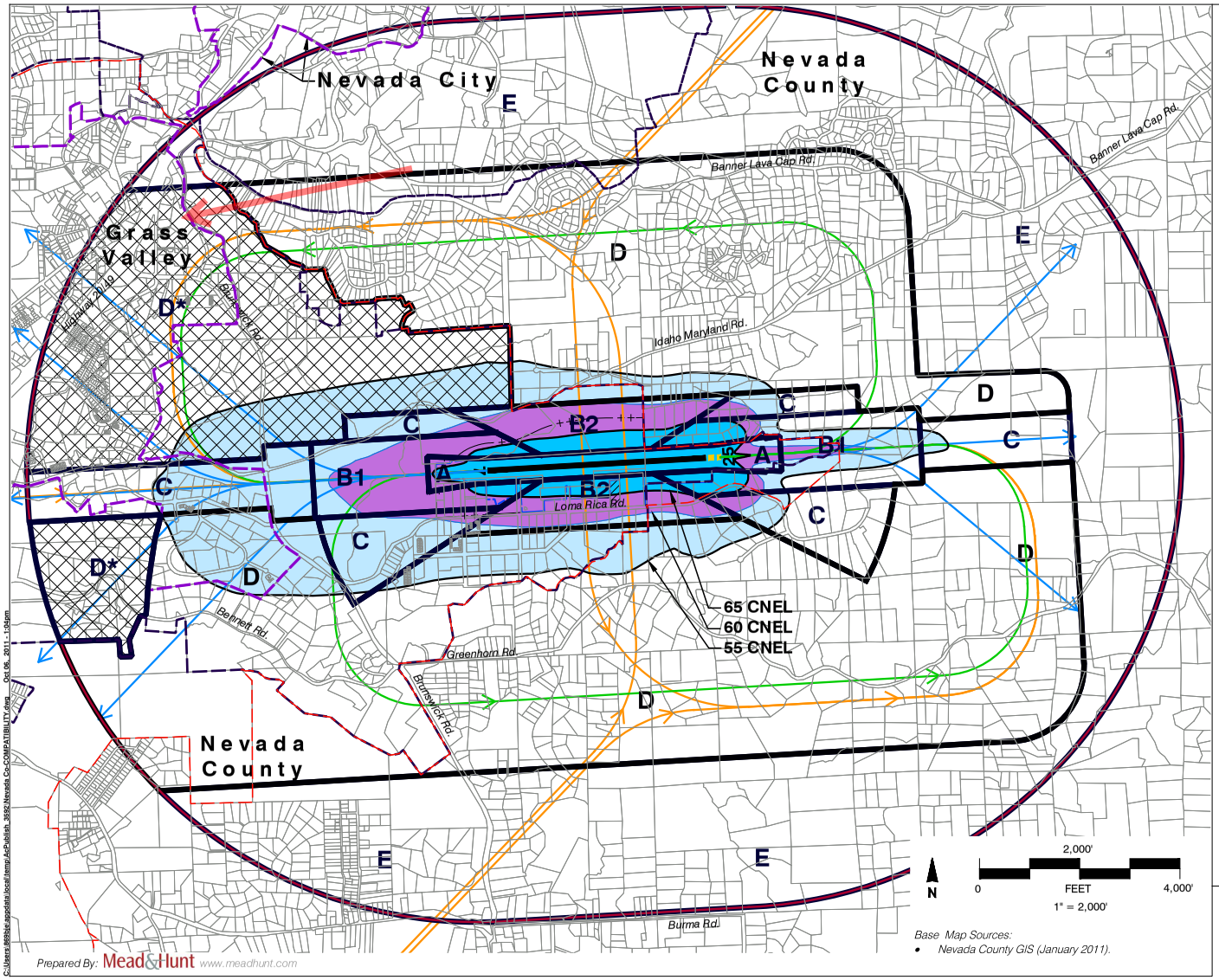
Typical projects reviewed by the U.S. EPA include housing projects undertaken by Housing and Urban Development, and highway construction and expansion projects undertaken by the Federal Highway Administration. In 1991, the U.S. EPA reviewed 152 federal assistance projects totaling $571 million; of these projects, 25 had to be modified to prevent contamination of sole source aquifers. Modifications included the redesign of bridges and highways to prevent spills of hazardous materials.

How do you designate an aquifer as a "Sole Source" Aquifer? As the name implies, only a "sole source" aquifer can qualify for the program. To be a sole source, the aquifer must supply more than 50% of a community's drinking water. Any individual, corporation, association, or federal, state or local agency may petition the U.S. EPA for sole source aquifer designation, provided the petition includes sufficient hydrogeologic information. An outline describing how such petitions should be prepared is contained in *The Sole Source Aquifer Designation Petitioner Guidance*, copies of which are available at EPA Regional offices (see contact information below.)

What about Boundaries? Determination of sole source aquifer boundaries is a difficult aspect of the designation process since the "designated area includes the surface area above the aquifer and its recharge area." Thus, some sole source aquifers extend across state boundaries. The 10,000 square-mile Eastern Snake River Aquifer, for example, includes portions of Idaho, Nevada, Utah, and Wyoming.

In Region 9: nine sole source aquifers have been designated in the following areas as shown on the map: Upper Santa Cruz and Avra Basin Aquifer, covering parts of Pima, Pinal, and Santa Cruz Counties, Arizona; Naco-Bisbee Aquifer, Arizona; Ocotillo-Coyote Wells, Imperial County, California; Fresno Aquifer, California; Scotts Valley Aquifer, Santa Cruz County, California; Campo-Cottonwood Aquifer, San Diego County, California; Northern Guam Aquifer, Guam; Southern Oahu Aquifer, Hawaii; and Molokai Aquifer, Hawaii.

Region 9 SSA maps are on the web at www.epa.gov/safewater/ssanp.html. For more information about SSA designation and project reviews, please call David Albright, manager of the Ground Water Office, at (415) 972-3971 or email albright.david@epa.gov.



Base Map Sources:
- Nevada County GIS (January 2011).

Prepared By: Mead & Hunt www.meadhunt.com

C:\Users\86\bkr.appdata\local\temp\AcPublish_3892\Nevada Co-COMPATIBILITY.dwg Oct 06, 2011 - 1:04pm

Legend

Boundary Lines
- Airport Property Line
- Proposed Airport Property Acquisition
- City Limits
- Grass Valley Planning Area
- Grass Valley Sphere of Influence
- Nevada City Sphere of Influence
- Existing Runway (4,350')
- Future Runway (4,650')
- Airport Influence Area

Compatibility Zones[1]
- Zone A - Runway Clear Zone
- Zone B1 - Inner Approach Zone
- Zone B2 - Sideline Zone
- Zone C - Inner Turning Zone & Extended Approach Zone
- Zone D - Traffic Pattern Zone
- Zone D* - Urban Overlay Zone
- Zone E - Other Airport Environs

Calculated Noise Contours
- 55 dB CNEL
- 60 dB CNEL
- 65 dB CNEL

} 60,000 Annual Operations (164 Average Annual Day)

Calculated Flight Tracks[3]
- Arrival
- Departure
- Touch-n-Go

Notes

1. See Chapter 2, Table 2B, Compatibility Zone Delineation.
2. Source: Mead & Hunt, Inc., using Integrated Noise Model (INM) 7.0b (April 2011). Contours represent average daily noise exposure for 60,000 annual operations on future runway. Contours modeled using USGS terrain data. Terrain results in shorter contours to west and wider contours near center of airport.
3. Flight tracks represent general arrival and departure routes.
4. Prevailing winds out of the west. Runway 25 is designated calm wind runway.
5. Departures on Runway 7 and arrivals on Runway 25 not recommended at night due to severe runway gradient (rising from west to east). Fire attack aircraft typically land on Runway 7.
6. Aircraft departing Runway 25 advised to climb to 3,800' MSL (648' above airport elevation) before turning (source: Airport management).

Nevada County Airport
Land Use Compatibility Plan
(Adopted September 2011)

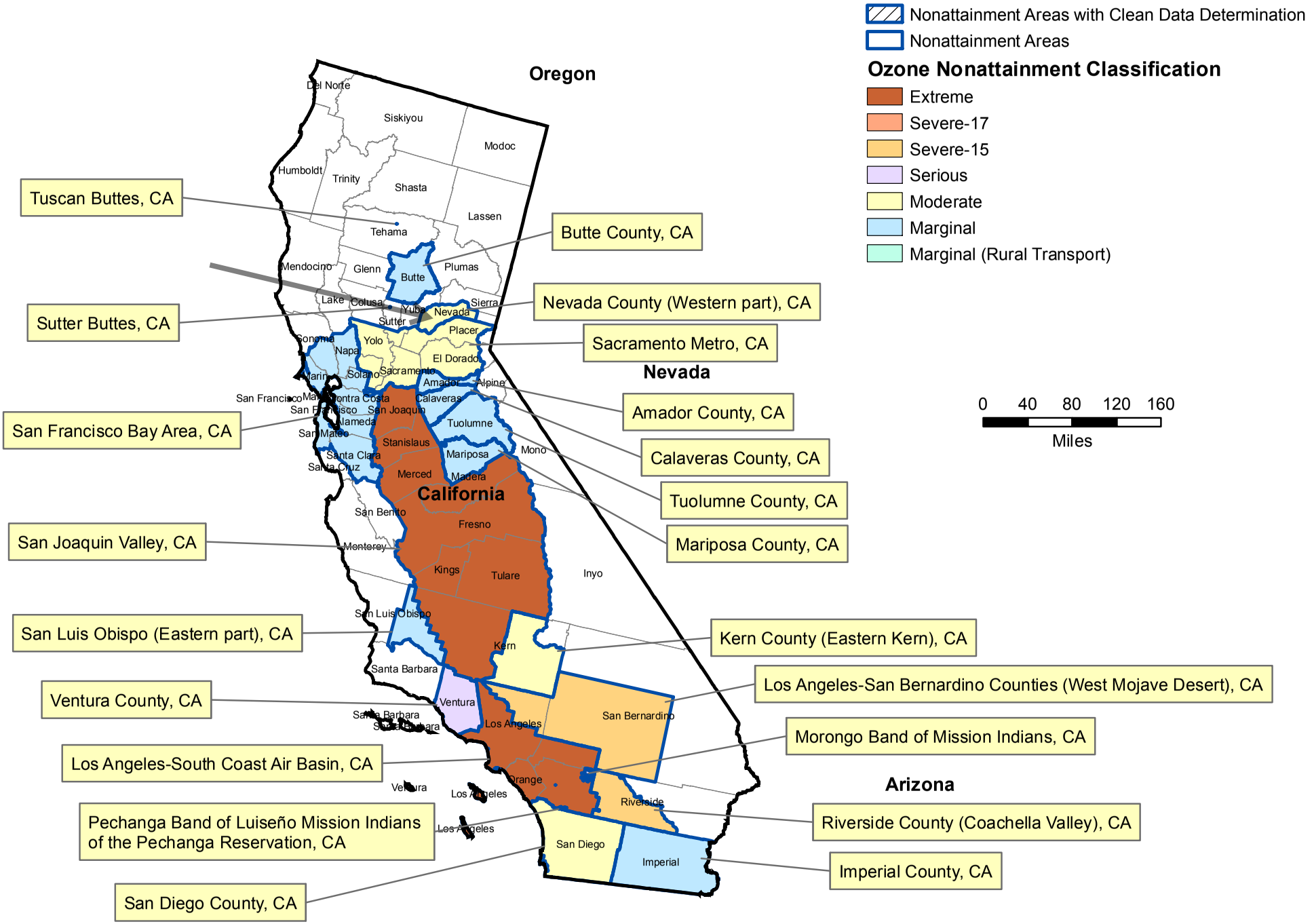
Exhibit 3-5

Compatibility Factors Map: Noise and Overflight

D. Air Quality

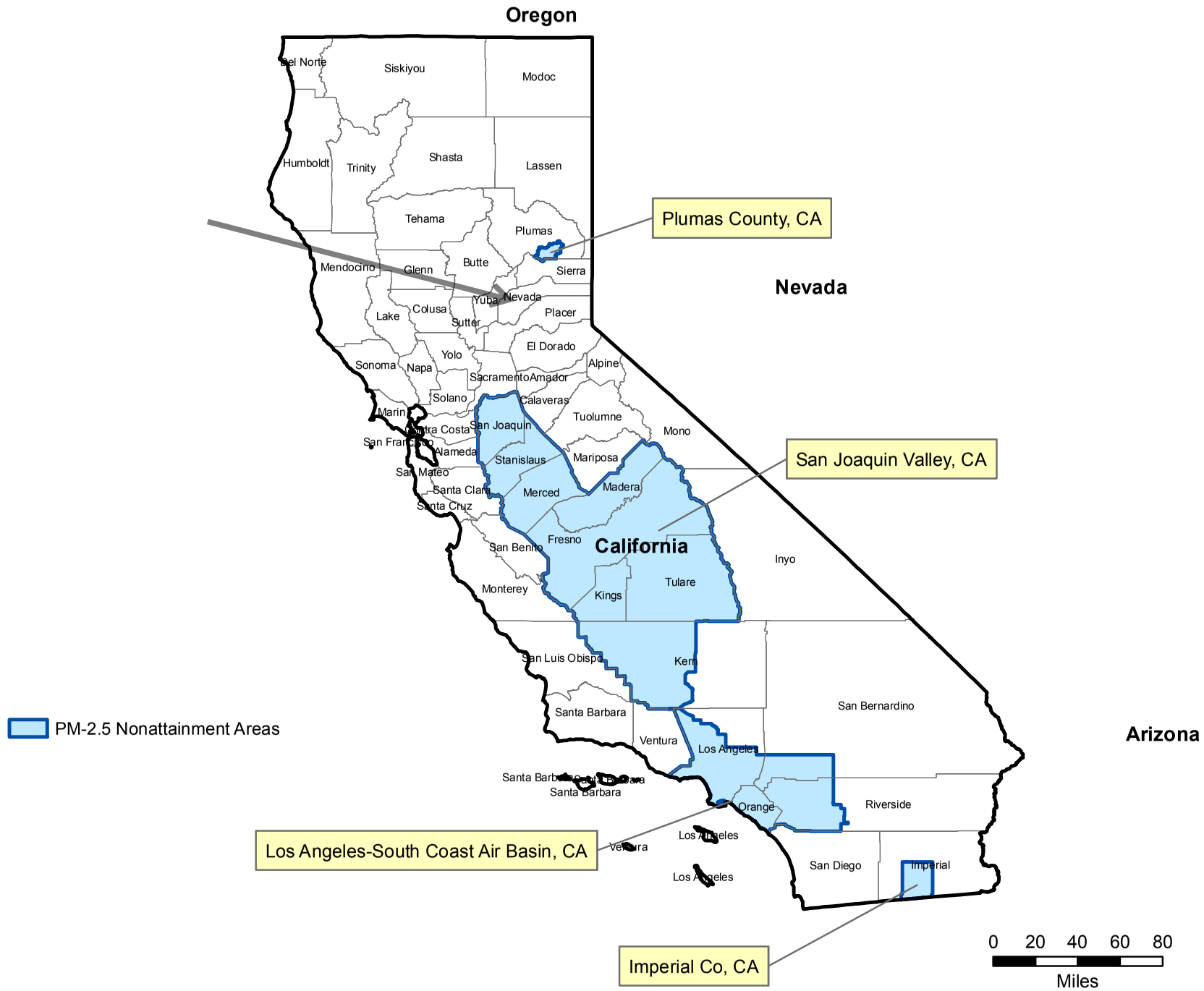
California 8-hour Ozone Nonattainment Areas (2015 Standard)

12/31/2018



California PM-2.5 Nonattainment Areas (2012 Standard)

12/31/2018



California Lead Nonattainment Areas (2008 Standard)

12/31/2018



Current Nonattainment Counties for All Criteria Pollutants

Data is current as of December 31, 2018

The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

"Part County NA" means only a portion of the county is designated nonattainment (NA).

Listed by State, County, NAAQS (Classification, if applicable) * Part County NA NA Area Name

---

ALASKA

Fairbanks North Star Borough

PM-2.5 (2006)	*Fairbanks, AK - (Serious)

ARIZONA

Cochise County

PM-10 (1987)	*Paul Spur/Douglas (Cochise County), AZ - (Moderate)

Gila County

Lead (2008)	*Hayden, AZ
PM-10 (1987)	*Hayden, AZ - (Moderate)
PM-10 (1987)	*Miami, AZ - (Moderate)
Sulfur Dioxide (2010)	*Hayden, AZ
Sulfur Dioxide (2010)	*Miami, AZ
8-Hour Ozone (2015)	*Phoenix-Mesa, AZ - (Marginal)

Maricopa County

PM-10 (1987)	*Phoenix, AZ - (Serious)
8-Hour Ozone (2008)	*Phoenix-Mesa, AZ - (Moderate)
8-Hour Ozone (2015)	*Phoenix-Mesa, AZ - (Marginal)

Pima County

PM-10 (1987)	*Ajo (Pima County), AZ - (Moderate)
PM-10 (1987)	*Rillito, AZ - (Moderate)

Pinal County

Lead (2008)	*Hayden, AZ
PM-10 (1987)	*Hayden, AZ - (Moderate)
PM-10 (1987)	*Miami, AZ - (Moderate)
PM-10 (1987)	*Phoenix, AZ - (Serious)
PM-10 (1987)	*West Pinal, AZ - (Moderate)
PM-2.5 (2006)	*West Central Pinal, AZ - (Moderate)
Sulfur Dioxide (1971)	*Hayden (Pinal County), AZ
Sulfur Dioxide (2010)	*Hayden, AZ
8-Hour Ozone (2008)	*Phoenix-Mesa, AZ - (Moderate)

8-Hour Ozone (2015) *Phoenix-Mesa, AZ - (Marginal)

Santa Cruz County

PM-10 (1987) *Nogales, AZ - (Moderate)

PM-2.5 (2006) *Nogales, AZ - (Moderate)

Yuma County

PM-10 (1987) *Yuma, AZ - (Moderate)

8-Hour Ozone (2015) *Yuma, AZ - (Marginal)

CALIFORNIA

Alameda County

PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)

8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)

8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Amador County

8-Hour Ozone (2015) Amador County, CA - (Marginal)

Butte County

8-Hour Ozone (2008) Chico (Butte County), CA - (Marginal)

8-Hour Ozone (2015) Butte County, CA - (Marginal)

Calaveras County

8-Hour Ozone (2008) Calaveras County, CA - (Marginal)

8-Hour Ozone (2015) Calaveras County, CA - (Marginal)

Contra Costa County

PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)

8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)

8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

El Dorado County

PM-2.5 (2006) *Sacramento, CA - (Moderate)

8-Hour Ozone (2008) *Sacramento Metro, CA - (Severe 15)

8-Hour Ozone (2015) *Sacramento Metro, CA - (Moderate)

Fresno County

PM-2.5 (1997) San Joaquin Valley, CA - (Serious)

PM-2.5 (2006) San Joaquin Valley, CA - (Serious)

PM-2.5 (2012) San Joaquin Valley, CA - (Moderate)

8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)

8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Imperial County

PM-10 (1987) *Imperial Valley, CA - (Serious)

PM-2.5 (2006) *Imperial Co, CA - (Moderate)

PM-2.5 (2012) *Imperial County, CA - (Moderate)

8-Hour Ozone (2008) Imperial County, CA - (Moderate)

8-Hour Ozone (2015) Imperial County, CA - (Marginal)

Inyo County

PM-10 (1987) *Owens Valley, CA - (Serious)

Kern County

PM-10 (1987) *East Kern Co, CA - (Serious)

PM-2.5 (1997) *San Joaquin Valley, CA - (Serious)

PM-2.5 (2006) *San Joaquin Valley, CA - (Serious)

PM-2.5 (2012) *San Joaquin Valley, CA - (Moderate)

8-Hour Ozone (2008) *Kern Co (Eastern Kern), CA - (Serious)

8-Hour Ozone (2008) *San Joaquin Valley, CA - (Extreme)

8-Hour Ozone (2015) *Kern County (Eastern Kern), CA - (Moderate)

8-Hour Ozone (2015) *San Joaquin Valley, CA - (Extreme)

Kings County

PM-2.5 (1997) San Joaquin Valley, CA - (Serious)

PM-2.5 (2006) San Joaquin Valley, CA - (Serious)

PM-2.5 (2012) San Joaquin Valley, CA - (Moderate)

8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)

8-Hour Ozone (2015)	San Joaquin Valley, CA - (Extreme)
Los Angeles County	
Lead (2008)	*Los Angeles County-South Coast Air Basin, CA
PM-2.5 (1997)	*Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006)	*Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012)	*Los Angeles-South Coast Air Basin, CA - (Moderate)
8-Hour Ozone (2008)	*Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe 15)
8-Hour Ozone (2008)	*Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015)	*Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe-15)
8-Hour Ozone (2015)	*Los Angeles-South Coast Air Basin, CA - (Extreme)
Madera County	
PM-2.5 (1997)	San Joaquin Valley, CA - (Serious)
PM-2.5 (2006)	San Joaquin Valley, CA - (Serious)
PM-2.5 (2012)	San Joaquin Valley, CA - (Moderate)
8-Hour Ozone (2008)	San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015)	San Joaquin Valley, CA - (Extreme)
Marin County	
PM-2.5 (2006)	San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008)	San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015)	San Francisco Bay Area, CA - (Marginal)
Mariposa County	
8-Hour Ozone (2008)	Mariposa County, CA - (Moderate)
8-Hour Ozone (2015)	Mariposa County, CA - (Marginal)
Merced County	
PM-2.5 (1997)	San Joaquin Valley, CA - (Serious)
PM-2.5 (2006)	San Joaquin Valley, CA - (Serious)
PM-2.5 (2012)	San Joaquin Valley, CA - (Moderate)
8-Hour Ozone (2008)	San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015)	San Joaquin Valley, CA - (Extreme)
Mono County	
PM-10 (1987)	*Mono Basin, CA - (Moderate)
Napa County	
PM-2.5 (2006)	San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008)	San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015)	San Francisco Bay Area, CA - (Marginal)
Nevada County	
8-Hour Ozone (2008)	*Nevada Co. (Western part), CA - (Moderate)
8-Hour Ozone (2015)	*Nevada County (Western part), CA - (Moderate)
Orange County	
PM-2.5 (1997)	Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006)	Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012)	Los Angeles-South Coast Air Basin, CA - (Moderate)
8-Hour Ozone (2008)	Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015)	Los Angeles-South Coast Air Basin, CA - (Extreme)

Brunswick Commons

Northern Sierra AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.95	1000sqft	0.00	1,950.00	0
Other Non-Asphalt Surfaces	8.93	1000sqft	0.21	8,930.00	0
Other Non-Asphalt Surfaces	2.86	1000sqft	0.07	2,860.00	0
Parking Lot	26.04	1000sqft	0.60	26,040.00	0
Parking Lot	11.15	1000sqft	0.26	11,150.00	0
Congregate Care (Assisted Living)	41.00	Dwelling Unit	0.39	41,000.00	117
Congregate Care (Assisted Living)	9.00	Dwelling Unit	0.14	9,000.00	26

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	1			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Multi-use Resource Center building includes commercial and residential functions. Dwelling unit footprint acres from general plan.

Construction Phase - Vacant lot = no demo.

Off-road Equipment - Program default.

Trips and VMT - Program defauts.

On-road Fugitive Dust - Program defaults.

Demolition - Vacant lot = no demo.

Grading - Preliminary grading plan: Cut 3539 cy / Fill 13337 cy

Architectural Coating - Program defaults.

Vehicle Trips - Program defaults.

Vehicle Emission Factors - Program defaults.

Vehicle Emission Factors - Program defaults.

Vehicle Emission Factors - Program defaults.

Road Dust - Program defaults.

Woodstoves - No wood fireplaces

Consumer Products - Program defaults.

Area Coating - Program defaults.

Landscape Equipment - Program defaults.

Energy Use - Program defaults.

Water And Wastewater - Program defaults.

Solid Waste - Program defaults.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation - Program defaults. No information available.

Mobile Land Use Mitigation - Program defaults. No information available.

Mobile Commute Mitigation - Program defaults. No information available.

Area Mitigation - Program defaults. No information available.

Energy Mitigation - Program defaults. No information available.

Water Mitigation - Program defaults. No information available.

Waste Mitigation - Assume recycling with 20% waste reduction.

Operational Off-Road Equipment - Program defaults.

Fleet Mix - No info for fleet mix availabke at this time
Stationary Sources - Emergency Generators and Fire Pumps - Program defaults. No information available.

Stationary Sources - Process Boilers - Program defaults. No information available.

Stationary Sources - User Defined - Program defaults. No information available.

Stationary Sources - Emergency Generators and Fire Pumps EF - Program defaults. No information available.

Stationary Sources - Process Boilers EF - Program defaults. No information available.

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberWood	17.50	0.00
tblGrading	MaterialExported	0.00	3,539.00
tblGrading	MaterialImported	0.00	13,337.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	2.56	0.39
tblLandUse	LotAcreage	0.56	0.14
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	110.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1996	1.5929	1.4110	3.5500e-003	0.0982	0.0596	0.1577	0.0302	0.0574	0.0876	0.0000	311.6153	311.6153	0.0348	0.0000	312.4845
2022	0.8671	0.3059	0.3543	6.9000e-004	0.0159	0.0132	0.0291	4.2600e-003	0.0127	0.0170	0.0000	59.4609	59.4609	8.6600e-003	0.0000	59.6774
Maximum	**0.8671**	**1.5929**	**1.4110**	**3.5500e-003**	**0.0982**	**0.0596**	**0.1577**	**0.0302**	**0.0574**	**0.0876**	**0.0000**	**311.6153**	**311.6153**	**0.0348**	**0.0000**	**312.4845**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1996	1.5929	1.4110	3.5500e-003	0.0982	0.0596	0.1577	0.0302	0.0574	0.0876	0.0000	311.6151	311.6151	0.0348	0.0000	312.4844
2022	0.8671	0.3059	0.3543	6.9000e-004	0.0159	0.0132	0.0291	4.2600e-003	0.0127	0.0170	0.0000	59.4608	59.4608	8.6600e-003	0.0000	59.6774
Maximum	**0.8671**	**1.5929**	**1.4110**	**3.5500e-003**	**0.0982**	**0.0596**	**0.1577**	**0.0302**	**0.0574**	**0.0876**	**0.0000**	**311.6151**	**311.6151**	**0.0348**	**0.0000**	**312.4844**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-11-2021	8-10-2021	0.8615	0.8615
2	8-11-2021	11-10-2021	0.5859	0.5859
3	11-11-2021	2-10-2022	0.5675	0.5675
4	2-11-2022	5-10-2022	0.9406	0.9406
		Highest	0.9406	0.9406

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4058	0.0568	1.3134	3.2800e-003		0.1560	0.1560		0.1560	0.1560	20.2136	43.9281	64.1417	0.0959	7.9000e-004	66.7762
Energy	1.2500e-003	0.0108	5.3800e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	89.7610	89.7610	3.7400e-003	9.5000e-004	90.1379
Mobile	0.1104	0.6589	1.2811	3.5000e-003	0.2445	3.7000e-003	0.2482	0.0657	3.4900e-003	0.0692	0.0000	321.8346	321.8346	0.0176	0.0000	322.2738
Waste						0.0000	0.0000		0.0000	0.0000	9.6299	0.0000	9.6299	0.5691	0.0000	23.8577
Water						0.0000	0.0000		0.0000	0.0000	1.1564	8.0707	9.2271	0.1191	2.8800e-003	13.0639
Total	**0.5174**	**0.7265**	**2.5999**	**6.8500e-003**	**0.2445**	**0.1606**	**0.4052**	**0.0657**	**0.1604**	**0.2261**	**30.9999**	**463.5944**	**494.5944**	**0.8055**	**4.6200e-003**	**516.1094**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2995	4.2900e-003	0.3721	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6074	0.6074	5.9000e-004	0.0000	0.6220
Energy	1.2500e-003	0.0108	5.3800e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	89.7610	89.7610	3.7400e-003	9.5000e-004	90.1379
Mobile	0.1104	0.6589	1.2811	3.5000e-003	0.2445	3.7000e-003	0.2482	0.0657	3.4900e-003	0.0692	0.0000	321.8346	321.8346	0.0176	0.0000	322.2738
Waste						0.0000	0.0000		0.0000	0.0000	7.7039	0.0000	7.7039	0.4553	0.0000	19.0861
Water						0.0000	0.0000		0.0000	0.0000	0.9251	6.9231	7.8483	0.0953	2.3100e-003	10.9195
Total	**0.4111**	**0.6740**	**1.6586**	**3.5900e-003**	**0.2445**	**6.6300e-003**	**0.2512**	**0.0657**	**6.4200e-003**	**0.0721**	**8.6290**	**419.1261**	**427.7552**	**0.5725**	**3.2600e-003**	**443.0393**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**20.54**	**7.23**	**36.21**	**47.59**	**0.00**	**95.87**	**38.01**	**0.00**	**96.00**	**68.11**	**72.16**	**9.59**	**13.51**	**28.92**	**29.44**	**14.16**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	70.1800
Vegetation Land Change	-7.1546
Total	**63.0254**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/11/2021	5/12/2021	5	2	
2	Grading	Grading	5/13/2021	5/18/2021	5	4	
3	Building Construction	Building Construction	5/19/2021	2/22/2022	5	200	
4	Paving	Paving	2/23/2022	3/8/2022	5	10	
5	Architectural Coating	Architectural Coating	3/9/2022	3/22/2022	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1.14

Residential Indoor: 101,250; Residential Outdoor: 33,750; Non-Residential Indoor: 2,925; Non-Residential Outdoor: 975; Striped Parking Area: 2,939 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	442.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,667.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	57.00	14.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0000e-003	0.0000	6.0000e-003	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**6.0000e-003**	**7.7000e-004**	**6.7700e-003**	**2.9800e-003**	**7.0000e-004**	**3.6800e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6800e-003	0.0588	9.5900e-003	1.8000e-004	3.7200e-003	2.0000e-004	3.9200e-003	1.0200e-003	1.9000e-004	1.2200e-003	0.0000	16.8914	16.8914	6.6000e-004	0.0000	16.9079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	4.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0859	0.0859	0.0000	0.0000	0.0860
Total	**1.7400e-003**	**0.0588**	**0.0100**	**1.8000e-004**	**3.8200e-003**	**2.0000e-004**	**4.0200e-003**	**1.0500e-003**	**1.9000e-004**	**1.2500e-003**	**0.0000**	**16.9773**	**16.9773**	**6.6000e-004**	**0.0000**	**16.9939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0000e-003	0.0000	6.0000e-003	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**6.0000e-003**	**7.7000e-004**	**6.7700e-003**	**2.9800e-003**	**7.0000e-004**	**3.6800e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6800e-003	0.0588	9.5900e-003	1.8000e-004	3.7200e-003	2.0000e-004	3.9200e-003	1.0200e-003	1.9000e-004	1.2200e-003	0.0000	16.8914	16.8914	6.6000e-004	0.0000	16.9079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	4.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0859	0.0859	0.0000	0.0000	0.0860
Total	**1.7400e-003**	**0.0588**	**0.0100**	**1.8000e-004**	**3.8200e-003**	**2.0000e-004**	**4.0200e-003**	**1.0500e-003**	**1.9000e-004**	**1.2500e-003**	**0.0000**	**16.9773**	**16.9773**	**6.6000e-004**	**0.0000**	**16.9939**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0106	0.0000	0.0106	5.1700e-003	0.0000	5.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	**2.5800e-003**	**0.0287**	**0.0127**	**3.0000e-005**	**0.0106**	**1.2800e-003**	**0.0119**	**5.1700e-003**	**1.1700e-003**	**6.3400e-003**	**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3300e-003	0.2216	0.0362	6.7000e-004	0.0140	7.6000e-004	0.0148	3.8600e-003	7.3000e-004	4.5900e-003	0.0000	63.7058	63.7058	2.4900e-003	0.0000	63.7681
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	8.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1718	0.1718	1.0000e-005	0.0000	0.1720
Total	**6.4500e-003**	**0.2217**	**0.0371**	**6.7000e-004**	**0.0142**	**7.6000e-004**	**0.0150**	**3.9100e-003**	**7.3000e-004**	**4.6400e-003**	**0.0000**	**63.8776**	**63.8776**	**2.5000e-003**	**0.0000**	**63.9402**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0106	0.0000	0.0106	5.1700e-003	0.0000	5.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	**2.5800e-003**	**0.0287**	**0.0127**	**3.0000e-005**	**0.0106**	**1.2800e-003**	**0.0119**	**5.1700e-003**	**1.1700e-003**	**6.3400e-003**	**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3300e-003	0.2216	0.0362	6.7000e-004	0.0140	7.6000e-004	0.0148	3.8600e-003	7.3000e-004	4.5900e-003	0.0000	63.7058	63.7058	2.4900e-003	0.0000	63.7681
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	8.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1718	0.1718	1.0000e-005	0.0000	0.1720
Total	**6.4500e-003**	**0.2217**	**0.0371**	**6.7000e-004**	**0.0142**	**7.6000e-004**	**0.0150**	**3.9100e-003**	**7.3000e-004**	**4.6400e-003**	**0.0000**	**63.8776**	**63.8776**	**2.5000e-003**	**0.0000**	**63.9402**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1477	1.1113	1.0513	1.8000e-003		0.0558	0.0558		0.0539	0.0539	0.0000	147.9613	147.9613	0.0264	0.0000	148.6217
Total	**0.1477**	**1.1113**	**1.0513**	**1.8000e-003**		**0.0558**	**0.0558**		**0.0539**	**0.0539**	**0.0000**	**147.9613**	**147.9613**	**0.0264**	**0.0000**	**148.6217**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3600e-003	0.1257	0.0328	3.0000e-004	6.7400e-003	3.4000e-004	7.0800e-003	1.9500e-003	3.2000e-004	2.2700e-003	0.0000	28.9212	28.9212	1.7200e-003	0.0000	28.9642
Worker	0.0352	0.0293	0.2595	5.5000e-004	0.0568	4.4000e-004	0.0572	0.0151	4.0000e-004	0.0155	0.0000	49.8892	49.8892	2.1800e-003	0.0000	49.9438
Total	**0.0396**	**0.1550**	**0.2923**	**8.5000e-004**	**0.0635**	**7.8000e-004**	**0.0643**	**0.0171**	**7.2000e-004**	**0.0178**	**0.0000**	**78.8104**	**78.8104**	**3.9000e-003**	**0.0000**	**78.9080**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1477	1.1113	1.0513	1.8000e-003		0.0558	0.0558		0.0539	0.0539	0.0000	147.9611	147.9611	0.0264	0.0000	148.6215
Total	**0.1477**	**1.1113**	**1.0513**	**1.8000e-003**		**0.0558**	**0.0558**		**0.0539**	**0.0539**	**0.0000**	**147.9611**	**147.9611**	**0.0264**	**0.0000**	**148.6215**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3600e-003	0.1257	0.0328	3.0000e-004	6.7400e-003	3.4000e-004	7.0800e-003	1.9500e-003	3.2000e-004	2.2700e-003	0.0000	28.9212	28.9212	1.7200e-003	0.0000	28.9642
Worker	0.0352	0.0293	0.2595	5.5000e-004	0.0568	4.4000e-004	0.0572	0.0151	4.0000e-004	0.0155	0.0000	49.8892	49.8892	2.1800e-003	0.0000	49.9438
Total	**0.0396**	**0.1550**	**0.2923**	**8.5000e-004**	**0.0635**	**7.8000e-004**	**0.0643**	**0.0171**	**7.2000e-004**	**0.0178**	**0.0000**	**78.8104**	**78.8104**	**3.9000e-003**	**0.0000**	**78.9080**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0305	0.2313	0.2354	4.1000e-004		0.0109	0.0109		0.0105	0.0105	0.0000	33.5917	33.5917	5.8500e-003	0.0000	33.7380
Total	**0.0305**	**0.2313**	**0.2354**	**4.1000e-004**		**0.0109**	**0.0109**		**0.0105**	**0.0105**	**0.0000**	**33.5917**	**33.5917**	**5.8500e-003**	**0.0000**	**33.7380**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1000e-004	0.0271	6.7300e-003	7.0000e-005	1.5300e-003	7.0000e-005	1.6000e-003	4.4000e-004	6.0000e-005	5.1000e-004	0.0000	6.5154	6.5154	3.8000e-004	0.0000	6.5248
Worker	7.4900e-003	5.9500e-003	0.0530	1.2000e-004	0.0129	1.0000e-004	0.0130	3.4300e-003	9.0000e-005	3.5200e-003	0.0000	10.9466	10.9466	4.4000e-004	0.0000	10.9575
Total	**8.4000e-003**	**0.0330**	**0.0597**	**1.9000e-004**	**0.0144**	**1.7000e-004**	**0.0146**	**3.8700e-003**	**1.5000e-004**	**4.0300e-003**	**0.0000**	**17.4620**	**17.4620**	**8.2000e-004**	**0.0000**	**17.4823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0305	0.2313	0.2354	4.1000e-004		0.0109	0.0109		0.0105	0.0105	0.0000	33.5917	33.5917	5.8500e-003	0.0000	33.7380
Total	**0.0305**	**0.2313**	**0.2354**	**4.1000e-004**		**0.0109**	**0.0109**		**0.0105**	**0.0105**	**0.0000**	**33.5917**	**33.5917**	**5.8500e-003**	**0.0000**	**33.7380**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1000e-004	0.0271	6.7300e-003	7.0000e-005	1.5300e-003	7.0000e-005	1.6000e-003	4.4000e-004	6.0000e-005	5.1000e-004	0.0000	6.5154	6.5154	3.8000e-004	0.0000	6.5248
Worker	7.4900e-003	5.9500e-003	0.0530	1.2000e-004	0.0129	1.0000e-004	0.0130	3.4300e-003	9.0000e-005	3.5200e-003	0.0000	10.9466	10.9466	4.4000e-004	0.0000	10.9575
Total	**8.4000e-003**	**0.0330**	**0.0597**	**1.9000e-004**	**0.0144**	**1.7000e-004**	**0.0146**	**3.8700e-003**	**1.5000e-004**	**4.0300e-003**	**0.0000**	**17.4620**	**17.4620**	**8.2000e-004**	**0.0000**	**17.4823**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5700e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.7000e-004	3.2600e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.6748	0.6748	3.0000e-005	0.0000	0.6754
Total	**4.6000e-004**	**3.7000e-004**	**3.2600e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.6748**	**0.6748**	**3.0000e-005**	**0.0000**	**0.6754**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	1.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5700e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.7000e-004	3.2600e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.6748	0.6748	3.0000e-005	0.0000	0.6754
Total	**4.6000e-004**	**3.7000e-004**	**3.2600e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.6748**	**0.6748**	**3.0000e-005**	**0.0000**	**0.6754**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.8228**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	2.7600e-003	1.0000e-005	6.7000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5709	0.5709	2.0000e-005	0.0000	0.5715
Total	**3.9000e-004**	**3.1000e-004**	**2.7600e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5709**	**0.5709**	**2.0000e-005**	**0.0000**	**0.5715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.8228**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	2.7600e-003	1.0000e-005	6.7000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5709	0.5709	2.0000e-005	0.0000	0.5715
Total	**3.9000e-004**	**3.1000e-004**	**2.7600e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5709**	**0.5709**	**2.0000e-005**	**0.0000**	**0.5715**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1104	0.6589	1.2811	3.5000e-003	0.2445	3.7000e-003	0.2482	0.0657	3.4900e-003	0.0692	0.0000	321.8346	321.8346	0.0176	0.0000	322.2738
Unmitigated	0.1104	0.6589	1.2811	3.5000e-003	0.2445	3.7000e-003	0.2482	0.0657	3.4900e-003	0.0692	0.0000	321.8346	321.8346	0.0176	0.0000	322.2738

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	112.34	90.20	100.04	383,717	383,717
Congregate Care (Assisted Living)	24.66	19.80	21.96	84,231	84,231
Government Office Building	134.41	0.00	0.00	190,139	190,139
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	271.41	110.00	122.00	658,087	658,087

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	16.80	7.10	7.90	37.30	20.70	42.00	86	11	3
Congregate Care (Assisted	16.80	7.10	7.90	37.30	20.70	42.00	86	11	3
Government Office Building	14.70	6.60	6.60	33.00	62.00	5.00	50	34	16
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.450218	0.041480	0.238529	0.144444	0.036492	0.006519	0.014682	0.056829	0.001848	0.001006	0.005817	0.000606	0.001528
Government Office Building	0.450218	0.041480	0.238529	0.144444	0.036492	0.006519	0.014682	0.056829	0.001848	0.001006	0.005817	0.000606	0.001528
Other Non-Asphalt Surfaces	0.450218	0.041480	0.238529	0.144444	0.036492	0.006519	0.014682	0.056829	0.001848	0.001006	0.005817	0.000606	0.001528
Parking Lot	0.450218	0.041480	0.238529	0.144444	0.036492	0.006519	0.014682	0.056829	0.001848	0.001006	0.005817	0.000606	0.001528

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Brunswick Commons - Northern Sierra AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	77.3510	77.3510	3.5000e-003	7.2000e-004	77.6541
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	77.3510	77.3510	3.5000e-003	7.2000e-004	77.6541
NaturalGas Mitigated	1.2500e-003	0.0108	5.3800e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	12.4100	12.4100	2.4000e-004	2.3000e-004	12.4837
NaturalGas Unmitigated	1.2500e-003	0.0108	5.3800e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	12.4100	12.4100	2.4000e-004	2.3000e-004	12.4837

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	159450	8.6000e-004	7.3500e-003	3.1300e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.5089	8.5089	1.6000e-004	1.6000e-004	8.5594
Congregate Care (Assisted Living)	35001.3	1.9000e-004	1.6100e-003	6.9000e-004	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8678	1.8678	4.0000e-005	3.0000e-005	1.8789
Government Office Building	38103	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0333	2.0333	4.0000e-005	4.0000e-005	2.0454
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2600e-003**	**0.0108**	**5.3900e-003**	**7.0000e-005**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**12.4100**	**12.4100**	**2.4000e-004**	**2.3000e-004**	**12.4837**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	35001.3	1.9000e-004	1.6100e-003	6.9000e-004	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8678	1.8678	4.0000e-005	3.0000e-005	1.8789
Congregate Care (Assisted Living)	159450	8.6000e-004	7.3500e-003	3.1300e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.5089	8.5089	1.6000e-004	1.6000e-004	8.5594
Government Office Building	38103	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0333	2.0333	4.0000e-005	4.0000e-005	2.0454
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2600e-003**	**0.0108**	**5.3900e-003**	**7.0000e-005**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**12.4100**	**12.4100**	**2.4000e-004**	**2.3000e-004**	**12.4837**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	189673	55.1780	2.4900e-003	5.2000e-004	55.3943
Congregate Care (Assisted Living)	41635.5	12.1123	5.5000e-004	1.1000e-004	12.1597
Government Office Building	21567	6.2741	2.8000e-004	6.0000e-005	6.2987
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3902.5	1.1353	5.0000e-005	1.0000e-005	1.1397
Parking Lot	9114	2.6514	1.2000e-004	2.0000e-005	2.6618
Total		**77.3510**	**3.4900e-003**	**7.2000e-004**	**77.6541**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	189673	55.1780	2.4900e-003	5.2000e-004	55.3943
Congregate Care (Assisted Living)	41635.5	12.1123	5.5000e-004	1.1000e-004	12.1597
Government Office Building	21567	6.2741	2.8000e-004	6.0000e-005	6.2987
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3902.5	1.1353	5.0000e-005	1.0000e-005	1.1397
Parking Lot	9114	2.6514	1.2000e-004	2.0000e-005	2.6618
Total		**77.3510**	**3.4900e-003**	**7.2000e-004**	**77.6541**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2995	4.2900e-003	0.3721	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6074	0.6074	5.9000e-004	0.0000	0.6220
Unmitigated	0.4058	0.0568	1.3134	3.2800e-003		0.1560	0.1560		0.1560	0.1560	20.2136	43.9281	64.1417	0.0959	7.9000e-004	66.7762

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1063	0.0525	0.9413	3.2600e-003		0.1540	0.1540		0.1540	0.1540	20.2136	43.3207	63.5344	0.0953	7.9000e-004	66.1542
Landscaping	0.0113	4.2900e-003	0.3721	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6074	0.6074	5.9000e-004	0.0000	0.6220
Total	**0.4058**	**0.0568**	**1.3134**	**3.2800e-003**		**0.1560**	**0.1560**		**0.1560**	**0.1560**	**20.2136**	**43.9281**	**64.1417**	**0.0959**	**7.9000e-004**	**66.7762**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0113	4.2900e-003	0.3721	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6074	0.6074	5.9000e-004	0.0000	0.6220
Total	**0.2995**	**4.2900e-003**	**0.3721**	**2.0000e-005**		**2.0600e-003**	**2.0600e-003**		**2.0600e-003**	**2.0600e-003**	**0.0000**	**0.6074**	**0.6074**	**5.9000e-004**	**0.0000**	**0.6220**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.8483	0.0953	2.3100e-003	10.9195
Unmitigated	9.2271	0.1191	2.8800e-003	13.0639

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	3.2577 / 2.05377	8.2527	0.1065	2.5700e-003	11.6817
Government Office Building	0.387386 / 0.23743	0.9744	0.0127	3.1000e-004	1.3822
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.2271**	**0.1191**	**2.8800e-003**	**13.0639**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	2.60616 / 2.05377	7.0204	0.0852	2.0600e-003	9.7652
Government Office Building	0.309909 / 0.23743	0.8279	0.0101	2.5000e-004	1.1543
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.8483**	**0.0953**	**2.3100e-003**	**10.9195**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.7039	0.4553	0.0000	19.0861
Unmitigated	9.6299	0.5691	0.0000	23.8577

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	45.63	9.2625	0.5474	0.0000	22.9474
Government Office Building	1.81	0.3674	0.0217	0.0000	0.9103
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.6299**	**0.5691**	**0.0000**	**23.8577**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	36.504	7.4100	0.4379	0.0000	18.3579
Government Office Building	1.448	0.2939	0.0174	0.0000	0.7282
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.7039**	**0.4553**	**0.0000**	**19.0861**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	63.0254	0.0000	0.0000	63.0254

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	4.99 / 3.33	-7.1546	0.0000	0.0000	-7.1546
Total		**-7.1546**	**0.0000**	**0.0000**	**-7.1546**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Pine	110	70.1800	0.0000	0.0000	70.1800
Total		**70.1800**	**0.0000**	**0.0000**	**70.1800**

E. Biological Resources

Biological Resources Assessment

Brunswick Commons Project

Nevada County, California

Prepared for:

AMG & Associates, Inc.

May 15, 2019

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, and monitoring and compliance reporting.

Citation: ECORP Consulting, Inc. 2019. Biological Resources Assessment. Prepared for AMG & Associates, Inc., Rocklin, California. May.

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Attachment A – Tentative Site Plan

Attachment B – Special-Status Species Searches

Attachment C – Representative Site Photographs

Attachment D – Plant Species Observed On-Site (March 7, 2019)

LIST OF ACRONYMS AND ABBREVIATIONS

BA	Biological assessment
BCC	Birds of Conservation Concern
BIOS	Biogeographic Information and Observation System
BO	Biological opinion
BRA	Biological resources assessment
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
HCP	Habitat conservation plan
MBTA	Migratory Bird Treaty Act
MSL	Mean sea level
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Brunswick Commons Project
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
Section 404 Permit	Section 404 of the federal CWA
SSC	Species of Special Concern
SSURGO	Soil Survey Geographic
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 OWNER/APPLICANT

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3.0 INTRODUCTION

At the request of AMG & Associates, Inc., ECORP Consulting, Inc. has conducted a biological resources assessment (BRA) for the proposed Brunswick Commons Project (Project) located in Nevada County, California.

3.1 Project Site Location

The ±5-acre Project site is located at 936 Old Tunnel Road, between Tunnel Road and Sutton Way, at the northern end of the City of Grass Valley in Nevada County, California. The Project site corresponds to a portion of Section 24, Township 16 North, and Range 08 East (Mount Diablo Base and Meridian) of the "Grass Valley, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1998) (*Figure 1. Project Location and Vicinity*). The approximate center of the Project site is located at 39.237669˚ and -121.032264˚ within the Upper Bear Watershed (Hydrologic Unit Code #18020126, Natural Resources Conservation Service [NRCS], et al. 2016). The Project site Assessor's Parcel Number (APN) is 035-400-054.

3.2 Project Description

The Project is a proposed 41-unit rental apartment project, designed to provide housing targeting the homeless and mentally ill. A single residential building, plus off-street parking, a community garden, a barbecue/picnic area, bicycle lockers, and a playground area, will occupy ±2.32 acres of the five-acre parcel. The Project will include a mix of 33 one-bedroom units and eight two-bedroom units. A community center, also located in the building, will provide an office, maintenance room, computer learning center, exercise room, community room with a communal kitchen, and laundry facilities.

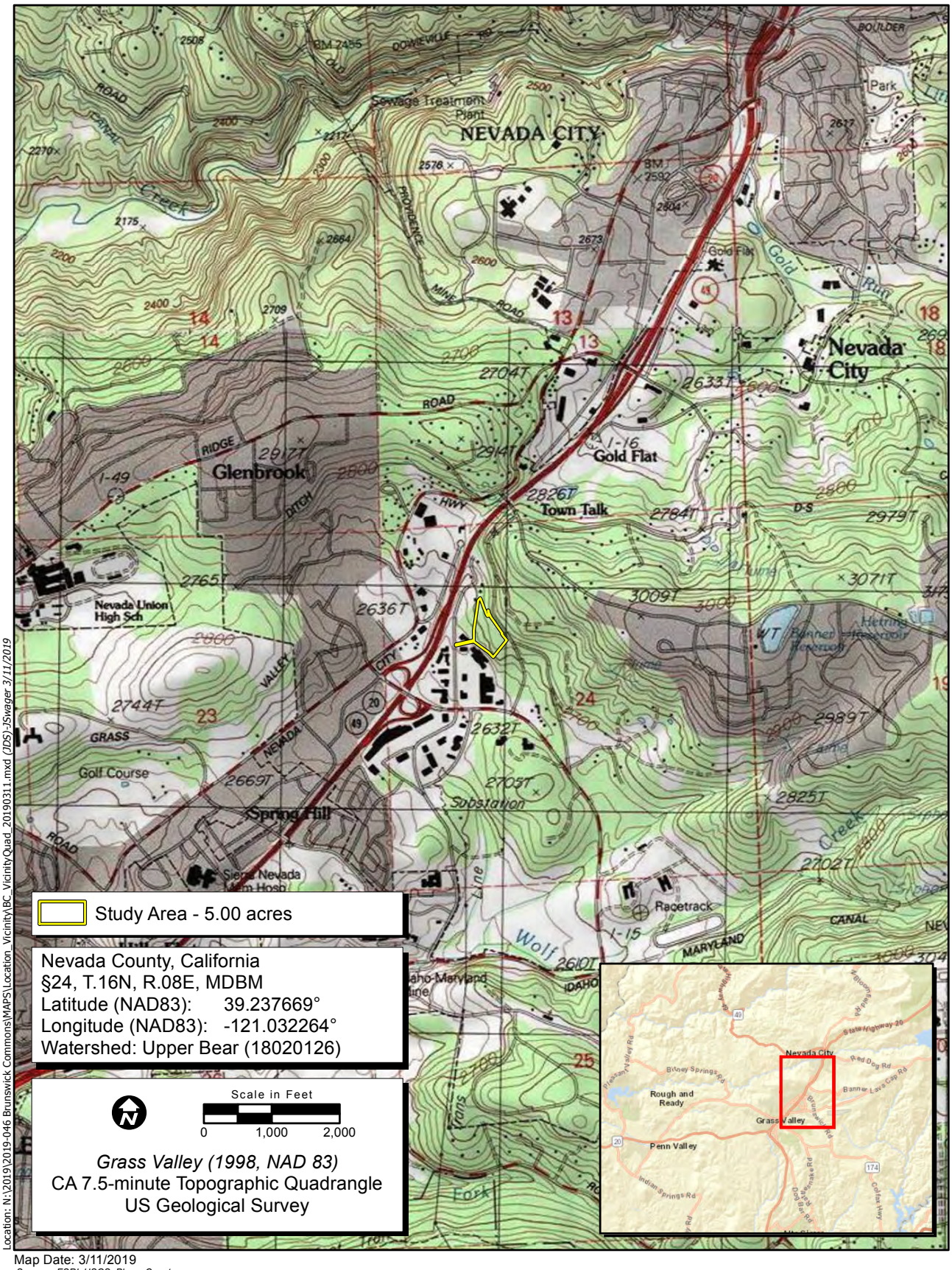


Figure 1. Project Location and Vicinity

2019-046 Brunswick Commons

ECORP Consulting, Inc.
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Construction will be wood frame supported by perimeter foundations with concrete slab flooring. Due to the slope of the site, the east (uphill) side of the building will be two stories, and the west (downhill) side will be three stories.

A 20-x-275-foot strip of land extends from the west side of the site to Sutton Way. A pedestrian path will be constructed within this strip, connecting the apartments and the existing resource center to Sutton Way. Based on the tentative site plan included as Attachment A, a ±1.7-acre area in the northwest portion of the parcel will remain undeveloped.

3.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to collect information on the biological resources present within the Project site assess the potential for occurrence of special-status plant and animal species or their habitat, and sensitive habitats such as wetlands within the Project site. This BRA is intended to support compliance with the California Environmental Quality Act (CEQA) documentation requirements.

This assessment does not include determinate field surveys conducted according to agency-promulgated protocols. An aquatic resources delineation was performed according to U.S. Army Corps of Engineers' (USACE's) standards). The conclusions and recommendations presented in this report are based upon a review of the available literature and site reconnaissance.

4.0 REGULATORY SETTING

4.1 Federal Regulations

4.1.1 Federal Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by the USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S. Code [USC] 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

Section 7

Section 7 of ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify

Critical Habitat for listed species. If direct and/or indirect effects will occur to Critical Habitat that appreciably diminish the value of Critical Habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the applicant must conduct a biological assessment (BA) for the purpose of analyzing the potential effects of the project on listed species and critical habitat to establish and justify an "effect determination." The federal agency reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

4.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

4.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. USFWS may authorizes take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

4.1.4 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S Environmental Protection Agency (USEPA) also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

The alteration of a USACE federally authorized civil works project requires a permit pursuant to Section 408 (33 USC 408, Section 14 of the Rivers and Harbors Act of 1899). Projects with minimal impacts require approval by the USACE Sacramento District Construction Operations Group, however projects with more substantial impacts may require USACE Headquarters review. Coordination with the Central Valley Flood Protection Board, who serve as the Non-Federal Sponsor, is required as a part of the process of obtaining a Section 408 permit.

4.2 State or Local Regulations

4.2.1 California Fish and Game Code

California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) generally parallels the main provisions of ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened or candidate species or result in destruction or adverse modification of essential habitat.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of ESA and California ESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the California ESA and/or ESA. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFW prohibits any state agency from issuing incidental take permits for fully protected species. The CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

Native Plant Protection Act

The NPPA of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW and provided in California Fish and Game Code §§ 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

Birds of Prey

Sections 3800, 3513, and 3503 of the California Fish and Game Code specifically protect birds of prey. Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the commission or a mitigation plan approved by CDFW for mining operations. Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Additionally, Subsection 3503.5 prohibits the take, possession, or destruction of any birds and their nests in the orders Strigiformes (owls) or Falconiformes (hawks and eagles). These provisions, along with the federal MBTA, serve to protect nesting native birds.

4.2.2 Species of Special Concern

SSC are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfy one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role;
- The species is listed as federally (but not state) threatened or endangered, or meets the state definition of threatened or endangered but has not formally been listed;
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status;
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened, or endangered species are considered "significant" under CEQA.

4.2.3 California Rare Plant Ranks

The CNPS maintains the *Inventory of Rare and Endangered Plants of California* (CNPS 2019), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2019). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

4.2.4 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination

System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

4.2.5 California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species not protected on a federal or state list may be considered rare or endangered if the species meets certain specified criteria. These criteria follow the definitions in the federal and California ESAs and §§ 1900-1913 of the California Fish and Game Code, which deal with rare or endangered plants or animals. Section 15380 was included in the CEQA Guidelines primarily to deal with situations where a project under review may have a significant effect on a species that has not yet been listed by either USFWS or CDFW.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant, and are particularly relevant to SSC. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant and require lead agencies to prepare an Environmental Impact Report to thoroughly analyze and evaluate the impacts. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, § 15064.7 of CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;

- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

Sensitive Natural Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. The CDFW maintains the *California Natural Community List* (CDFW 2018), which provides a list of vegetation alliances, associations, and special stands as defined in the *Manual of California Vegetation* (Sawyer et al. 2009), along with their respective state and global rarity ranks. Natural communities with a state rarity rank of 1, 2, or 3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

Wildlife Movement/ Corridors and Nursery Sites

As part of the California Essential Habitat Connectivity Project, the CDFW and California Department of Transportation maintain data on Essential Habitat Connectivity areas. This data is available in the California Natural Diversity Database (CNDDB). The goal of this project is to map large intact habitat or natural landscapes and potential linkages that could provide corridors for wildlife. For urban settings such as the Project, riparian vegetated stream corridors can also serve as wildlife movement corridors.

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries, bat maternity roosts, mule deer critical fawning areas. This data is available through CDFW's Biogeographic Information and Observation System (BIOS) database or as occurrence

records in the CNDDB and is supplemented with the results of the field reconnaissance. Local Plans and Ordinances

County of Nevada General Plan

The County of Nevada General Plan identifies environmentally sensitive resources and constraints that may exist within a project site and may need to be evaluated prior to implementation of a project. Environmentally sensitive resources/constraints identified by Policy 1.17 of the General Plan and addressed in this report include the following:

- Wetlands (as delineated in the USFWS National Wetlands inventory);
- Major deer migration corridors, critical range, and critical fawning areas (as defined by CDFW's Migratory Deer Range Maps);
- Landmark oaks, (defined as any oak 36" diameter at breast height [dbh] or greater);
- Landmark oak groves, (defined as areas with 33+% canopy closure based on the State Department of Forestry and Fire Protection's Hardwood Rangeland Maps);
- Rare and endangered species, (as found in the CNDDB and the CNPS Inventory of Rare and Endangered Vascular Plants of California);
- Riparian corridors within 100 feet of intermittent or perennial water courses (as shown the USGS Quadrangle Topographic Maps);
- Floodplains precluding development and land disturbance within floodways and restricting development within the floodway fringe, through the establishment of floodplain setbacks and associated development regulations (as defined by FEMA's Flood Insurance Rate Maps);

Grass Valley City Tree Ordinance

The Grass Valley City Code (Chapter 12.36) regulates pruning or removal of any trees designated as protected; modification of the area surrounding protected trees is also regulated. Protected trees include any woody plant with a trunk of 10 inches dbh (54 inches above ground height), any tree that measures 24 inches dbh (considered significant trees), and any trees listed in the City of Grass Valley heritage tree list (heritage trees).

If Project activities will require removal of protected trees, a construction related tree removal permit must be requested from the City of Grass Valley Planning Department. A Tree Protection Plan must be approved by the tree permit administrator prior to commencement of construction. Removal of protected trees will likely require mitigation at a 1:1 ratio in accordance with Municipal Code 12.36.085.

Nevada County Tree Ordinance

The purposes of the Nevada County Tree Ordinance include minimizing removal of trees, protecting trees during construction activities, providing habitat for native wildlife, and preserving landmark and heritage

trees. Development of a Management Plan and approval by the County are required before trees can be removed. The Ordinance requires documentation of native oak trees with a dbh of six inches or greater and requires documentation of landmark trees, landmark groves, heritage trees and groves, and riparian habitat. These terms are defined as follows:

- Landmark Trees: Any oak (*Quercus* sp.) ≥36 inches dbh, or any tree whose size, visual impact, or association with historically significant structure or event has caused it to be marked for preservation by the County, State, or federal government.
- Landmark Groves: Hardwood tree groves with ≥33 percent canopy closure, or groves whose size, visual impact, or association with a historically significant structure or event has caused it to be marked for preservation by the County, State, or federal government.
- Heritage Trees and Groves: A tree or group of hardwood trees designated by the Board of Supervisors to be of historical or cultural value, outstanding specimens, unusual species, or of significant community benefit due to size, age, or any unique characteristic considered to be in good health.

The Management Plan must evaluate project impacts on defined trees and groves and provide recommended project modifications that avoid or minimize impacts. Mitigation must be provided for defined trees that must be removed, based on an inch-for-inch dbh replacement, and long-term maintenance for replacement trees must be provided. The Ordinance put a specific emphasis on the protection of blue oak (*Q. douglasii*) and Valley Oak (*Q. lobata*).

5.0 METHODS

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the ESA;
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- Are identified as a SSC by CDFW;
- Are plants considered by the California CNPS to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1 and 2);
- Are plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- Are plants listed as rare under the California NPPA, California Fish and Game Code, § 1900 et seq.); or
- Are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for this assessment. Birds identified as Birds of Conservation Concern (BCC) by the USFWS, that were not also in one of the groups listed above, were not included in this analysis. Other species tracked by the CNDDB but having no other special status were not considered to be special status and were not included within this analysis.

5.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Project site. Results of the species searches are included as Attachment B.

- CDFW CNDDB data for the "Grass Valley, California" 7.5-minute quadrangle as well as the eight surrounding USGS quadrangles (CDFW 2019a);
- CDFW Spotted Owl Viewer in BIOS 5 (note: the report is not included in Attachment B because it identifies exact locations of sightings) (CDFW 2019b);
- USFWS Information, Planning, and Consultation System Resource Report List for the Project site (USFWS 2019a);
- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Grass Valley, California" 7.5-minute quadrangles and the eight surrounding quadrangles (CNPS 2019);
- CDFW BIOS query of range maps for potentially occurring special-status species (CDFW 2019c); and
- USFWS Threatened & Endangered Species Active Critical Habitat Report (USFWS 2019b).

Additional background information was reviewed regarding the documented or potential occurrence of special-status species within or near the Project site from the following sources:

- The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004 (California Department of Fish and Game [CDFG] 2005);
- California Bird SSC (Shuford and Gardali 2008);
- Amphibian and Reptile SSC in California (Thompson et al. 2016);
- Mammalian SSC in California (Williams 1986);
- California's Wildlife, Volumes I-III (Zeiner, et al. 1988, 1990a, 1990b); and
- A Guide to Wildlife Habitats of California (Mayer and Laudenslayer Jr., eds. 1988).

5.2 Site Reconnaissance

ECORP Biologist Clay DeLong conducted the site reconnaissance visit on March 7, 2019. The Project site was systematically surveyed on foot using a Trimble GPS unit with sub-meter accuracy, topographic maps, and aerial imagery to ensure total site coverage; the field survey lasted approximately four hours. Special

attention was given to identifying those portions of the Project site with the potential to support special-status species and sensitive habitats. During the field survey, biological communities occurring onsite were characterized and the following biological resource information was collected:

- Vegetation communities within the Project site;
- Plant and animal species directly observed;
- Animal evidence (e.g., scat, tracks);
- Existing active raptor nest locations;
- Burrows and any other special habitat features;
- Representative Project site photographs (Attachment C)

In addition, soil types were identified using the NRCS Web Soil Survey (NRCS 2019a).

5.3 Special-Status Species Considered for the Project

Based on species occurrence information from the literature review and observations in the field, a list of special-status plant and animal species that have the potential to occur within the Project site was generated and is provided in Section 6.6. Only special-status species as defined in Section 3.3 were included in this analysis. Each of these species' potential to occur within the Project site was assessed based on the following criteria:

- **Present** - Species was observed during the site visit or is known to occur within the Project site based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Project site.
- **Low Potential to Occur** - Marginal or limited amounts of habitat occur, and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other available documentation.
- **Absent** - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other documentation.

6.0 RESULTS

6.1 Site Characteristics and Land Use

The Project site is located east of State Highway 49/20 and north of Brunswick Road in Grass Valley. The Project site is characterized by disturbed areas and ponderosa pines. The surrounding areas consist of development to the west and south, and forested areas to the east and north. No developed areas exist within the Project site; however, several commercial buildings are located directly east of the Project site.

The Project site is composed of rolling to steep terrain. Elevation ranges within the Project site from approximately 2,650 - 2,760 feet above mean sea level (MSL). The Project is located approximately 7 miles from the nearest floodplain according to the FEMA Flood Insurance Rate Map (2019).

The average winter low temperature in the vicinity of the Study Area is 34.6°F and average summer high temperature is 84.0°F. Average annual precipitation is approximately 62.4 inches, which falls as rain and snow (National Oceanic and Atmospheric Administration [NOAA] 2019).

6.2 Vegetation Communities and Land Cover Types

During the field visit, two land cover types were identified within the Project site. These are disturbed and ponderosa pine (*Pinus ponderosa*) forest. These land cover types are described below and are depicted in Figure 2 *Habitat Map*. See Section 6.3.1 for a description of the vegetation associated with aquatic resources within the Study Area. A list of plant species observed on the Project site is provided in Attachment D.

6.2.1 Disturbed

The disturbed portions of the site include a narrow portion of the Project site that extends to the west through a landscaped portion of the adjacent shopping center, and a disturbed area in the southwest portion of the site. These areas appear frequently disturbed by vehicles and/or pedestrians. The disturbed areas are dominated by hedge parsley (*Torilis arvensis*).

6.2.2 Ponderosa Pine Forest

This vegetation community is characterized by a tall tree canopy dominated primarily by ponderosa pine. Other tree species present in the overstory include incense cedar (*Calocedrus decurrens*) and California black oak (*Quercus kelloggii*). The understory of this plant community is sparsely vegetated with blue wild rye (*Elymus glaucus*), pink honeysuckle (*Lonicera hispidula*), Himalayan blackberry (*Rubus armeniacus*), and Scotch broom (*Cytisus scoparius*). Openings in the tree canopy are dominated by white leaf manzanita (*Arctostaphylos viscida*), and buck brush (*Ceanothus cuneatus*), and blue wild rye.

6.3 Potential Aquatic Resources

A total of 0.038 acre of potential aquatic resources were mapped within the Project site during the field survey. Potentially jurisdictional features mapped within the Project site include one ephemeral drainage (*Figure 3. Aquatic Resource Delineation)*.

Table 1. Potential Aquatic Resources within the Project Site.

Type	Acres[1]
Aquatic Resources	
Ephemeral Drainage	0.038
Total	**0.038**

[1]Acreages represent a calculated estimation and are subject to modification following the USACE verification process.



Map Features

APN Boundary - 5.00 acres

Habitat Types

Disturbed (0.6 acre)

Ponderosa Pine Forest (4.4 acres)

Photo Source: NAIP, 2016
Boundary Source: Nevada County Parcel Data



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Map Date: 4/30/2019

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Scale in Feet
0 100

Figure 2. Habitat Map

2019-046 Brunswick Commons

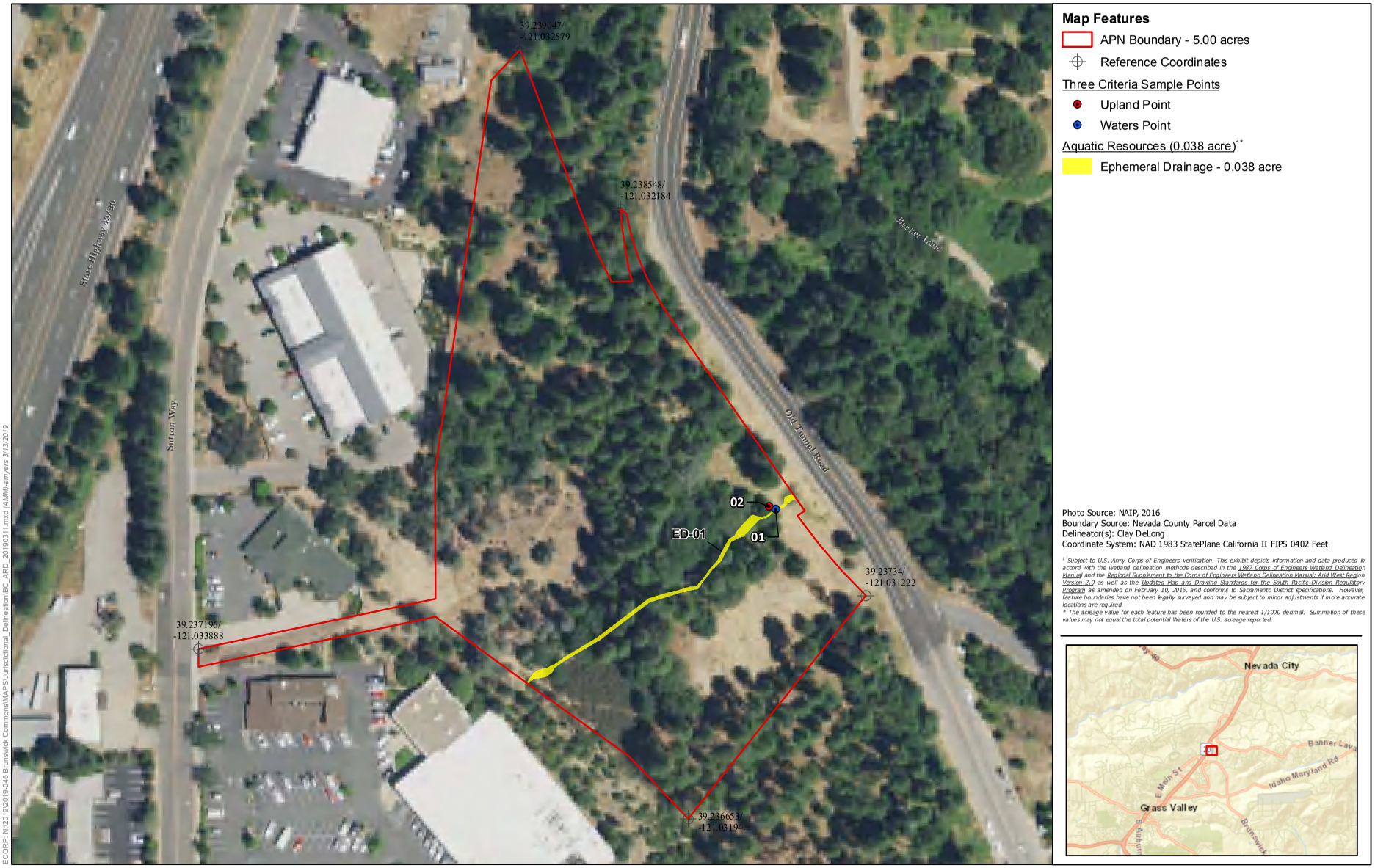


Figure 3. Aquatic Resource Delineation

2019-046 Brunswick Commons

6.3.1 Ephemeral Drainage

Ephemeral drainages are linear features that exhibit a bed and bank and an ordinary high-water mark. These features typically convey runoff for short periods of time during and immediately following rain events and are not influenced by groundwater sources at any time during the year. One ephemeral drainage occurs in the southeastern portion of the Project site. This feature is a steep, narrow, deeply incised channel that enters the property via a culvert under Old Tunnel Road. It is primarily unvegetated due to scour. Portions are sparsely vegetated with Himalayan blackberry and umbrella sedge (*Cyperus eragrostis*).

6.4 Soils

According to the Soil Survey Geographic (SSURGO) Database for Nevada County, California (NRCS 2019a), three soil units, or types, have been mapped within the Project site (*Figure 4. Natural Resources Conservation Service Soil Types*):

- CmC – Cohasset loam, 9 to 15 percent slopes;
- CmD – Cohasset loam, 15 to 30 percent slopes; and
- ScE – Secca-Rock outcrop complex, 2 to 50 percent slopes.

None of the identified soil types contain hydric components (NRCS 2019b).

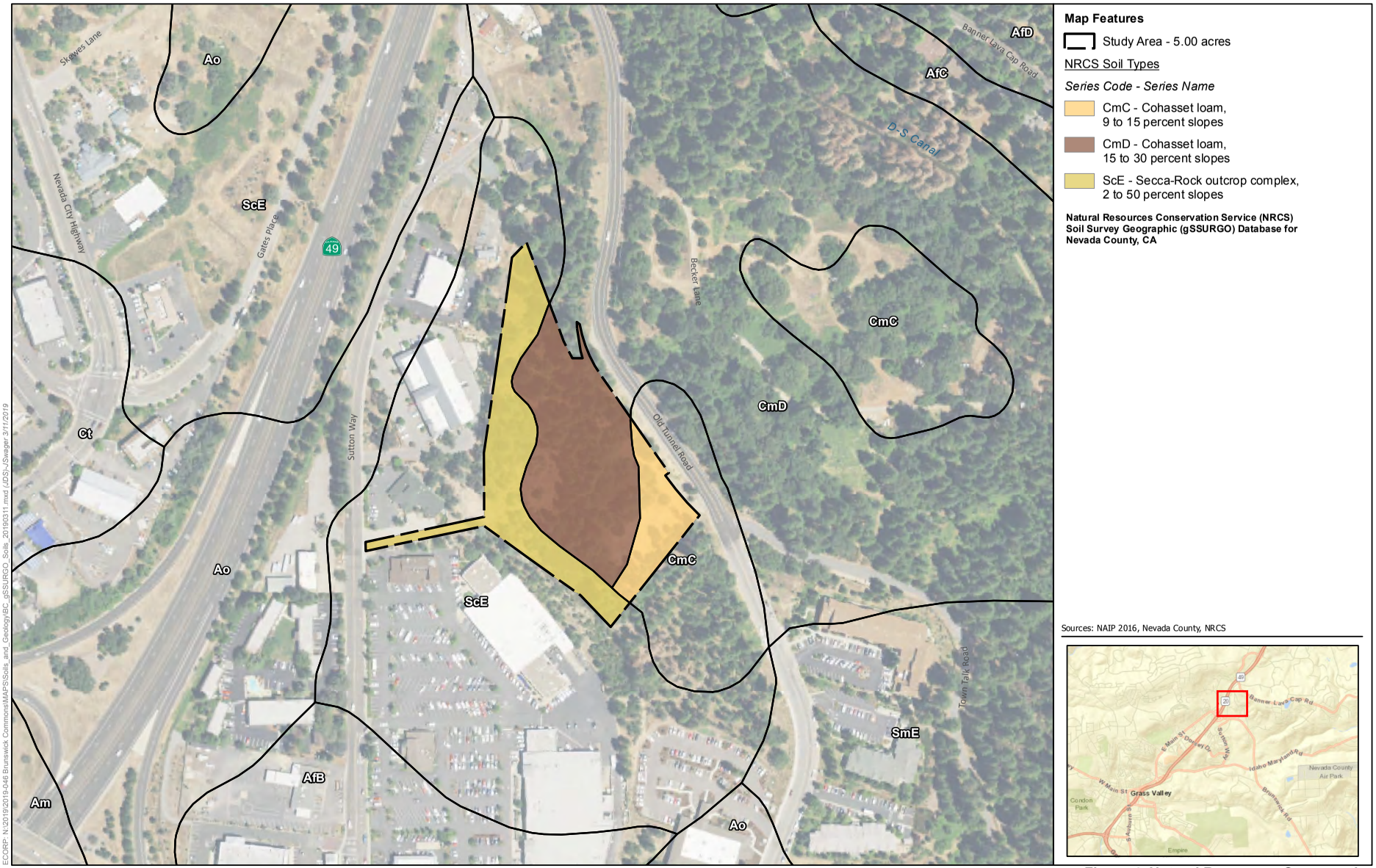
6.5 Wildlife

No wildlife species were observed during the field survey due to poor weather conditions at the time of the survey (i.e., cold temperatures, rain, and wind). No potential mammal dens were observed during the field survey.

6.6 Evaluation of Species Identified in the Literature Search

A list of all of the plant and wildlife species identified in the literature search as potentially occurring within the Project site is provided in Table 2. This table includes the listing status for each species, a brief habitat description, and a determination on the potential to occur in the Project site. Following the table is a brief description of each species with potential to occur.

Several species and sensitive habitat types came up in the database and literature searches (Attachment B) but are not included in Table 2. These species and habitat types were not included in Table 2 because the species have been formally delisted or are only tracked by the CNDDB and possess no special-status, or because the identified sensitive habitats are not located within the Project site. They are not discussed further in this report. One mammal species (ringtail [*Bassariscus astutus*]) was added to the analysis. Ringtail has been added because it is known to occur in the area, but it does not typically appear in the database and literature searches.



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Map Date: 3/11/2019

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Figure 4. Natural Resources Conservation Service Soil Types
2019-046 Brunswick Commons

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Plants						
Congdon's onion *(Allium sanbornii* var. *congdonii)*	-	-	4.3	Chaparral and cismontane woodland with serpentinite or volcanic soils (984'–4577').	April–July	Absent. No suitable habitat present onsite.
Sanborn's onion *(Allium sanbornii* var. *sanbornii)*	-	-	4.2	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentinite soils (853'–4,954').	May–September	Low Potential-marginal habitat present onsite.
True's manzanita *(Arctostaphylos mewukka* ssp. *truei)*	-	-	4.2	Chaparral or lower montane coniferous forest, sometimes on roadsides (1,394'–4,560').	February–July	Potential-suitable habitat present onsite.
Mexican mosquito fern *(Azolla microphylla)*	-	-	4.2	Marshes and swamps, ponds or slow-moving bodies of water (98'–328').	August	Absent. No suitable habitat present onsite.
Sierra foothills brodiaea *(Brodiaea sierrae)*	–	–	4.3	Serpentinite or gabbroic soils within chaparral or cismontane woodland (164'–3,215').	May–August	Absent. No suitable habitat present onsite.
Stebbins' morning–glory *(Calystegia stebbinsii)*	FE	CE	1B.1	Gabbroic or serpentine soils in chaparral and cismontane woodland (607'–3,576').	April–July	Absent. No suitable soils present onsite.
Chaparral sedge *(Carex xerophila)*	–	–	1B.2	Serpentinite or gabbroic soils within chaparral, cismontane woodland, and lower montane coniferous forest (1,444'–2,526').	March–June	Absent. No suitable soils present onsite.
Red Hills soaproot *(Chlorogalum grandiflorum)*	–	–	1B.2	Serpentinite or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest, occasionally on non–ultramafic soils (804'–5,545').	May–June	Absent. No suitable soils present onsite.
Brandegee's clarkia *(Clarkia biloba* ssp. *brandegeeae)*	–	–	4.2	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (246'–3,002').	May–July	Potential-suitable habitat present onsite.
Streambank spring beauty *(Claytonia parviflora* ssp. *grandiflora)*	–	–	4.2	Occurs in rocky cismontane woodland (820'–3,937').	February–May	Low potential-marginal habitat present onsite.
California lady's–slipper (*Cypripedium californicum)*	–	–	4.2	Usually within serpentinite seeps and streambanks of bogs and ferns, and lower montane coniferous forest (98'–9,022').	April–August	Low potential-marginal habitat present onsite.

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Clustered lady's–slipper *(Cypripedium fasciculatum)*	–	–	4.2	In serpentinite seeps, and streambanks of lower montane coniferous forest, and North Coast coniferous forest (328'–7,989').	March–August	Absent. No suitable soils present onsite.
California pitcherplant *(Darlingtonia californica)*	–	–	4.2	Mesic areas in generally serpentinite seeps of bogs and ferns, and meadows and seeps (0'–8,481').	April–August	Absent. No suitable mesic habitat present onsite.
Northern Sierra daisy *(Erigeron petrophilus* var. *sierrensis)*	–	–	4.3	In sometimes serpentinite cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest (984'–6,801').	June–October	Low potential-marginal habitat present onsite.
Jepson's coyote thistle (*Eryngium jepsonii*)	–	–	1B.2	Clay soils of valley and foothill grassland, and vernal pools (10'–984').	April–August	Absent. No suitable habitat present onsite.
Pine Hill flannelbush *(Fremontodendron decumbens)*	FE	CR	1B.2	Serpentine or gabbro rock outcrops in chaparral and cismontane woodland (1,394'–2,493').	April–July	Absent. No suitable soils present onsite.
Butte County fritillary *(Fritillaria eastwoodiae)*	–	–	3.2	Chaparral, cismontane woodland, and openings in lower montane coniferous forest and occasionally is found on serpentinite soils (164'–4,921').	March–June	Potential-suitable habitat present onsite.
Finger rush *(Juncus digitatus)*	–	–	1B.1	Openings within cismontane woodland and lower montane coniferous forest, as well as xeric vernal pools (2,165'–2,592).	April–June	Potential- suitable habitat present onsite.
Dubious Pea *(Lathyrus sulphureus* var. *argillaceus)*	–	–	3	Cismontane woodland, lower montane coniferous forest and upper montane coniferous forest. (492'–3,051').	April–May	Potential-suitable habitat present onsite.
Cantelow's lewisia *(Lewisia cantelovii)*	–	–	1B.2	In granitic or sometimes serpentinite soils within mesic areas of broad–leaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest (1,083'–4,495').	May–October	Absent. No suitable mesic habitat present onsite.
Humboldt Lily *(Lilium humboldtii* ssp. *humboldtii)*	–	–	4.2	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (295'–4,199').	May–August	Potential-suitable habitat present onsite.

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Inundated bog club-moss *(Lycopodiella inundata)*	–	–	2B.2	Bogs and fens; lower montane coniferous forest; marshes and swamps (16' – 3,281').	June–September	Absent. No suitable habitat present onsite.
Elongate copper moss *(Mielichhoferia elongata)*	–	–	4.3	Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate within broad-leafed upland forest, chaparral, cismontane coniferous forest, meadows and seeps, and subalpine coniferous forest. (0'–6,430').	N/A	Low potential-marginal habitat present onsite.
Follett's monardella *(Monardella follettii)*	–	–	1B.2	Rocky serpentinite soil in lower montane coniferous forests (1,969'–6,562').	June–September	Absent. No suitable soils present onsite.
Bacigalupi's yampah *(Perideridia bacigalupii)*	–	–	4.2	Serpentinite soils of lower montane coniferous forest and chaparral (1,476'–3,396').	June–August	Absent. No suitable soils present onsite.
Cedar Crest popcornflower *(Plagiobothrys glyptocarpus* var. *modestus)*	–	–	3	Cismontane woodland and mesic valley and foothill grasslands (108'–2,945).	April–June	Potential-suitable habitat present onsite.
Sierra blue grass *(Poa sierrae)*	–	–	1B.3	Lower montane coniferous forest openings (1,198'–4,921').	April–July	Potential-suitable habitat present onsite.
Brownish beaked–rush *(Rhynchospora capitellata)*	–	–	2B.2	Mesic areas in lower montane coniferous forest, upper montane coniferous forests, meadows, seeps, marshes, and swamps (148'–6,562').	July–August	Low potential-marginal habitat present onsite.
Giant checkerbloom *(Sidalcea gigantea)*	–	–	4.3	Meadows and seeps within lower and upper montane coniferous forests (2,198'–6,398').	January–June	Absent. No suitable habitat present onsite.
Scadden Flat checkerbloom *(Sidalcea stipularis)*	–	CE	1B.1	Montane freshwater marshes and swamps (2,297'–2,395').	July–August	Absent. No suitable habitat present onsite.
Long–fruit jewelflower *(Streptanthus longisiliquus)*	–	–	4.3	Openings in cismontane woodland and lower montane coniferous forest (2,346'–4,921').	April–September	Potential-suitable habitat present onsite.
Invertebrates						
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	–	–	Elderberry shrubs.	Any season	Absent. The Project site is outside of the geographic range for this species (USFWS 2019c).

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Fish						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	–	Water bodies connected to the Sacramento-San Joaquin delta.	N/A	Absent. There is no suitable aquatic habitat on-site for this species.
Amphibians						
California red-legged frog (*Rana draytonii*)	FT	–	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1– November 1	Absent. There is no suitable habitat on-site for this species.
Foothill yellow-legged frog (*Rana boylii*)	–	CC	SSC	Foothill yellow-legged frogs can be active all year in warmer locations, but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather along main-stem rivers during spring to breed.	May–October	Absent. There is no suitable habitat on-site for this species.
Reptiles						
Blainville's (Coast) horned lizard (*Phrynosoma blainvillii* formerly *Phrynosoma coronatum frontale*)	–	–	SSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Needs open areas for basking, but with bushes and shaded areas for cover. A dietary specialist on native ants.	April–October	Low potential to occur.
Northwestern pond turtle (*Actinemys marmorata*)	–	–	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April–October	Absent. There is no suitable habitat on-site for this species.
Birds						
California black rail (*Laterallus jamaicensis coturniculus*)	–	CT	BCC, CFP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer counties)	March– September (breeding)	Absent. There is no suitable habitat on-site for this species.

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
California Spotted owl	–	–	BCC SSC CFGC	Found in the southern Cascade Range and northern Sierra Nevada from Pit River south to Tehachapi Mountains, in the Transverse and Peninsular Ranges south to northern Baja California. At lower elevations, they breed in hardwood forests and coniferous forests at higher elevations.	March-September (breeding)	Absent. There is no suitable habitat on-site for this species due to proximity of development.
Cooper's hawk *(Accipiter cooperii)*	–	–	WL	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	March–July	Potential to occur.
Northern goshawk *(Accipiter gentilis)*	–	–	SSC	Nesting occurs in mature to old-growth forests composed primarily of large trees with high canopy closure. In California, nests are built primarily in conifer trees in the Sierra Nevada, Cascade and northwestern coastal Ranges.	March–August	Absent. There is no suitable habitat on-site for this species.
Mammals						
Fisher- West Coast Distinct Population Segment *(Pekania pennanti)*	FPT	CT	SSC	Northern coniferous and mixed forests of Canada and northern United States.	Any season	Low potential to occur.
Ringtail *(Bassariscus astutus)*	–	–	FP	Rare, permanent resident of the Sierra Nevada, Cascade, and Klamath mountain ranges. Occur in intermediate to large-tree coniferous forests and deciduous riparian habitats. Dens are generally found in cavities of trees but can also be in brush piles and logs.	Any season	Low potential to occur.

Table 2. Special-Status Species Evaluated for the Study Area

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Sierra Nevada red fox (*Vulpes vulpes necator*)	FC	CT	–	Found in the Cascades in Siskiyou County, and from Lassen County south to Tulare County, rare in the Sierra Nevada. Sierra Nevada populations may be found in a variety of habitats, including alpine dwarf-shrub, wet meadow subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. Most sightings in Sierra Nevada area above 7,000 feet but range from 3,900 to 11,900 feet.	Any season	Low potential to occur.
Townsend's big-eared bat *(Corynorhinus townsendii)*	–	–	SSC	Caves, mines, buildings, rock crevices, trees.	April–September	Low potential to occur.

Status Codes[1]:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
FC	FESA Candidate for Listing
FE	ESA listed, Endangered.
FPT	ESA proposed for listing, Threatened
FT	ESA listed, Threatened.
BCC	USFWS Bird of Conservation Concern
FP	CDFW Fully Protected
WL	CDFW Watch List
CC	CESA Candidate for Listing
CE	CESA or NPPA listed, Endangered.
CFP	California Fully Protected Species
CT	CESA or NPPA listed, Threatened.
CR	CESA or NPPA listed, Rare.
SSC	CDFW Species of Special Concern
BCC	USFWS Bird of Conservation Concern
1B	CRPR /Rare or Endangered in California and elsewhere.
2B	CRPR /Rare or Endangered in California, more common elsewhere.
3	CRPR/Plants About Which More Information is Needed – A Review List.
4	CRPR /Plants of Limited Distribution - A Watch List.
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

6.6.1 Plants

There are 31 special-status plant species identified as having the potential to occur within the Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, 16

species were determined to be absent from the Project site due to the lack of suitable habitat (Table 2). No further discussion of these species is provided in this analysis. A brief description of the remaining 15 species that have the potential to occur within the Project site are presented below.

Sanborn's Onion

Sanborn's onion (*Allium sanbornii* var. *sanbornii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a bulbiferous perennial that occurs on serpentinite or gravelly soils on chaparral, cismontane woodlands, and lower montane coniferous forest (CNPS 2019). Sanborn's onion blooms from May through September and is known to occur at elevations ranging from 853 to 4,954 feet above MSL (CNPS 2019). The current range of this species in California includes Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne and Yuba counties (CNPS 2019).

There are no CNDDB documented occurrences of Sanborn's onion within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides marginally suitable habitat for this species. Sanborn's onion has low potential to occur onsite.

True's Manzanita

True's manzanita (*Arctostaphylos mewukka* ssp. *truei*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an evergreen, perennial shrub that occurs sometimes on roadsides of chaparral and lower montane coniferous forest (CNPS 2019). True's manzanita blooms from February through July and is known to occur at elevations ranging from 1,394 to 4,560 feet above MSL (CNPS 2019). True's manzanita is endemic to California; the current California range of this species include Butte, El Dorado, Nevada, Placer, Plumas and Yuba counties (CNPS 2019).

There are no CNDDB documented occurrences of True's manzanita within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides suitable habitat for this species. True's manzanita has potential to occur onsite.

Brandegee's Clarkia

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 plant. This species is an herbaceous annual that occurs in chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (CNPS 2019). Brandegee's clarkia blooms from May through July and is known to occur at elevations ranging from 246 to 3,002 feet above MSL (CNPS 2019). Brandegee's clarkia is endemic to California, and the current range of this species includes Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties (CNPS 2019).

There are three CNDDB documented occurrences of Brandegee's clarkia within five miles of the Project site (CDFW 2019a), and the ponderosa pine forest within the Project site provides suitable habitat for this species. Brandegee's clarkia has potential to occur onsite.

Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky cismontane woodland (CNPS 2019). Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,937 feet above MSL (CNPS 2019). Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare, and Tuolumne counties (CNPS 2019).

There are no CNDDB documented occurrences of streambank spring beauty within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides marginally suitable habitat for this species. Streambank spring beauty has low potential to occur onsite.

California Lady's-Slipper

California lady's-slipper (*Cypripedium californicum*) is not listed pursuant to either the federal and California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous perennial rhizome that occurs in serpentinite seeps and streambanks, bogs and fens, and lower montane coniferous forest (CNPS 2019). California lady's-slipper blooms between April and September and is known to occur at elevations ranging from 98 to 9,022 feet above MSL (CNPS 2019). The current range for California lady's-slipper in California includes Butte, Del Norte, Humboldt, Mendocino, Marin, Plumas, Shasta, Siskiyou, Sonoma, and Trinity counties; however, it is presumed extirpated from Marin County (CNPS 2019).

There are no CNDDB documented occurrences of California lady's-slipper within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides marginally suitable habitat for this species. California lady's-slipper has low potential to occur onsite.

Northern Sierra Daisy

Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a rhizomatous herbaceous perennial that occurs in sometimes serpentinite soils of cismontane woodland as well as lower and upper montane coniferous forest (CNPS 2019). Northern Sierra daisy blooms from June through October and is known to occur at elevations ranging from 984 to 6,801 feet above MSL. (CNPS 2019). Northern Sierra daisy is endemic to California and is known to occur in Butte, El Dorado, Nevada, Plumas, Sierra, and Yuba counties (CNPS 2019).

There are no CNDDB documented occurrences of Northern Sierra daisy within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides marginally suitable habitat for this species. Northern Sierra daisy has low potential to occur onsite.

Butte County Fritillary

Butte County fritillary (*Fritillaria eastwoodiae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.2 species. This species is an herbaceous bulbiferous perennial that occurs in chaparral, cismontane woodland, and openings in lower montane coniferous forest and occasionally is

found on serpentinite soils (CNPS 2019). Butte County fritillary blooms from March to June and is known to occur at elevations ranging from 164 to 4,921 feet above MSL (CNPS 2019). The current range of this species in California includes Butte, El Dorado, Nevada, Placer, Shasta, Tehama, and Yuba counties (CNPS 2019).

There is one CNDDB documented occurrence of Butte County fritillary within five miles of the Project site (CDFW 2019a), and the ponderosa pine forest within the Project site provides suitable habitat for this species. Butte County fritillary has potential to occur onsite.

Finger Rush

Finger rush (*Juncus digitatus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in openings within cismontane woodland and lower montane coniferous forest, as well as xeric vernal pools (CNPS 2019). Finger rush blooms from April through June and is known to occur at elevations ranging from 2,165 to 2,592 feet above MSL (CNPS 2019). Finger rush is endemic to California; its current range includes Nevada and Shasta counties (CNPS 2019).

There is one CNDDB documented occurrence of finger rush within five miles of the Project site (CDFW 2019a), and the ponderosa pine forest within the Project site provides suitable habitat for this species. Finger rush has potential to occur onsite.

Dubious Pea

Dubious pea (*Lathyrus sulphureus* var. *argillaceus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3 species. This species is an herbaceous perennial that occurs in cismontane woodland, lower montane coniferous forest and upper montane coniferous forest (CNPS 2019). Dubious pea blooms from April through May and is known to occur at elevations ranging from 492 to 3,051 feet above MSL (CNPS 2019). Dubious pea is endemic to California; the current range of this species includes Calaveras, El Dorado, Nevada, Placer, Shasta, and Tehama counties; distribution or identity is uncertain in Nevada County (CNPS 2019).

There is one CNDDB documented occurrence of dubious pea within five miles of the Project site (CDFW 2019a), and the ponderosa pine forest within the Project site provides suitable habitat for this species. Dubious pea has potential to occur onsite.

Humboldt Lily

Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (CNPS 2019). Humboldt lily blooms from May through August and is known to occur at elevations ranging from 295 to 4,199 feet above MSL (CNPS 2019). Humboldt lily is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba counties (CNPS 2019).

There are no CNDDB documented occurrences of Humboldt lily within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides suitable habitat for this species. Humboldt lily has potential to occur onsite.

Elongate Copper Moss

Elongate copper moss (*Mielichhoferia elongata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a moss that occurs on metamorphic rock, usually acidic, vernally mesic, often on roadsides, and sometimes on carbonate soils in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, and subalpine coniferous forest (CNPS 2019). Elongate copper moss is known to occur at elevations ranging from sea level to 6,430 feet above MSL (CNPS 2019). The current range of this species in California includes Fresno, Humboldt, Inyo, Lake, Monterey, Mariposa, Marin, Nevada, Placer, Plumas, Santa Clara, Santa Cruz, Siskiyou, San Mateo, Trinity, Tulare, and Tuolumne counties (CNPS 2019).

There are no CNDDB documented occurrences of elongate copper moss within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides marginally suitable habitat for this species. Elongate copper moss has low potential to occur onsite.

Cedar Crest Popcornflower

Cedar Crest popcornflower (*Plagiobothrys glyptocarpus* var. *modestus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3 species. This species is an annual herb that occurs in cismontane woodland and mesic areas of valley and foothill grasslands (CNPS 2019). Cedar Crest popcornflower blooms from April through June and is known to occur at elevations from 108 to 2,945 feet above MSL (CNPS 2019, Jepson 2019). Cedar Crest popcornflower is endemic to California; the current range of this species includes Nevada and Yuba counties, although the distribution or identity in Yuba County is uncertain (CNPS 2019).

There are no CNDDB documented occurrences of Cedar Crest popcornflower within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides suitable habitat for this species. Cedar Crest popcornflower has potential to occur onsite.

Sierra Blue Grass

Sierra blue grass (*Poa sierrae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.3 species. This species is a rhizomatous herbaceous perennial that occurs in lower montane coniferous forest openings (CNPS 2019). Sierra blue grass blooms from April through July and is known to occur at elevations ranging from 1,198 to 4,921 feet above MSL (CNPS 2019). Sierra blue grass is endemic to California; its current range includes Butte, El Dorado, Madera, Nevada, Placer, Plumas, and Shasta counties (CNPS 2019).

There are no CNDDB documented occurrences of Sierra blue grass within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides suitable habitat for this species. Sierra blue grass has potential to occur onsite.

Brownish Beaked-Rush

Brownish beaked-rush (*Rhynchospora capitellata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is an herbaceous perennial that occurs in mesic areas in lower montane coniferous forest, meadows, seeps, marshes, swamps, and upper montane coniferous forest (CNPS 2019). Brownish beaked-rush blooms from July through August and is known to occur at elevations ranging from 148 to 6,562 feet above MSL (CNPS 2019). The current range of this species in California includes Butte, El Dorado, Mariposa, Nevada, Plumas, Sonoma, Tehama, Trinity, and Yuba counties; distribution or identity is uncertain in Sonoma County, but it is presumed extirpated if it was once present there (CNPS 2019).

There is one CNDDB documented occurrence of brownish beaked-rush within five miles of the Project site (CDFW 2019a), and the ephemeral drainage within the Project site provides marginally suitable habitat for this species. Brownish beaked-rush has low potential to occur onsite.

Long-Fruit Jewelflower

Long-fruit jewelflower (*Streptanthus longisiliquus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs in openings within cismontane woodland and lower montane coniferous forests (CNPS 2019). Long-fruit jewelflower blooms from April through September and is known to occur at elevations ranging from 2,346 to 4,921 feet above MSL (CNPS 2019). Long-fruit jewelflower is endemic to California; the current range of this species in California includes Butte, Shasta, and Tehama counties (CNPS 2019).

There are no CNDDB documented occurrences of long-fruit jewelflower within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest within the Project site provides suitable habitat for this species. Long-fruit jewelflower has potential to occur onsite.

6.6.2 Invertebrates

One special-status invertebrate species was identified as having potential to occur within the Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, this species was determined to be absent from the Project site because the Project site is outside the range of the species (Table 2). No further discussion of this species is provided in this analysis.

6.6.3 Fish

One special-status fish species was identified as having potential to occur within the Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, this species was determined to be absent from the Project site due to the lack of suitable habitat (e.g. aquatic features) (Table 2). No further discussion of this species is provided in this analysis.

6.6.4 Amphibians

Two special-status amphibian species were identified as having potential to occur within Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, both

species were determined to be absent from the Project site due to the lack of suitable habitat (Table 2). No further discussion of these species is provided in this analysis.

6.6.5 Reptiles

Two special-status reptile species were identified as having potential to occur within the Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, one was determined to be absent from the Project site due to the lack of suitable habitat (e.g. ponds or streams) (Table 2). No further discussion of this species is provided in this analysis. A brief description of the remaining species is provided below.

Blainville's (Coast) Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is considered an SSC by CDFW. This species is a relatively large (up to 105mm in snout-vent length) dorsoventrally flattened, rounded lizard found historically from Redding, California to Baja, Mexico (Jennings and Hayes 1994). Formally considered the coast horned lizard (*P. coronatum*), the species has gone through a long period of taxonomic instability (Jennings and Hayes 1994; Montanucci 2004, Leaché et al. 2009). This diurnal species can occur within a variety of habitats including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins 2003). In the Coast Ranges, it occurs from Sonoma County south into Baja California (CDFG 1988). It occurs from sea level to 8,000 feet above MSL and an isolated population occurs in Siskiyou County (Stebbins 2003).

Like all horned lizards, Blainville's horned lizard is adorned with pointed and keeled scales, head spines, and parallel lateral fringes of scales, all of which serve to dissuade predators and aid in crypsis (Sherbrooke 2003). This is a ground-dwelling lizard that does not use vertical structures except where they shade the ground (Stebbins and McGinnis 2012).

Blainville's horned lizard is found in open microhabitats such as sandy washes with scattered shrubs or firebreaks in chaparral, where they forage for ants, small beetles and other insects (Jennings and Hayes 1994). Horned lizards (*Phrynosoma*) are native ant specialists and daily activities are centered on aboveground activity patterns of ants, with lizards active generally in mornings and later in the afternoon in the summer. They generally emerge from hibernation in March or April, and are active until September or later. Mating takes place in April through early May (Jennings and Hayes 1994), and an average of 12 (but up to 21) eggs are laid from April to June (Stebbins and McGinnis 2012). Hatchlings 25–27mm in length emerge from July through September (Stebbins and McGinnis 2012). Periods of daily or seasonal inactivity are spent within rodent burrows or underneath the soil or surface objects (CDFG 1988).

There are four CNDDB documented occurrences of Blainville's horned-lizard within five miles of the Project (CDFW 2019a). The disturbed and ponderosa pine forest within the Project site provide marginally suitable habitat for this species. Blainville's horned-lizard has low potential to occur onsite.

6.6.6 *Birds*

Four special-status bird species were identified as having potential to occur within the Project site based on the literature review (Table 2). Upon further analysis and after the reconnaissance site visit, three species were considered to be absent from the Project site due to the lack of suitable habitat (Table 2). No further discussion of these species is provided in this analysis. A brief description of the remaining special-status bird species that has the potential to occur within the Project site is presented below.

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is not listed pursuant to either the federal or California ESAs, but it is a CDFW "watch list" species and is currently tracked in the CNDDB. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Cooper's hawk nest throughout California from Siskiyou County to San Diego County, and includes the Central Valley (Curtis et al. 2006). Breeding occurs during March through July, with a peak from May through July.

There is one CNDDB documented occurrence of Cooper's hawk within five miles of the Project site (CDFW 2019a), and the disturbed and ponderosa pine forest provide suitable foraging and nesting habitat for this species. Given the Project site's proximity to development, Cooper's hawk has potential to nest and forage onsite.

6.6.7 *Mammals*

Three special-status mammal species were identified as having potential to occur within the Project site based on the literature review (Table 2). One additional special status mammal species (ringtail) was included because it is known to occur in vicinity of the Project, but does not typically appear in database searches. Upon further analysis and after the reconnaissance site visit, all four species were considered to have low potential to occur within the Project site. Brief descriptions of each of these species are presented below.

Fisher

Fisher (*Pekania pennanti*) is proposed for threatened status under the Federal ESA and a candidate for threatened status under the California ESA; it is designated as an SSC by CDFW. Fisher is a rare, permanent resident of the Sierra Nevada, Cascade, and Klamath Mountain ranges (Zeiner et al. 1990b). Most sightings occur in intermediate to large-tree coniferous forests and deciduous riparian habitats (Zeiner et al. 1990b). Dens are found in cavities, brush piles, and logs (Zeiner et al. 1990b).

There are no CNDDB documented occurrences of fisher within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest onsite provides marginally suitable habitat for this species. Fisher has very low potential to occur onsite.

Ringtail

Ringtail is not listed pursuant to the federal or California ESAs, but is designated as Fully Protected in California by CDFW. This is a smallish procyonid, related to the widespread raccoon (*Procyon lotor*) and

neotropical white-nosed coati (*Nasua narica*). Ringtails are mesocarnivores of riparian areas, especially with abundant rocky outcrops, in low to middle elevation drainages in blue oak woodlands, foothill pine/oak forests, chaparral, ponderosa pine woodlands, black oak woodlands, riparian deciduous forests, and mixed coniferous forest (Verner and Boss 1980). Highly nocturnal, ringtails consume small rodents, snakes, birds and their eggs, invertebrates, and some fruits, nuts, and carrion (Zeiner et al. 1990b).

There are no CNDDB documented occurrences of ringtail within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest onsite provides marginally suitable habitat for this species. Ringtail has low potential to occur onsite.

Sierra Nevada red fox

Sierra Nevada red fox (*Vulpes vulpes necator)* is listed as threatened pursuant to the California Endangered Species Act. Sierra Nevada red fox is found in a variety of habitats including alpine dwarf shrub, wet meadow, subalpine conifer forest, montane riparian, and mixed conifer forests; however, it prefers forests interspersed with meadows or alpine fell-fields (Zeiner et al. 1990b). This species uses dense vegetation and rocky areas for cover and den sites (Zeiner et al. 1990b).

There are no CNDDB documented occurrences of Sierra Nevada red fox within five miles of the Project site (CDFW 2019a). However, the ponderosa pine forest onsite provides marginally suitable habitat for this species. Sierra Nevada red fox has low potential to occur onsite.

Townsend's big-eared bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large "rabbit-like" ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet. Habitats used include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. Townsend's big-eared bat is a moth specialist with over 90 percent of its diet composed of Lepidopterans. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (Western Bat Working Group [WBWG] 2019).

There is one CNDDB documented occurrence of Townsend's big-eared bat within five miles of the Project site (CDFW 2019a). The ponderosa pine forest in the Project site provides marginally suitable roosting and foraging habitat for this species. Townsend's big-eared bat has low potential to occur onsite.

6.7 Sensitive Natural Communities

No sensitive natural communities were identified as having the potential to occur within the Project site based on the literature review (CDFW 2019a).

6.8 Wildlife Movement/Corridors and Nursery Sites

The Project site is undeveloped with one ephemeral drainage and no other identified aquatic resources. Wildlife may use the disturbed and ponderosa pine forest for movement and dispersal; however, the limited aquatic resources suggest the Project site does not provide high-quality habitat for dispersal. Wildlife species that may use the Project site as a migratory or movement corridor include birds such as passerines and raptors. Highly mobile mammal species such as raccoon and coyote (*Canis latrans*) are expected to occasionally move through the Project site. Although wildlife may utilize this site as a movement corridor, it is surrounded by other rural lands and is not an exclusive means of dispersal from any area to another.

In CDFW's BIOS database, the CDFW Mule Deer Range, Region 2 dataset indicates that the Project site is within the winter range of mule deer, but the Project site is not identified as a migration corridor, critical range, or critical fawning area (CDFW 2019c).

As indicated on the USGS quadrangle topographic map, there are no intermittent or perennial water courses within 100 feet of the Project site (Figure 1); therefore, there are no riparian corridors within 100 feet of the Project site.

The Project site does not include a known nursery site (CDFW 2019a) and none were identified during the field reconnaissance.

7.0 RECOMMENDATIONS

7.1 Waters of the U.S. and State

Approximately 0.038 acre of potential Waters of the U.S./State is located within the Project site (Figure 3). The following mitigation measures are recommended to minimize potential impacts to Waters of the U.S./State iIf the Project proposes to place fill in these features:

- Authorization to fill wetlands and other Waters of the U.S. under the Section 404 of the federal CWA (Section 404 Permit) must be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit to ensure no-net-loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Permit for the Project will be prepared and submitted to USACE and will include direct, avoided, and preserved acreages to Waters of the U.S. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however final mitigation requirements will be developed in consultation with USACE.

- A Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions.
- Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State within the Project site will be developed in consultation with the RWQCB.

Features that may be subject to CDFW Section 1602 jurisdiction were identified in the Project site (e.g., ephemeral drainage). The following measure is recommended to minimize potential impacts to the bed, bank, or channel of rivers, streams, or lakes within the Project site if the Project proposes to place fill in these features:

- A Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the California Fish and Game Code must be obtained for any activity that will impact the bed, bank, or channel of any river, stream, or lake. Mitigation measures will be developed during consultation with CDFW as part of the SAA permit process to ensure protections for affected fish and wildlife resources.

7.2 Special-Status Species

7.2.1 Plants

A total of 15 special-status plants have potential to occur within the Project site. These include Sanborn's onion, True's manzanita, Brandegee's clarkia, streambank spring beauty, California lady's-slipper, Northern Sierra daisy, Butte County fritillary, finger rush, dubious pea, Humboldt lily, elongate copper moss, Cedar Crest popcornflower, Sierra blue grass, brownish beaked-rush, and long-fruit jewelflower. Based on the tentative site plan in Attachment A, ±3.3 acres of the Project site are expected to be developed. The following measures are recommended to minimize potential impacts to special-status plants:

- Perform focused plant surveys according to USFWS, CDFW, and CNPS protocols. Surveys should be timed according to the blooming period for target species and known reference populations, if available, and/or local herbaria should be visited prior to surveys to confirm the appropriate phenological state of the target species.
- If special-status plant species are found during surveys within the Project and avoidance of the species is not possible, seed collection, transplantation, and/or other mitigation measures may be developed in consultation with appropriate resource agencies to reduce impacts to special-status plant populations.
- If no special-status plants are found within the Project Area, no further measures pertaining to special-status plants are necessary.

7.2.2 Invertebrates

The Project site does not provide suitable habitat for any special-status invertebrate species. No measures are recommended for special-status invertebrate species.

7.2.3 Fish

The Project site does not provide suitable habitat for any special-status fish species. No measures are recommended for special-status fish species.

7.2.4 Amphibians

The Project site does not provide suitable habitat for any special-status amphibian species. No measures are recommended for special-status amphibian species.

7.2.5 Reptiles

The Project site provides marginally suitable habitat for Blainville's horned lizard. Approximately 3.3 acres of the Project site are expected to be developed. The following measures are recommended to minimize potential impacts to special-status reptiles:

- Conduct a pre-construction Blainville's horned lizard survey 48 hours prior to construction activities. If Blainville's horned lizard is found, consultation with CDFW prior to initiation of construction activities may be required.

7.2.6 Birds and MBTA Protected Birds (including Raptors)

Suitable nesting and foraging habitat for Cooper's hawk is present on the Project site. Approximately 3.3 acres of the Project site are expected to be developed. This will permanently impact 3.3 acres of nesting and foraging habitat for the species. In addition, if nesting individuals are present during construction, the Project could result in harassment to nesting individuals and may temporarily disrupt foraging activities.

In addition to the above-listed special-status bird species, all native birds, including raptors, are protected under the California Fish and Game Code and the federal MBTA. As such, to ensure that there are no impacts to active nests during construction, the following mitigation measures are recommended:

- Conduct a pre-construction nesting raptor and bird survey of all suitable habitat on the Project site within 14 days of the commencement of construction during the nesting season (February 1 – August 31). Surveys should be conducted within 300 feet of the Project site for nesting raptors, including Cooper's hawk, and 100 feet of the Project site for nesting birds.
- If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist and is recommended to be 300 feet for raptors and 50 feet for nonraptor songbirds. If an active Cooper's hawk nest is found, the no-disturbance buffer shall be determined through consultation with CDFW. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

7.2.7 Mammals

The Project site provides potential habitat for fisher, Sierra Nevada red fox, and Townsend's big-eared bat. The following measures are recommended.

Fisher and Sierra Nevada red fox

- Prior to construction activities, a pre-construction Fisher and Sierra Nevada red fox den survey will be conducted within the Project site (can be concurrent with reptile or bird surveys). If potential den sites are located, consultation with CDFW prior to initiation of construction activities may be required. If no potential den sites are found during the survey, no further measures are necessary.

Townsend's big-eared Bat

- Prior to work within potentially suitable bat roosting habitat, a bat habitat assessment is recommended for all suitable roosting habitat (i.e., manmade structures and suitable trees, if present). If the assessment identifies moderate to highly suitable roosting habitat, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If Townsend's big-eared bats are found, consultation with CDFW prior to initiation of construction activities may be required. If no suitable roosting habitat is found, or if no bats are not found during the emergence surveys, no further measures are necessary.

7.3 Sensitive Natural Communities

No measures are recommended.

7.4 Wildlife Movement/Corridors and Nursery Sites

Wildlife have potential to use the Project site for wildlife movement, however implementation of the Project would not constitute a significant loss of the available migration habitat in the area. No measures are recommended. The Project site does not include a known nursery site (CDFW 2019a) or mule deer fawning area (CDFW 2019c). No nursery sites were identified during the field reconnaissance. No measures are recommended.

8.0 INFORMATION SUMMARY

The report was prepared on May 10, 2019. The ±5-acre Project site is located at 936 Old Tunnel Road, between Tunnel Road and Sutton Way, at the northern end of the City of Grass Valley in Nevada County, California. The Project site corresponds to a portion of Section 24, Township 16 North, and Range 08 East (Mount Diablo Base and Meridian) of the "Grass Valley, California" 7.5-minute quadrangle (USGS 1998) (Figure 1). The Project site Assessor's Parcel Number is 035-400-054.

8.1 Owner/Applicant

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8.2 Principal Investigator

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8.3 Report Summary

A total of 15 special-status plants have potential to occur within the Project site. These include Sanborn's onion, True's manzanita, Brandegee's clarkia, streambank spring beauty, California lady's-slipper, Northern Sierra daisy, Butte County fritillary, finger rush, dubious pea, Humboldt lily, elongate copper moss, Cedar Crest popcornflower, Sierra blue grass, brownish beaked-rush, and long-fruit jewelflower. One special-status reptile species has potential to occur within the Project site (Blainville's horned lizard). One special-status bird species has potential to occur within the Project site (Cooper's hawk). Three special-status mammal species have potential to occur within the Project site. These include fisher, Sierra Nevada red fox, and Townsend's big-eared bat. Recommendations to reduce potential impacts to these species include special-status plant surveys, pre-construction Blainville's horned lizard surveys, pre-construction nesting bird surveys, pre-construction fisher and Sierra Nevada red fox den surveys, and pre-construction bat surveys.

In CDFW's BIOS database, the CDFW Mule Deer Range, Region 2 dataset indicates that the Project site is within the winter range of mule deer, but the Project site is not identified as a migration corridor, critical range, or critical fawning area (CDFW 2019c). It is unknown if landmark oaks or landmark oak groves are present on the Project site as a tree survey has not been conducted. A tree survey will need to be conducted prior to construction of the Project and a tree removal permit and associated mitigation may be required. There are no riparian corridors on the Project site. The Project site is located approximately seven miles from the nearest floodplain (FEMA 2019).

8.4 Name of Person Preparing Report

This report was prepared by Peter Balfour, Senior Biologist at ECORP Consulting, Inc.

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LIST OF ATTACHMENTS

Attachment A – Tentative Site Plan

Attachment B – Special-Status Species Searches

Attachment C – Representative Site Photographs

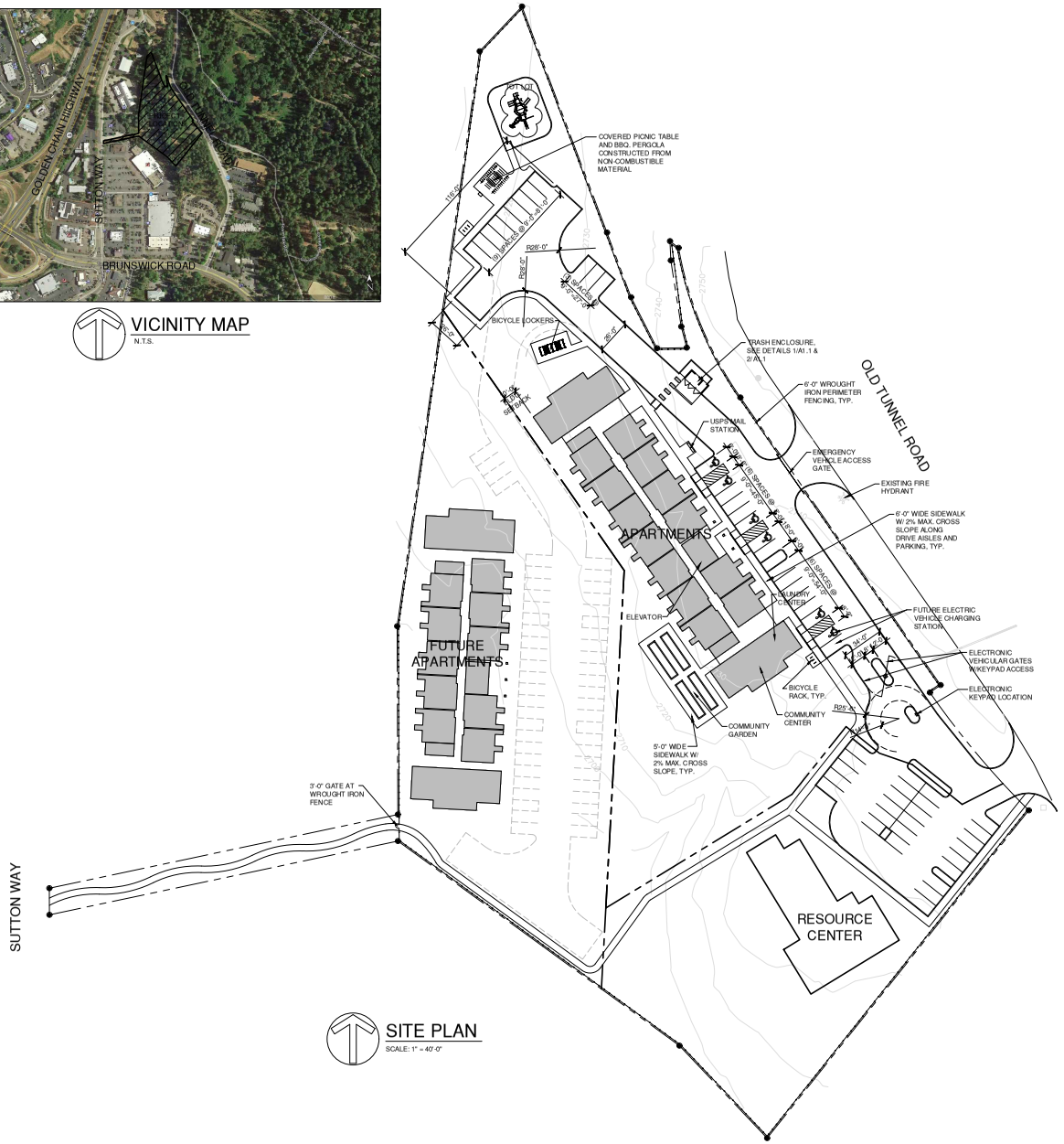
Attachment D – Plant Species Observed On-Site (March 7, 2019)

ATTACHMENT A

Tentative Site Plan



VICINITY MAP
N.T.S.



SITE PLAN
SCALE: 1" = 40'-0"

APPLICANT
? PACIFIC ASSOCIATES - A CALIFORNIA LIMITED PARTNERSHIP
CAMERON JOHNSON
P.O. BOX 260770
ENCINO, CA 91426
(818) 825-5488

ARCHITECT
PACIFIC WEST ARCHITECTURE
DOUGLAS GIBSON, CALIFORNIA ARCHITECT C29792
430 E. STATE STREET, SUITE 100
EAGLE, IDAHO 83616
(208)-461-0022 X3021

APARTMENTS

ACCESSIBILITY	# OF UNITS	PERCENTAGE
ADAPTABLE UNITS (ALL GROUND FLOOR UNITS REQ.)	34	
ACCESSIBLE UNITS (10% TOTAL)	5	12.20 %
SENSORY IMPAIRED UNITS (4% TOTAL)	2	4.88 %

UNIT MIX SUMMARY — CONDITIONED SQ. FOOTAGES

(33) 1-BEDROOM UNITS	(33) x 607 S.F. =	20,031S.F.
(8) 2-BEDROOM UNITS	(8) x 799 S.F. =	6,392 S.F.
(41) UNITS TOTAL	20,031 S.F. + 6,392 S.F.= 26,423 S.F.	
COMMUNITY CENTER		1,600 S.F.
TOTAL		28,023 S.F.

PARKING SUMMARY

PROPOSED

0.5 SPACES PER UNIT = 41 * 0.5= 22 SPACES

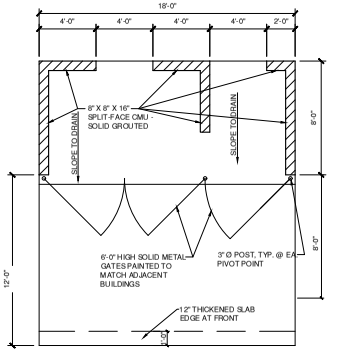
PROVIDED

22 SPACES + 6 ACCESSIBLE SPACES

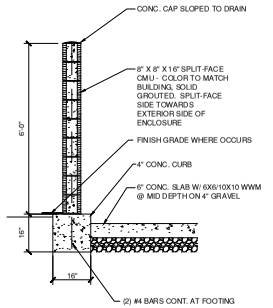
TOTAL PARKING SPACES PROVIDED= 28 SPACES

SITE SIZE

101,076.69 S.F.± (2.32 ACRES±)
17.67 UNITS PER ACRE



1 TRASH ENCLOSURE
1/4" = 1'-0"



2 TRASH ENCLOSURE SECTION A-A
1/2" = 1'-0"

REVISIONS

COPYRIGHT DATE: 1/24/18
DRAWN: DE
PROJECT #: AMG18-41

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PROJECT
BRUNSWICK COMMONS
OLD TUNNEL ROAD
GRASS VALLEY, CA

-A1.1

SCHEMATIC SET / NOT FOR CONSTRUCTION

ATTACHMENT B

Special-Status Species Searches

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

31 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3912132, 3912131, 3912038, 3912122, 3912121, 3912028, 3912112 3912111 and 3912018;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium sanbornii var. congdonii	Congdon's onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	4.3	S3	G4T3
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
Arctostaphylos mewukka ssp. truei	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	4.2	S3	G4?T3
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Brodiaea sierrae	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	May-Aug	4.3	S3	G3
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S3	G3
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	4.2	S4	G4
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Darlingtonia californica	California pitcherplant	Sarraceniaceae	perennial rhizomatous herb (carnivorous)	Apr-Aug	4.2	S4	G4
Erigeron petrophilus var. sierrensis	northern Sierra daisy	Asteraceae	perennial rhizomatous herb	Jun-Oct	4.3	S4	G4T4
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
Fritillaria eastwoodiae	Butte County fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	3.2	S3	G3Q
Juncus digitatus	finger rush	Juncaceae	annual herb	(Apr)May-Jun	1B.1	S1	G1
	dubious pea	Fabaceae	perennial herb	Apr-May	3	S1S2	G5T1T2

Lathyrus sulphureus var. argillaceus							
Lewisia cantelovii	Cantelow's lewisia	Montiaceae	perennial herb	May-Oct	1B.2	S3	G3
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Lycopodiella inundata	inundated bog club-moss	Lycopodiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S1?	G5
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
Monardella follettii	Follett's monardella	Lamiaceae	perennial shrub	Jun-Sep	1B.2	S2	G2
Perideridia bacigalupii	Bacigalupi's yampah	Apiaceae	perennial herb	Jun-Aug	4.2	S3	G3
Plagiobothrys glyptocarpus var. modestus	Cedar Crest popcornflower	Boraginaceae	annual herb	Apr-Jun	3	SH	G3THQ
Poa sierrae	Sierra blue grass	Poaceae	perennial rhizomatous herb	Apr-Jul	1B.3	S3	G3
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	2B.2	S1	G5
Sidalcea gigantea	giant checkerbloom	Malvaceae	perennial rhizomatous herb	(Jan-Jun)Jul-Oct	4.3	S3	G3
Sidalcea stipularis	Scadden Flat checkerbloom	Malvaceae	perennial rhizomatous herb	Jul-Aug	1B.1	S1	G1
Streptanthus longisiliquus	long-fruit jewelflower	Brassicaceae	perennial herb	Apr-Sep	4.3	S3	G3

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 16 April 2019].

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2019-SLI-1723
Event Code: 08ESMF00-2019-E-05487
Project Name: Brunswick Commons

April 18, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-1723

Event Code: 08ESMF00-2019-E-05487

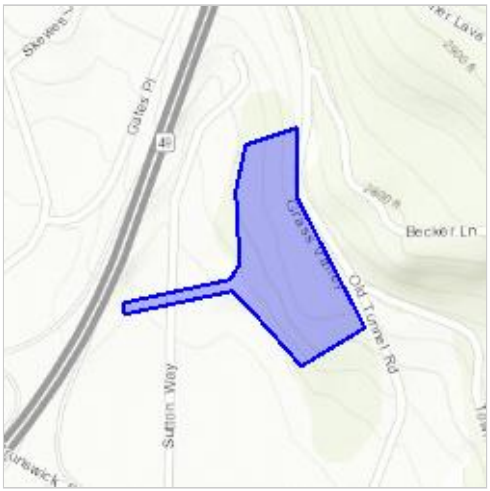
Project Name: Brunswick Commons

Project Type: DEVELOPMENT

Project Description: Project in the City of Grass Valley

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.23779804469672N121.03225918493814W



Counties: Nevada, CA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Flowering Plants

NAME	STATUS
Pine Hill Flannelbush *Fremontodendron californicum ssp. decumbens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory *Calystegia stebbinsii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENT C

Representative Site Photographs



View of site from the narrow portion of the site in the west that crosses a parking lot. Photo taken March 7, 2019.



View of representative Ponderosa pine forest vegetation community on-site. Photo taken March 7 2019.



View of the ephemeral drainage in the southeastern portion of the site. Photo taken March 7, 2019.



View facing northeast along ephemeral drainage. Photo taken March 7, 2019.

ATTACHMENT D

Plant Species Observed Onsite (March 7, 2019)

Attachment D
Plant List March 7, 2019

Family Name	Family Common Name	Scientific Name	Common Name	Indicator
AGAVACEAE	**AGAVE FAMILY**	*Chlorogalum pomeridianum*	Soap plant	N/L
APIACEAE	**CARROT FAMILY**	*Torilis arvensis**	Torilis (hedge parsley)	N/L
CAPRIFOLIACEAE	**HONEYSUCKEL FAMILY**	*Lonicera hispidula*	Pink honeysuckle	FACU
CUPRESSACEAE	**CYPRESS FAMILY**	*Calocedrus decurrens*	Incense cedar	N/L
CYPERACEAE	**SEDGE FAMILY**	*Cyperus eragrostis*	Tall flatsedge	FACW
ERICACEAE	**HEATH FAMILY**	*Arctostaphylos viscida*	White leaf manzanita	N/L
FABACEAE	**LEGUME FAMILY**	*Cytisus scoparius**	Scotch broom	N/L
FAGACEAE	**OAK FAMILY**	*Quercus kelloggii*	Black oak	N/L
PINACEAE	**PINE FAMILY**	*Pinus ponderosa*	Ponderosa pine	FACU
POACEAE	**GRASS FAMILY**	*Elymus glaucus*	Blue wild-rye	FACU
RANUNCULACEAE	**BUTTERCUP FAMILY**	*Ranunculus muricatus**	Spiny-fruit buttercup	FACW
RHAMNACEAE	**BUCKTHORN FAMILY**	*Ceanothus cuneatus*	Buck brush	N/L
ROSACEAE	**ROSE FAMILY**	*Chamaebatia foliolosa*	Mountain misery	N/L
ROSACEAE	**ROSE FAMILY**	*Rubus armeniacus**	Himalayan blackberry	FAC
SALICACEAE	**WILLOW FAMILY**	*Salix lasiolepis*	Arroyo willow	FACW

F. Cultural Resources

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Lisa Ann L. Mangat, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

RECEIVED
MAY 20 2019
NEVADA COUNTY
PLANNING DEPARTMENT

May 13, 2019

Refer to HUD_2019_0412_001

Mr. Tyler Barrington
Principal Planner
County of Nevada
Community Development Department Agency
950 Maidu Avenue
Nevada County, CA 95959-8617

Re: Brunswick Commons Apartments Multifamily Affordable Housing Development Project at 936 Old Tunnel Road, Grass Valley, CA

Dear Mr. Barrington:

The California State Historic Preservation Officer received the consultation submittal for the above referenced undertaking for our review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800. The regulations and advisory materials are located at www.achp.gov.

Pursuant to 36 CFR §800.4(d) we do not object to the County of Nevada's finding that no historic properties will be affected by the proposed Brunswick Commons Apartments multifamily affordable housing development project located at 936 Old Tunnel Road in Grass Valley, CA. However, the County may have additional Section 106 responsibilities under certain circumstances set forth at 36 CFR Part 800. For example, in the event that historic properties are discovered during implementation of the undertaking, your agency is required to consult further pursuant to §800.13(b).

We appreciate the County of Nevada's consideration of historic properties in the project planning process. If you have questions please contact Shannon Lauchner, Historian II, with the Local Government & Environmental Compliance Unit at (916)445-7013 or by email at shannon.lauchner@parks.ca.gov .

Sincerely,

Julianne Polanco
State Historic Preservation Officer

COUNTY OF NEVADA
COMMUNITY DEVELOPMENT AGENCY
PLANNING DEPARTMENT
950 MAIDU AVENUE NEVADA CITY, CA 95959-8617
(530) 265-1222 FAX (530) 265-9851 http://www.mynevadacounty.com/CDA

Sean Powers
Community Development Agency Director

Brian Foss
Planning Director

April 10, 2019

Ms. Lucinda Woodward
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Re: Historic Property Survey Report for the Brunswick Commons
Grass Valley, Nevada County

Dear Ms. Woodward:

The proposed Brunswick Commons Apartments is an affordable multi-family, supportive living housing project, which is anticipating receiving Project-Based Section 8 funding, and is therefore subject to NEPA and Section 106 review. It will be located on a 5.0± acre parcel of vacant land, situated at 936 Old Tunnel Road in Grass Valley, Nevada County, California. The project site is within the city limits of Grass Valley, but is owned Nevada County; therefore, the County is acting as Responsible Entity under NEPA as well as Lead Agency under CEQA.

Brunswick Commons is planned for construction in two phases. The first phase, planned to start construction in early 2020, will occupy 2.32± acres. This phase includes 41 residential units in a single residential building, with a mix of 33 one-bedroom units and 8 two-bedroom units. A community center will provide an office, maintenance room, computer learning center, exercise room, community room with a communal kitchen, and laundry facilities. Additional on-site facilities will include off-street parking, a community garden, a barbecue/picnic area, bicycle lockers, and a playground area. Construction will be wood frame supported by perimeter foundations with concrete slab flooring. Due to the slope of the site, the east (uphill) side of the building will be two stories, and the west (downhill) side will be three stories. The second phase, estimated to start construction in 2022, will add 32-40 additional residential units, with associated parking spaces, on a 1.7± acre site to the west of the first phase. As a separate but related project, the remaining 1± acre at the south end of the parcel will be the site of a Resource Center, intended to provide social services to project residents as well as other members of the community in need. A 20' by 275' strip of land extend from the west side of the site to Sutton Way. A pedestrian path will be constructed within this strip, connecting the apartments and the resource center to Sutton Way.

A cultural resources survey was prepared by Peak and Associates, issued on March 28, 2019. The study found that no cultural resources will be impacted by the project. Based on this study, the County of Nevada has determined that the proposed project will have no effect on historic resources. We look forward to your comments on our determination pursuant to 36 CFR Part

800.4(d).

Please send your comments to:

Tyler Barrington
Principal Planner, Nevada County
950 Maidu Avenue, Suite 170 Nevada City, CA 95959
Tyler.Barrington@co.nevada.ca.us

This consultation is undertaken by RNC Environmental, LLC, on the County's behalf. If you require further information to complete this request, please do not hesitate to contact Neil O'Hara at 888-485-3330 or neil@rnc-enviro.com.

Thank you for your assistance.

Sincerely,

Tyler Barrington
Principal Planner

DETERMINATION OF ELIGIBILITY AND EFFECT FOR THE BRUNSWICK COMMONS APARTMENTS PROJECT, GRASS VALLEY NEVADA COUNTY, CALIFORNIA

Prepared by

Melinda A. Peak
Peak & Associates, Inc.
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95762
(916) 939-2405

Prepared for

Pacific West Communities, Inc.
430 East State Street, Suite 100
Eagle, Idaho 83616

March 28, 2019
(Job #19-016)

INTRODUCTION

Brunswick Commons will be located at 936 Old Tunnel Road (APN 035-400-054) in the city of Grass Valley, Nevada County, California. The vacant, irregularly shaped, 5.00± acre parcel is on the west side of Old Tunnel Road, north of the junction of Town Talk Road.

Brunswick Commons is planned for construction in two phases. The first phase, planned to start construction in early 2020, will occupy 2.32± acres. This phase includes 41 residential units in a single residential building, with a mix of 33 one-bedroom units and 8 two-bedroom units. A community center will provide an office, maintenance room, computer learning center, exercise room, community room with a communal kitchen, and laundry facilities. Additional on-site facilities will include off-street parking, a community garden, a barbecue/picnic area, bicycle lockers, and a playground area. Construction will be wood frame supported by perimeter foundations with concrete slab flooring. Due to the slope of the site, the east (uphill) side of the building will be two stories, and the west (downhill) side will be three stories. Brunswick Commons will provide affordable housing targeting the homeless and mentally ill.

The second phase, estimated to start construction in 2022, will add 32-40 additional residential units, with associated parking spaces, on a 1.7± acre site to the west of the first phase.

As a separate but related project, the remaining 1± acre at the south end of the parcel will be the site of a Resource Center, intended to provide social services to project residents as well as other members of the community in need.

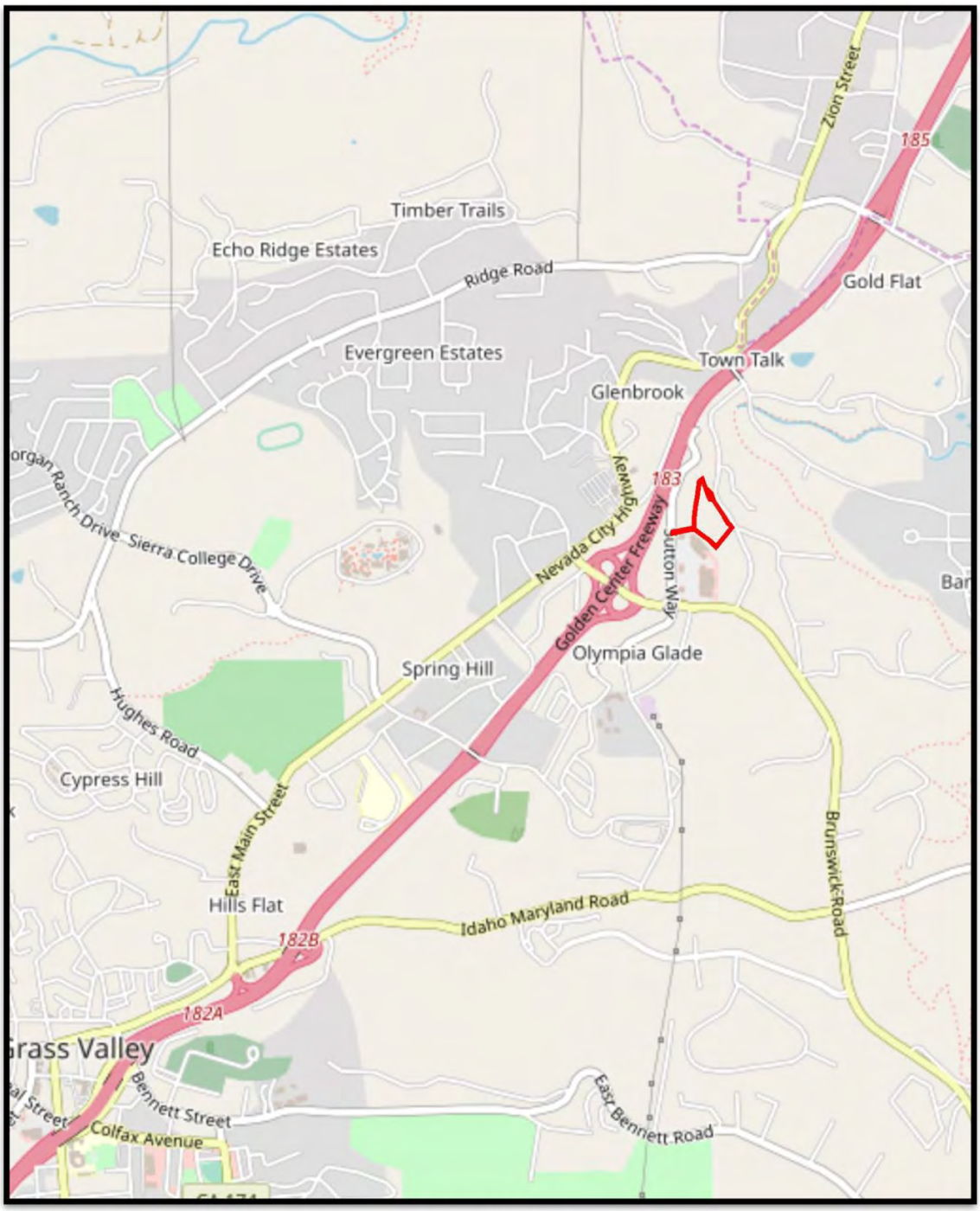
A 20' by 275' strip of land extends from the west side of the site to Sutton Way. A pedestrian path will be constructed within this strip, connecting the apartments and the resource center to Sutton Way.

The project area is located in section 24, Township 16 north, Range 8 east, mapped on the Grass Valley, United States Geological Survey 7.5-minute topographic quadrangle (Figures 1, 2 and 3).

Melinda A. Peak, senior historian/archeologist with Peak & Associates, Inc. served as principal investigator for the study with Neal Neuenschwander completing the field survey (resumes, Appendix 1).

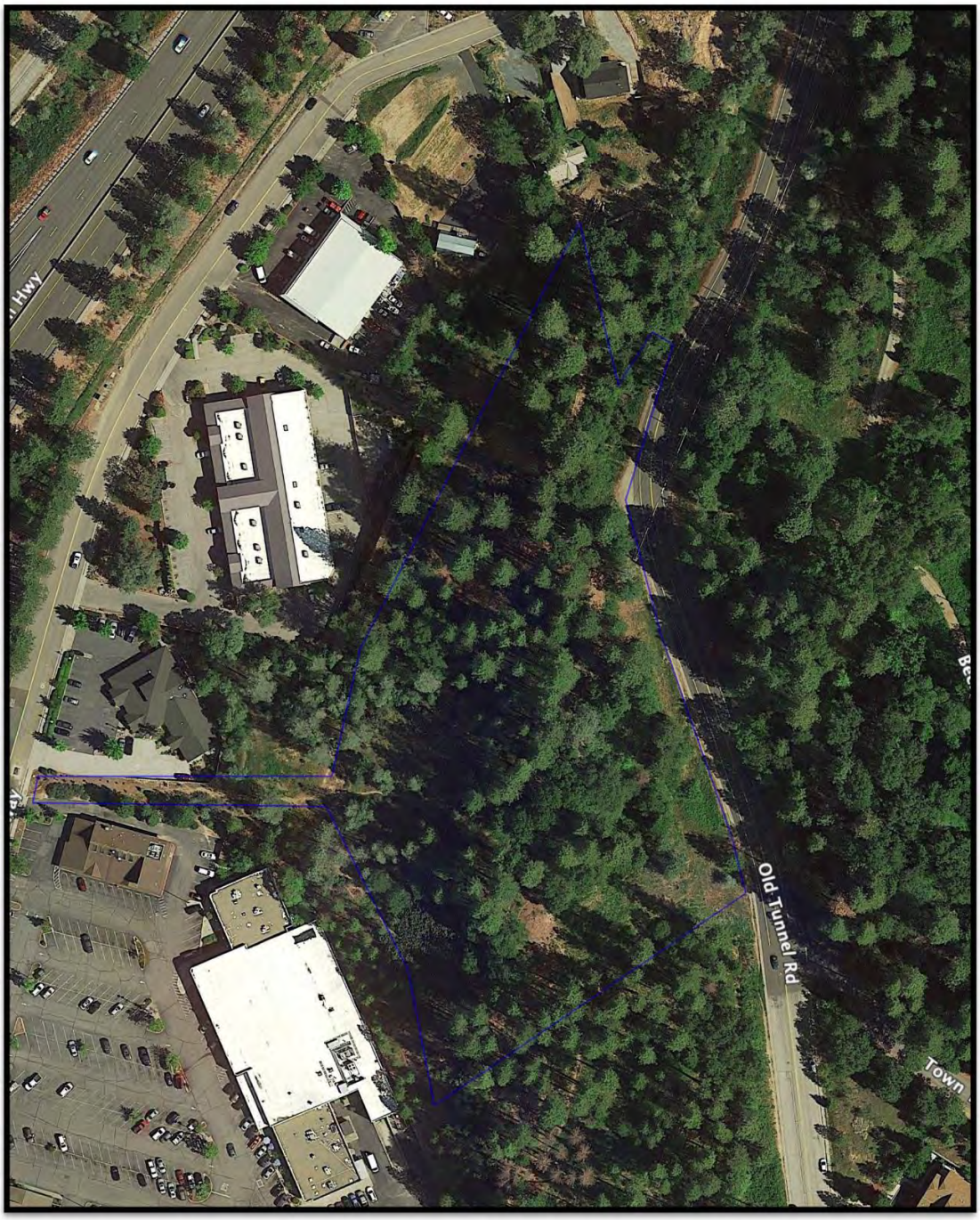
REGULATORY CONTEXT

The Section 106 review process is implemented using a five step procedure: 1) identification and evaluation of historic properties; 2) assessment of the effects of the undertaking on properties that are eligible for the National Register; 3) consultation with the State Historic Preservation Office (SHPO) and other agencies for the development of a memorandum of agreement (MOA) that addresses the treatment of historic properties; 4) receipt of Advisory Council on Historic Preservation comments



Location Map

Figure 1



Aerial Photo, 2018

Figure 2

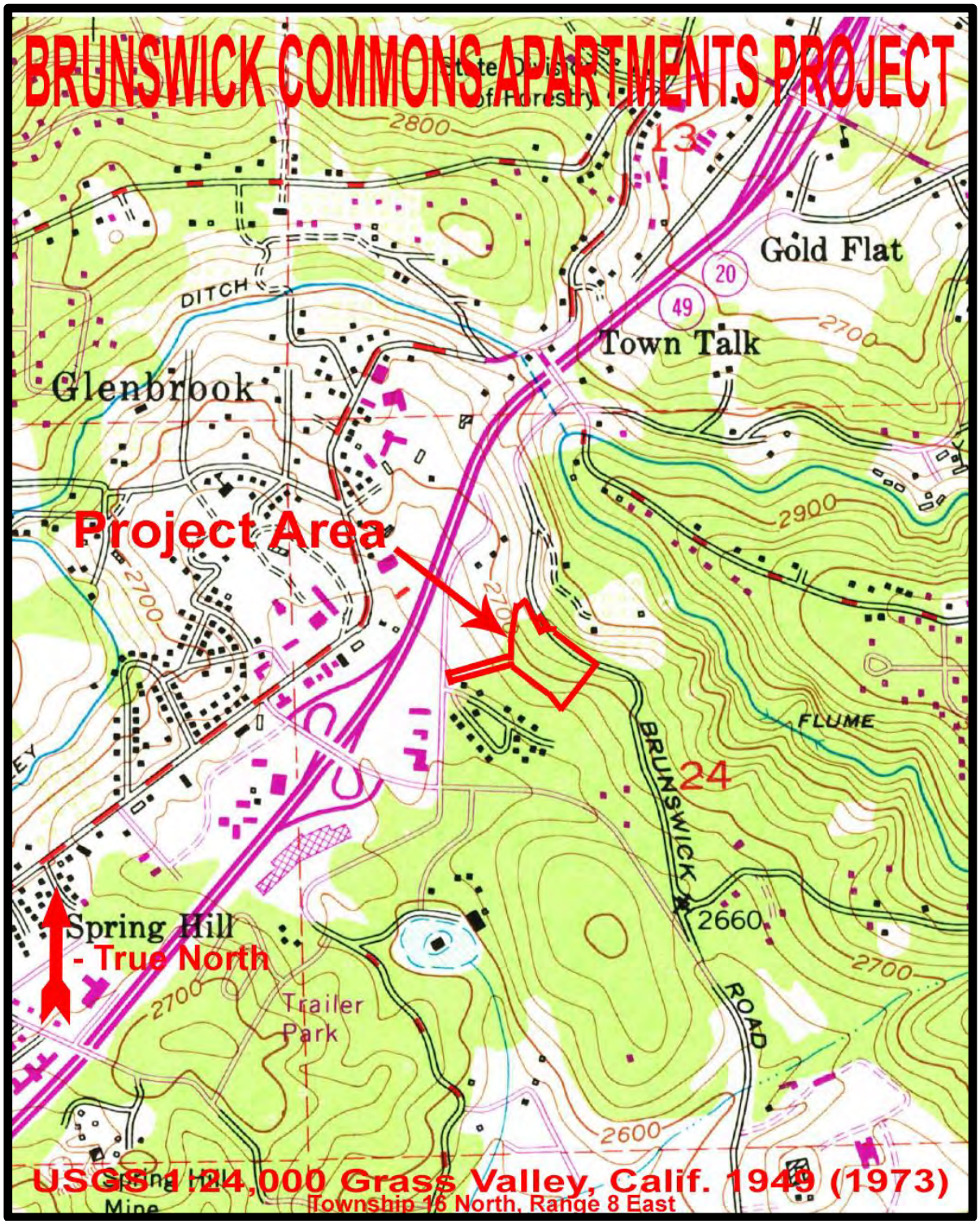

BRUNSWICK COMMONS APARTMENTS PROJECT
Project Area
Gold Flat
Town Talk
Glenbrook
Spring Hill
- True North
Trailer Park
DITCH
FLUME
BRUNSWICK ROAD
2800
2700
2900
2660
2600
13
24
20
49
USGS 1:24,000 Grass Valley, Calif. 1949 (1973)
Township 16 North, Range 8 East

Figure 3

on the MOA or results of consultation; and 5) the project implementation according to the conditions of the MOA.

The Section 106 compliance process may not consist of all the steps above, depending on the situation. For example, if identification and evaluation result in the documented conclusion that no properties included in or eligible for inclusion are present, the process ends with the identification and evaluation step.

FRAMEWORK FOR EVALUATION

Decisions regarding management of cultural resources hinge on determinations of their significance (36 CFR 60.2). As part of this decision-making process the National Park Service has identified components which must be considered in the evaluation process, including:

- o criteria for significance;
- o historic context; and,
- o integrity.

Criteria for Significance

Significance of cultural resources is measured against the National Register criteria for evaluation:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and,
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) that are associated with the lives of persons significant in our past; or
>
> (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Historic Context

The historic context is a narrative statement "that groups information about a series of historic properties based on a shared theme, specific time period, and geographical area." To evaluate resources in accordance with federal guidelines, these sites must be examined to determine whether they are examples of a defined "property type." The property type is a "grouping of individual properties based on shared physical or associative characteristics." Through this evaluation, each site is viewed as a representative of a class of similar properties rather than as a unique phenomenon.

A well-developed historical context helps determine the association between property types and broad patterns of American history. Once this linkage is established, each resource's potential to address specific research issues can be explicated.

Integrity

For a property to be eligible for listing in the National Register it must meet one of the criteria for significance (36 CFR 60.4 [a, b, c, or d]) and retain integrity. Integrity is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period."

The following discussion is derived from National Register Bulletin 15 ("How to Apply the National Register Criteria for Evaluation").

Within the concept of integrity, there are seven aspects or qualities that define integrity in various combinations. The seven aspects are: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will possess several or usually most of these aspects. The retention of specific aspects is necessary for a property to convey this significance. Determining which of the seven aspects are important involves knowing why, where and when the property is significant.

The prescribed steps in assessing integrity are as follows:

- define the essential physical features that must be present for a property to represent its significance;
- determine whether the essential physical features are visible enough to convey their significance;
- determine whether the property needs to be compared with similar properties; and,
- determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define why a property is significant.

A property's historic significance depends on certain aspects of integrity. Determining which of the aspects is most important to a particular property requires an understanding of the property's significance and its essential physical features. For example, a property's historic significance can be related to its association with an important event, historical pattern or person. A property that is significant for its historic association is eligible for listing if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person.

A property important for association with an event, historical pattern, or person ideally might retain some features of all seven aspects of integrity. Integrity of design and workmanship, however, might not be as important to the significance, and would not be relevant if the property were an archeological site. A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today. For archeological sites that are eligible under criteria A and B, the seven aspects of integrity can be applied in much the same way as they are to buildings, structures, or objects.

In sum, the assessment of a resource's National Register eligibility hinges on meeting two conditions:

- the site must possess the potential to be eligible for listing in the National Register under one of the evaluation criteria either individually or as a contributing element of a district based on the historic context that is established; and

- the site must possess sufficient integrity, i.e. it must retain the qualities that make it eligible for the National Register.

For the National Register, "a district possesses a significant concentration, linkage, or continuity of ... objects united historically or aesthetically by plan or physical development." The identity of a district derives from the relationship of its resources, which can be an arrangement of functionally related properties.

California Register of Historical Resources

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource, which is defined as any site which:

(A.) Is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and

(B) Meets any of the following criteria:

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

2. Is associated with the lives of persons important in our past;

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

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

CULTURAL SETTING

Ethnographic Background

At the time of the gold rush, the project vicinity was occupied by the Nisenan Indians, identified by the language they spoke. There have been several general treatments of the Nisenan culture by Beals 1933; Kroeber 1929, 1953; Littlejohn 1928; Wilson and Towne 1978 and Wilson 1982. There are also several more specific articles on various aspects of their culture as reported in the bibliography and elsewhere.

The Nisenan peoples occupied the drainages of the Yuba, Bear, and the American Rivers from the Sacramento River on the west to the summit of the Sierra in the east. The Foothill and Hill Nisenan peoples were distinctive from the Valley Nisenan and were loosely organized into tribelets or districts with large central villages, surrounded by smaller villages. These are often referred to as winter villages by older Indians. These central villages and their leaders seemed to have had power or control over the surrounding smaller villages and camps and specific surrounding territory (Beals 1933; Littlejohn 1928; Wilson and Towne 1978). These districts were oriented to the natural resources and the landforms.

In the foothills and mountains, the major drainages became formal or informal boundaries with the land in between forming the district. Thus, the Placerville District is between the Cosumnes River and the Middle Fork of the American River, the Auburn District between the Middle Fork of the American River and the Bear River and the Nevada City District between the Bear River and the Yuba River.

All the Nisenan depended on activities attuned to the seasonal ripening of plant foods and the seasonal movements and migration of the animals and the runs of fish. With the flooding of the valley in the winter and spring a great number of animals such as elk, antelope and bears moved to the natural levees along the rivers and up into the lower foothills. Along the foothill margins they joined the resident and migratory deer herds. Huge flocks of waterfowl visited the flooded areas between the rivers and the foothills, coveys of quail gathered in the fall, and pigeons were common in the fall and spring. Steelhead and salmon ran up most of the major streams including Secret Ravine and Auburn Ravine in the fall, winter and spring. The hunting of these plentiful resources was part of the foothill lifeway.

This same bounty was available to the river-oriented valley peoples out on the valley floor and along the natural levees of the rivers. There were major north-south Indian trails along the margin of the foothills that were usable year around as well as other trails east and west along the natural levees of the stream courses. There was probably not a great deal of competition for resources at this time except in lean years. Both the valley and foothill peoples lived at the edges of rich ecotones: the rivers and the valley floor, and the valley floor and the foothills.

While the Hill Nisenan to the east in the foothills carried on trade with the valley peoples and shared some of the cultural traits, they lacked the complexity or richness of the Valley Nisenan. The Hill Nisenan had a different resource base to work with which required greater mobility and a more intense use of the available resources (Matson 1972). They developed a local culture that was more oriented to the gathering, storage and year round use of the acorn, continual foraging of resources by everyone in the village group, specialized hunting strategies and availability of different plants to gather and process (Erskian and Ritter 1972). They depended on activities attuned to the seasonal ripening of plant foods and the seasonal migrations and increased populations of animals and insects. The foothill people relied more on foraging for food, for immediate use or short-term storage, rather than gathering for future needs. This meant they had to be much more mobile in their use of the land and its resources. Population densities and the large number of campsites reflect the more limited ability to acquire and utilize the fewer available resources: they had to work harder for less.

This continual movement meant the foothill people did not have large year-round villages. There are no known major villages in the foothills or mountains that can compare with the valley permanent village sites or population densities. However, there are hundreds of small campsites and villages scattered across the foothills and mountains with certain localities as the centers for these hill peoples.

It appears that the hill people were more socially organized around the extended family than to the village and would often camp in informal family groups around the central village. Since they did some foraging and extensive fishing and hunting during the winter, they always needed to have access to a resource base. However, due to the ability to store acorns and other dried foods and take advantage of the winter concentrations of game, birds and fish, they could congregate in larger villages in the wintertime. There is some evidence that these winter villages were moved at times if the local resources were too badly depleted. Many place names refer to these old or unoccupied sites.

At the central villages there was the need to build and maintain more substantial houses for winter living. Larger family houses, a dance house and acorn granaries were part of these winter quarters. The availability of firewood may also have been a factor in the preference for living up in the oak woodlands of the foothills. Winter was the time of ceremonies, social gatherings and marriages. Shamans had contests, children were trained, and trade items, tools, baskets and equipment were made and repaired.

Two kinds of family houses were made. One was a more permanent winter house (*hu*) with a strong frame and covered with brush, mud or cedar or pine bark. It was partially excavated with an inside hearth and in some cases a portable mortar set into the ground. Sleeping was done around the edges on mats and skins, with benches or shelves to hold equipment and foods (Beals 1933, Wilson n.d.). It was often up to 15 feet in diameter and provided shelter for several persons. These are often associated with the dance house (*kum*), sweat houses, and acorn granaries, and were part of the permanent villages.

The other was a house used when away from the main village and was made quite quickly of a frame covered with brush, boughs and tules. It also was excavated slightly with the removed earth piled on the outside at the base to block the wind. It often did not have a hearth and was used for sleeping and storage only. These camp shelters would be taken down when the group moved on so that animals would not live in them. When rebuilding them they were cleaned out and fresh earth was used for the floor. Hearths were usually outside at these temporary houses and often there was a common firepit for several families associated with the temporary shelters. For a quick shelter in the summer, a low circular brush wall was built in a sheltered or shaded location. Sometimes an old housepit was used for this (Wilson n.d.).

One description of a house in the project vicinity survives in an early miner's account. E.G. Buffum was traveling north along the base of the foothills on his way to the Yuba River mines in the fall of 1848:

> ... I crossed the plain, and found, at the foot of the hill on the other side, a deserted Indian hut, built of bushes and mud. The fire was still burning on the mud hearth, a few gourds filled with water were lying at the entrance, and an ugly dog was growling near it. Within a few feet of the hut was a little circular mound enclosed with a brush railing. It was an Indian's grave, and placed in the center, as a tombstone, was a long stick stained with red coloring, which also covered the surface of the mound. Some proud chieftain probably rested here and as the hut bore evident marks of having been recently deserted, his descendants had without doubt left his bones to moulder there alone, and had fled at the sight of the white man... (Buffum 1850:27)

Buffum traveled north past Johnson's Ranch toward the Yuba River where he visited a “rancheria” at the foot of the hills about three miles southeast from the Yuba River.

> ... It was located on both sides of a deep ravine, across which was thrown a large log as a bridge and consisted of about twenty circular wigwams, built of brush, plastered with mud, and capable of containing three or four persons. As [we] entered we

> observed our flying beauties seated on the ground pounding acorns on a large rock indented with holes similar to those which had so puzzled me at "Camp Beautiful". We were suddenly surrounded upon our entrance by thirty or forty male Indians, entirely naked who had their bows and quivers slung over their shoulders... Pule-u-le exhibited to me the interior of several of the wigwams, which were nicely thatched with sprigs of pine and cypress, while a matting of the same material covered the bottom... Pule-u-le told me that in the spring he thought they should leave and go over the "big mountain" to get away from the sight of the whiteman. (Buffum 1850:33, 34)

Buffum's account that describes a single hut is perhaps a shaman's sweathouse shrine or one related to mourning or some unrecorded religious practice. A single habitation would seem unusual. The rancheria appears to be a permanent or winter village, perhaps a hill village moved near the mining activity on the Yuba and was set back into the hills for safety's sake. It is interesting that they use both pine and cedar for interior thatching which is a hill method of covering the house frame. Valley peoples would have used reeds and tule. Both house descriptions indicate the use of mud over brush on the exterior. This could be either a foothill or a valley method. The 30 to 40 males would indicate a group of over 100 counting the aged, women and children at the camp

Other structures built were frames for drying meat and plants, and shade structures over the bedrock mortar stations. The drying sheds were often away from the village site since they attracted yellow jackets and flies. It was the task of the children to keep the insects off the drying meat until a hard glaze on the meat was established (Wilson n.d.).

The cemetery sites were usually associated with the permanent villages but could be in a separate location nearby. Villages would be moved occasionally, but the cemetery site traditionally remained in the same location.

Sometimes large flats away from the village were traditional gathering places for Big Times, "crys" or second burnings, trade and major ceremonies. This site was often used when peoples were invited from outside the local group's area. This meeting place could be near a shrine or major landmark. Size of crowds, mistrust of strangers, availability of campsites, firewood and water and a central location also influenced where this might be. Several hundred persons could attend one of these gatherings.

Historical Background

The project area lies within one of the early mining districts of the state: Grass Valley Mining District. Placer mining in the area began soon after Marshall's discovery of gold at Coloma in 1848. In the same year, fold was discovered at Wolf Creek near Grass Valley. Although the placer mines were soon exhausted, quartz lodes were discovered that would support a very active mining industry for the next century (Clark 1970: 53-60).

The Gold Hill and Allison Ranch mines top producers in the early days, but others soon eclipsed them, particularly the Idaho- Maryland, Empire, North Star, Pennsylvania, and WYOD. Nearly

four thousand miners were employed in the Grass Valley District during the Depression era and early World War II. The mines were closed during the war, but most of the larger mines in the district, in contrast to most gold mines in California, reopened after the war. The Idaho-Maryland group did not stop gold mining until 1956 and the gold mining era finally ended the following year when the Empire-Star group ceased production.

Estimates of total production are not very accurate, but Clark (1970: 54) claims that the lode mines of the Grass Valley District produced at least three hundred million dollars, with placer mines adding a few million more.

The Nevada County Narrow Gauge Railroad was built in the mid-1870s to provide goods and services to the region, transport passengers and to transport lumber and wood products from the region to other markets. The line ran from Colfax to Nevada City, by way of Grass Valley, a total of 22.64 miles. The railroad line was referred to by locals as the "Never Come Never Go" line. The system ran until 1942, when the federal government closed down gold mining. The rails were taken up from the road beds and sold for scrap.

RESEARCH

A record search was conducted for the project area at the North Central Information Center of the California Historical Resources Information System on February 4, 2019 (IC File #NEV 19-7, Appendix 2). The southern portion of the project area had been inspected by archeologists in 1990 with negative results (Jensen 1990). A previously recorded resource, P-29-000839 (CA-NEV-1590H), the Nevada County Narrow Gauge Railroad was shown to be located within the parcel (Appendix 2).

NATIVE AMERICAN CONSULTATION

A letter was sent to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands files. The NAHC replied saying that there were no known cultural resources in the immediate project area and provided a list of contact names (Appendix 3). Letters requesting information on sites of concern within or near the project area were sent on February 14, 2019 to: Don Ryberg, Chairman Tsi Akim Maidu; Grayson Coney, Cultural Director, Tsi Akim Maidu; Clyde Prout, Chairperson, Colfax-Todds Valley Consolidated Tribe; Pamela Cubbler, Treasurer, Colfax-Todds Valley Consolidated Tribe; Gene Whitehouse, Chairman, United Auburn Indian Community of the Auburn Rancheria; and, to the Darrel Cruz, Cultural Resource Department THPO, Washoe Tribe of Nevada and California (Appendix 3).

Cherilyn Neider of the United Auburn Indian Community of the Auburn Rancheria Tribal Preservation Office responded by email on March 26, 2019 with comments and attachments (Appendix 3).

FIELD ASSESSMENT/RESULTS

The project area was inspected on February 12, 2019 by Neal Neuenschwander of Peak & Associates, Inc., who performed a complete, intensive pedestrian survey using 10-meter wide transects of the entire project area (Figure 4).

A section of the grade associated with the former Nevada County Narrow Gauge Railroad, P-29-000839/CA-NEV-1590H, was identified within the project area. The former railroad corridor/grade parallels Old Tunnel Road about 30 to 50 feet west of the road embankment. At the northern end of the project, fill associated with the berm of Old Tunnel Road has encroached on part of the former grade. Generally, the grade is about a 10' – 12' wide clearing with a gentle grade increasing from south to north.

A second, previously unidentified historic period resource was identified during the February 12, 2018 field inspection. It consists of a low, about six-inch high and six-inch wide linear concrete barrier located along a southwestern facing hillside above a cut (excavation). The concrete barrier appears to have been installed to control surface erosion and protect the excavated hillside below. The barrier was likely originally installed to protect a group of homes below the excavated face that are shown on a 1949 edition of the USGS topographic map for Grass Valley. A more modern concrete section with rubber discharge hose was added to the system at some point, probably when the commercial development below was constructed. The resource was assigned the temporary field designation PA-19-01.

Complete Department of Parks and Recreation (DPR) 523 Series forms for P-29-000839/CA-NEV-1590H and PA-19-01 are presented in Appendix 4.

SITE EVALUATIONS

P-29-000839/CA-NEV-1590H

The segment of the former Nevada County Narrow Gauge Railroad grade no longer has tracks, ties, trestles, or other indicators of previous rail activity within this inspected segment. The grade is basically indistinguishable from an unimproved dirt road. The resource no longer conveys any sense of setting, place, feeling or association or possess any integrity after its abandonment 77 years ago. The resource dies not meet criteria to be considered an eligible historic property under the NRHP or CRHR.

P-19-01

The linear concrete erosion control feature does not appear to be associated with any important person or events, nor embodies any distinctive characteristics of type, period, or method of construction, nor represents the work of a master, or possess high artistic values. It has not yielded,

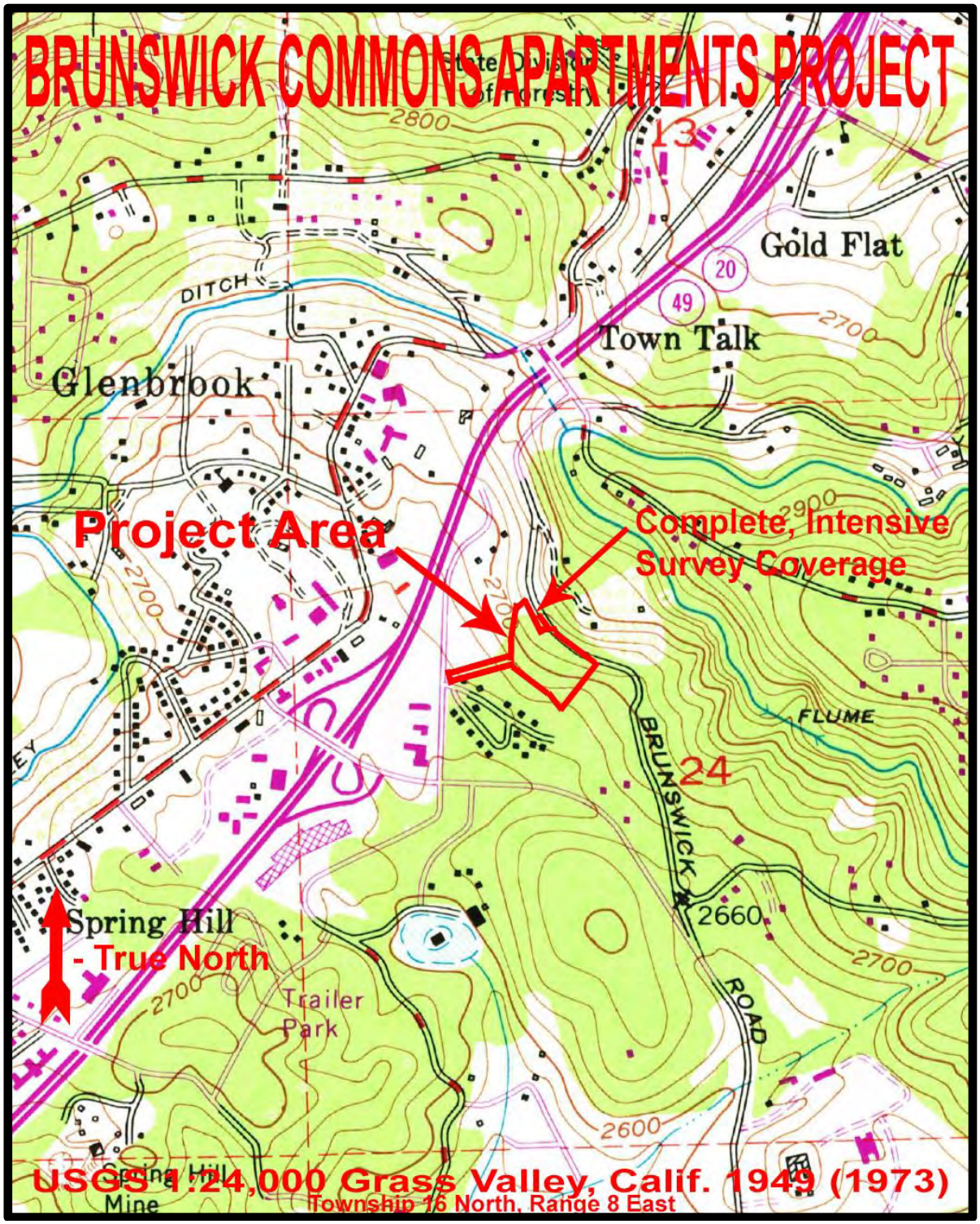

BRUNSWICK COMMONS APARTMENTS PROJECT
Project Area
Complete, Intensive Survey Coverage
Gold Flat
Town Talk
Glenbrook
DITCH
FLUME
BRUNSWICK ROAD
Spring Hill
- True North
Trailer Park
Spring Hill Mine
2800
2700
2660
2600
13
20
49
24
USGS 1:24,000 Grass Valley, Calif. 1949 (1973)
Township 16 North, Range 8 East

Figure 4

or may be likely to yield, information important in history. The resource dies not meet criteria to be considered an eligible historic property under NRHP or CRHR.

EFFECTS OF THE PROPOSED PROJECT

As a result of the identification and evaluation efforts, an agency official may find that there are no historic properties present or there are historic properties present but the undertaking will have no agency official shall apply the criteria of adverse effect. "An adverse effect is found when an effect upon them as defined in Section 800.16 (i)."

If the agency official finds there are historic properties that may be affected by the undertaking, the undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association" (Section 800.5 (a)).

There are three possible findings:

- **Finding of no historic properties affected:** There is no effect of any kind on the historic properties.

- **Finding of no adverse effect:** There could be an effect, but the effect would not be harmful to the characteristics that qualify the property for inclusion in the National Register; or

- **Adverse effect:** There could be an effect, and that effect could diminish the integrity of such characteristics.

There were no historic properties recorded within the project area. With regard to Section 106 of the NHPA, it is recommended that the agency seek concurrence from the California SHPO with a finding of "no historic properties affected" per § 800.4(d) (1).

For the purposes of CEQA, we conclude that there will be no impact to important cultural resources from implementation of the project.

REFERENCES

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APPENDIX 1

Resumes

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK **January 2019**
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

PROJECTS

In recent months, Ms. Peak has completed a number of determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places.

She has also completed historical research projects on a wide variety of topics for a number of projects including the development of a winery in a ranch in Folsom, commercial buildings in the City of Davis, a lumber mill in Clovis, older farmhouses dating to the 1860s, an early roadhouse, bridges, canals, mines, a former small-town site, and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites. She is currently involved as the principal investigator for the Teichert Quarry project in eastern Sacramento County, coordinating contacts with Native Americans, the Corps of Engineers and the Office of Historic Preservation.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project, and served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Legacy*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the Land of Liberty series.

PEAK & ASSOCIATES, INC.
RESUME

NEAL J. NEUENSCHWANDER **January 2019**
Staff Archeologist
3941 Park Drive, Suite 20-329 3161 Godman Avenue
El Dorado Hills, CA 95672 Chico, CA 95973
(916) 939-2405 (530) 342-2800

PROFESSIONAL EXPERIENCE

Mr. Neuenschwander has compiled an excellent record of supervision of excavation and survey projects for both the public and private sectors over the past forty years. He has supervised the fieldwork of over 1,800 projects throughout California, Oregon, Nevada, and southern Idaho.

EDUCATION

M.A. candidate - Anthropology - California State University, Chico
B.A. - Anthropology - California State University, Chico (with distinction)
B.A. - Geography - California State University, Chico (with distinction)

RECENT PROJECTS

Mr. Neuenschwander manages the North Valley office of Peak & Associates, located in Chico, California.

Neuenschwander's duties at Peak & Associates have included the field direction for multiple site excavations and surveys throughout northern, central, and southern California, Nevada, Oregon and Idaho. In this capacity, he has been responsible for the planning and implementation of every aspect of the fieldwork, analysis, and report production phases. During his twenty-five years with the company, he has developed a reputation for his ability to complete projects on-time and within budget parameters, while at the same time maximizing the recovery and analysis of data for the professional community.

Notable projects under Neuenschwander's direction include the nine-week excavation at Clarks Flat in Calaveras County, eleven weeks with a crew of over twenty technicians at the Upper Mountain locale (a remote camp six miles from the nearest road), ten weeks of an over 9,000-acre survey at Elk Hills Naval Petroleum Reserve, and a two-phase excavation at CA-PLU-88, a site that contained radiocarbon evidence of the some of the earliest inhabitation of the Sierra Nevada Mountains.

Mr. Neuenschwander also served as the field director for multiple phases of recordation, testing and evaluation for the 172-mile-long Pacific Pipeline Project proposed for construction in Santa Barbara, Ventura, and Los Angeles counties. He also has served as field director or co-director on a number of AT&T fiber optic projects throughout California, Oregon and Idaho.

AP**PENDIX 2**

Record Search

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

2/4/2019 NCIC File No.: NEV-19-7

Neal Neuenschwander
Peak & Associates, Inc.
3161 Godman Avenue
Chico, CA 95973

Re: Brunswick Commons Apartments

The North Central Information Center received your record search request for the project area referenced above, located on the Grass Valley USGS 7.5' quad. The following reflects the results of the records search for the project area and a ¼-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shapefiles

Resources within project area:	P-29-839
Resources outside project area, within radius:	P-29-1515 P-29-1144 P-29-4660
Reports within project area:	386 2893
Reports outside project area, within radius:	187 365 548 1642 1669 1670 1679 2255 2888 2895 4619 6719 8947 12383 12502

Resource Database Printout (list):	☒ enclosed ☐ not requested ☐ nothing listed/NA
Resource Database Printout (details):	☐ enclosed ☒ not requested ☐ nothing listed/NA
Resource Digital Database Records:	☐ enclosed ☒ not requested ☐ nothing listed/NA
Report Database Printout (list):	☒ enclosed ☐ not requested ☐ nothing listed/NA
Report Database Printout (details):	☐ enclosed ☒ not requested ☐ nothing listed/NA
Report Digital Database Records:	☐ enclosed ☒ not requested ☐ nothing listed/NA
Resource Record Copies:	☒ enclosed ☐ not requested ☐ nothing listed/NA
Report Copies:	☒ enclosed ☐ not requested ☐ nothing listed/NA

OHP Historic Properties Directory:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed/NA
CA Inventory of Historic Resources (1976):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed/NA
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

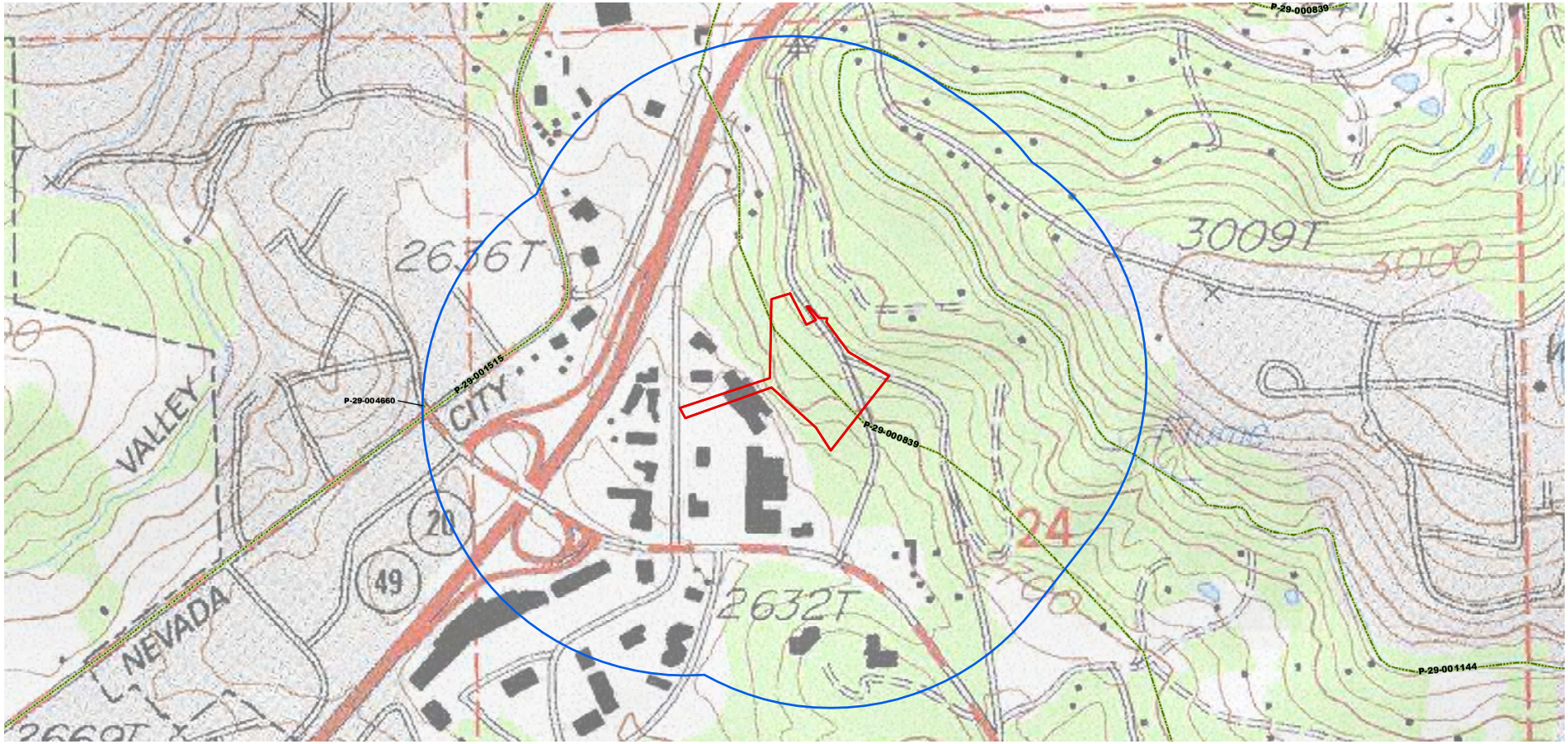
Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Assistant Coordinator
North Central Information Center

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VALLEY
NEVADA


P-29-000839
2656T
3009T
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VALLEY
P-29-001515
P-29-004660
CITY
P-29-000839
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24
49
2632T
NEVADA
P-29-001144

APPENDIX 3

Consultation

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

February 5, 2019

Neal Neuenschwander
Peak & Associates, Inc.

VIA Email to: peakinc@yahoo.com

RE: Brunswick Commons Apartments Project, Community of Glenbrook; Grass Valley USGS Quadrangle, Nevada County

Dear Mr. Neuenschwander:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, B.S., M.A., Ph.D.
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Nevada County
2/5/2019

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

Tsi Akim Maidu
Don Ryberg, Chairperson
P.O. Box 510 Maidu
Browns Valley, CA, 95918
Phone: (530) 559 - 8595
tsi-akim-maidu@att.net

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn, CA, 95603 Miwok
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

Washoe Tribe of Nevada and California
Darrel Cruz, Cultural Resources Department
919 Highway 395 North Washoe
Gardnerville, NV, 89410
Phone: (775) 265 - 8600
darrel.cruz@washoetribe.us

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Brunswick Commons Apartments Project, Nevada County.

Native American Contact List
February 5, 2019
Nevada County

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 Miwok
Auburn , CA 95604 Maidu
PCubbler@colfaxrancheria.com
(530) 320-3943

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairman
P.O. Box 4884 Miwok
Auburn , CA 95604 Maidu
miwokmaidu@yahoo.com
(916) 577-3558

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Secti on 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the Brunswick Commons Apartments Project Nevada County, California

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Don Ryberg, Chairperson
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Dear Honorable Chairperson Ryberg,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

I inspected the parcel yesterday and recorded the railroad bed alignment and a pre-WWII concrete retaining wall located on the far western side of the parcel that was constructed to protect the homes that used to be in this area before the shopping complex was developed. I didn't see any prehistoric period artifacts which wasn't too surprising give the steep gradient. About a dozen homeless residents look to be living (have lived) on the parcel as it is an easy commute to the adjacent shopping complex below.

If you have any information concerning cultural resources, or wish to have input or comment on the proposed Brunswick Commons Apartments Project, please don't hesitate to contact me, Neal Neuenschwander, Staff Archeologist, Peak & Associates, Inc., 3161 Godman Avenue, Chico, CA 95973, (530) 342-2800, peakinc@yahoo.com Thank you for your time reviewing this letter and attached topographic map of the project area.

Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Grayson Coney, Cultural Director
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Hi Grayson,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

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Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Gene Whitehouse, Chairperson
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Dear Honorable Chairperson Whitehouse,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

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Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Clyde Prout, Chairperson
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Dear Honorable Chairperson Prout,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

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Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Pamela Cubbler, Treasurer
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Hi Pamela,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

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Sincerely,

Neal Neuenschwander
Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

February 14, 2019

Darrel Cruz, Cultural Resources Department
Washoe Tribe of Nevada and California
919 Highway 395 North
Gardnerville, NV 89410

Subject: Brunswick Commons Apartments Project, Grass Valley, Nevada County, California.

Hi Darrel,

The Brunswick Commons Apartments Project is an income-assisted apartment complex proposed to be developed on a five-acre parcel located on the hill above the Safeway/Rite Aid shopping complex located at the intersection of Brunswick Road and Sutton Way in Grass Valley (please see attached topographic map of project area). A record search through CHRIS NCIC revealed one historic period resource, the Nevada County Narrow Gauge Railroad, was supposed to be in the proposed project area.

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Sincerely,

Neal Neuenschwander
Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

Good afternoon Neal,

Thank you for your letter requesting information on the Brunswick Common Apartments project. Are you able to provide contact information for the lead agency?

We do have concerns about unrecorded resources within the project area. For your reference, I have attached measures recommended to protect these resources. These measures include a post-ground disturbance site visit, allowing a UAIC representative to inspect exposed soils on site, a tribal cultural resource section incorporated into the worker environmental awareness and protection program, and the UAIC's preferred inadvertent discoveries measure.

Many thanks,

Cherilyn

Cherilyn Neider

Tribal Historic Preservation

United Auburn Indian Community

530.883.2394

Inadvertent Discoveries Mitigation Measure

If potential tribal cultural resources (TCRs), archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease within 100 feet of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from a traditionally and culturally affiliated Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from traditionally and culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe.

Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. These recommendations will be documented in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with UAIC and other traditionally and culturally affiliated Native American Tribes regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

Post-Ground Disturbance Site Visit Mitigation Measure

A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the applicant shall notify the CEQA lead agency representative of the proposed earthwork start-date, in order to provide the CEQA lead agency representative with time to contact the United Auburn Indian Community (UAIC). A UAIC tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of ground breaking activity. During this inspection, a site meeting of construction personnel shall also be held in order to afford the tribal representative the opportunity to provide tribal cultural resources awareness information. If any tribal cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the project applicant shall immediately notify the CEQA lead agency representative. The project applicant shall coordinate any necessary investigation of the site with a UAIC tribal representative, a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the UAIC and provide proper management recommendations should potential impacts to the resources be found by the CEQA lead agency representative to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the CEQA lead agency representative by the qualified archaeologist. Possible management recommendations for tribal cultural resources, historical, or unique archaeological resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by CEQA lead agency representative staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources, including the use of a Native American Monitor whenever work is occurring within 100 feet of the find.

Tribal Cultural Resource – Awareness Training - Mitigation Measure

A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

If Human Remains are Found

The protocols for human remains discoveries are similar for other discoveries. **It is important to treat any human remains and the situation in which they are discovered with sensitivity, dignity, and respect.**

1. All work within 100 feet of the find will immediately stop. Work will also stop in areas where there is reason to believe additional human remains could be located (generally determined by a tribal monitor or qualified archaeologist).
2. UAIC and the on-site project/construction will be notified immediately.
3. **The location of any Native American Human remains must stay confidential.**



The United Auburn Indian Community

The United Auburn Indian Community is comprised of Miwok and Southern Maidu (Nisenan) people who are traditionally and culturally affiliated with this geographic area. The Tribe's area of geographic traditional and cultural affiliation encompasses all of Amador, El Dorado, Nevada, Placer, Sacramento, Sutter and Yuba counties, as well as portions of Butte, Plumas, San Joaquin, Sierra, Solano and Yolo counties; which includes the project area.

Contact us at

530-883-2394

https://www.auburnrancheria.com/

United Auburn Indian Community
of the Auburn Rancheria
10720 Indian Hill Road
Auburn CA, 95603



Respect on the Project for Native American Culture

Prepared by:
The United Auburn Indian Community
Preservation Department

Protection Measures and Protocols

The United Auburn Indian Community has developed the measures listed below to protect any unanticipated finds of tribal cultural resources and achieve compliance with federal and state cultural and environmental laws.

1. All work must stop IMMEDIATELY at that location and within 100 feet of the find. Work may be stopped by the tribal monitor or a qualified archaeologist. Work can continue on the rest of the project, as long as project activities stay at least 100 feet away.

2. The on-site project/construction manager will immediately be informed of the possible find and contact a qualified archeologist or tribal monitor of the find.

3. Under NO circumstances will any contractor or employee collect the archaeological material.

4. Over the next days or weeks following the discovery, a number of visitors may be present in order to investigate and evaluate the find. These may include: agency officials, the County Coroner, professional archaeologists, members of the tribe or the California Native American Heritage Commission, the California Office of Historic Preservation, and local representatives of the historical society (if the find is historic in nature). It is important for the integrity of the find and for culturally-appropriate treatment, and so that there is no violation issued, that reasonable methods be taken to ensure that there is no disturbance or damage (including theft) to the find and its context and surrounding areas.

5. It is important to respect the direction of the tribal monitor or other authorized tribal representative regarding identification and treatment of finds and to have some flexibility regarding where work might be able recommence outside of the find location area.

6. The location and nature of the discovery will be strictly confidential, shared only with individuals that need to know.

Cultural Resource Examples

There are many types of archaeological resources. The most common kind of artifacts, or markers of human activity that are found include stone tools, shell, beads, plant remains, animal bones, and a type of dark soil called midden. Archaeology from the historic era can also be found: these kinds of artifacts and features can include bottles, cans, ceramics, building foundations, bricks, and many more.













APPENDIX 4

Site Records

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-29-000839 (Update)
HRI #
Trinomial CA-NEV-1590H (Update)
NRHP Status Code

Other Listings
Review Code Reviewer Date

*Resource Name or #: Nevada County Narrow Gauge Railroad

P1. Other Identifier:

*P2. Location: ☐ Not for Publication X Unrestricted *a. County: Nevada

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Grass Valley Date: 1949 (1973) T ; R ; ¼ of ¼ of Sec ; M.D. B.M.

c. Address: N/A City: Zip:

d. UTM: Zone: 10 ; Point A: 669950 mE; 4344925 mN. Point B: 670100 mE; 4344800 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 2720 (south end) – 2730 (north end). This segment is located approximately 30 – 50 feet west of Old Tunnel Road, north of the intersection of Old Tunnel Road and Town Talk Road in Grass Valley, Nevada County, California.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The resources consists of a railroad grade that is approximately 10 to 12 feet wide. The rails were removed in 1942 and were sold for scrap and most of the ties were removed as well at that time.

*P3b. Resource Attributes: (List attributes and codes) AH7 – Railroad grade

*P4. Resources Present: ☐Building ☐Structure ☐Object X Site ☐District ☐Element of District ☐Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) View looking south at a typical section of the grade located in the central portion of the project area. 2/12/19. Acc. 201901fr813.

*P6. Date Constructed/Age and Sources: x Historic
☐Prehistoric ☐Both
1876 +/-

*P7. Owner and Address:
Unknown

*P8. Recorded by: (Name, affiliation, and address) Neal Neuenschwander Peak & Associates, Inc. 3161 Godman Avenue, Chico, CA 95973

*P9. Date Recorded: 2/12/19

*P10. Survey Type: (Describe)
Complete, intensive.

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") *Determination of Eligibility and Effect for the Brunswick Commons Apartment Complex Project, City of Grass Valley, Nevada County, California.* Peak & Associates, Inc. 2019

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

L1. Historic and/or Common Name: Nevada County Narrow Gauge Railroad

L2a. Portion Described: ☐ Entire Resource X Segment ☐ Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) See page 1 of 6 (523a) form for UTM information.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) The railroad grade varies in width from between 10 to 12 feet. The tracks were removed in 1942 and used for scrap.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width: 10 – 12 Feet

b. Bottom Width: 10 – 12 Feet

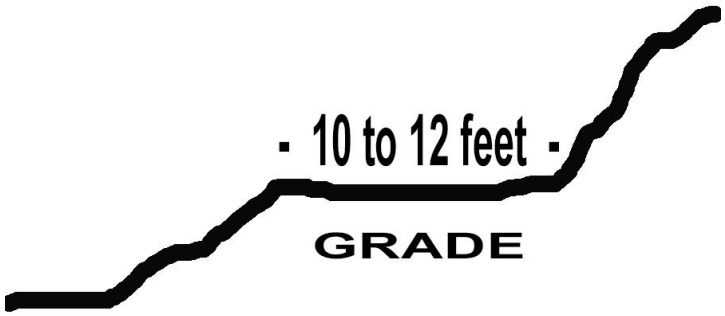
c. Height or Depth: N/A

d. Length of Segment: 450 feet

L5. Associated Resources: None observed

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) The railroad grade traverses a southwestern and western facing hillside in this segment with the elevation of the grade increasing south to north.

Facing: North



L7. Integrity Considerations: Tracks were removed in 1942. Natural erosion and revegetation during the past 77 years since abandonment and track removal has left many sections difficult to discern unless secondary uses such as roads and trails were developed over the same route.



L8b. Description of Photo, Map, or Drawing (View, scale, etc.) View looking north of a typical segment of the grade within the current project area.

L9. Remarks:

L10. Form Prepared by: (Name, affiliation, and address) Neal Neuenschwander Peak & Associates, Inc. 3161 Godman Avenue, Chico, CA 95973

L11. Date: 2/12/19



A) View of the railroad grade at the south end of the project area looking south, Old Tunnel Road in background. 2/12/19. Acc. #201902fr807.



B) View of the railroad grade in the southern portion of the project area looking north, Old Tunnel Road (center right). 2/2/19. Acc. #201902fr809.



C) View of the railroad grade in the central portion of the project area looking north, Old Tunnel Road to right. 2/12/19. Acc. #201902fr811.



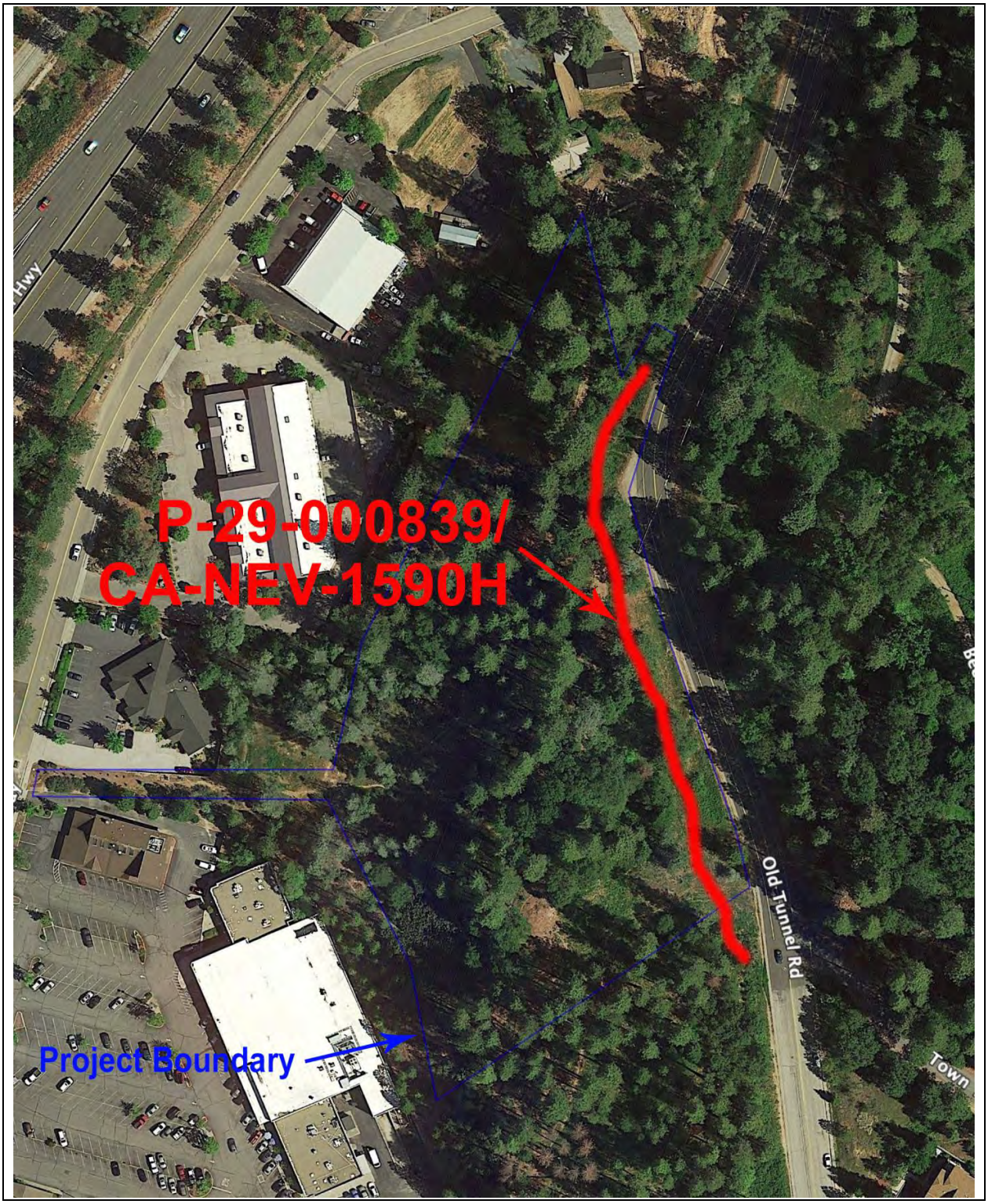
D) View of the railroad grade at the northern boundary of the project area looking north, Old Tunnel Road to right. 2/2/19. Acc. #201902fr816.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary # P-29-000839 (Update)
HRI#
Trinomial CA-NEV-1590H (Update)

Page 5 **of** 6 ***Resource Name or #** (Assigned by recorder) Nevada County Narrow Gauge Railroad
***Drawn By:** Neal Neuenschwander ***Date** 2/12/19

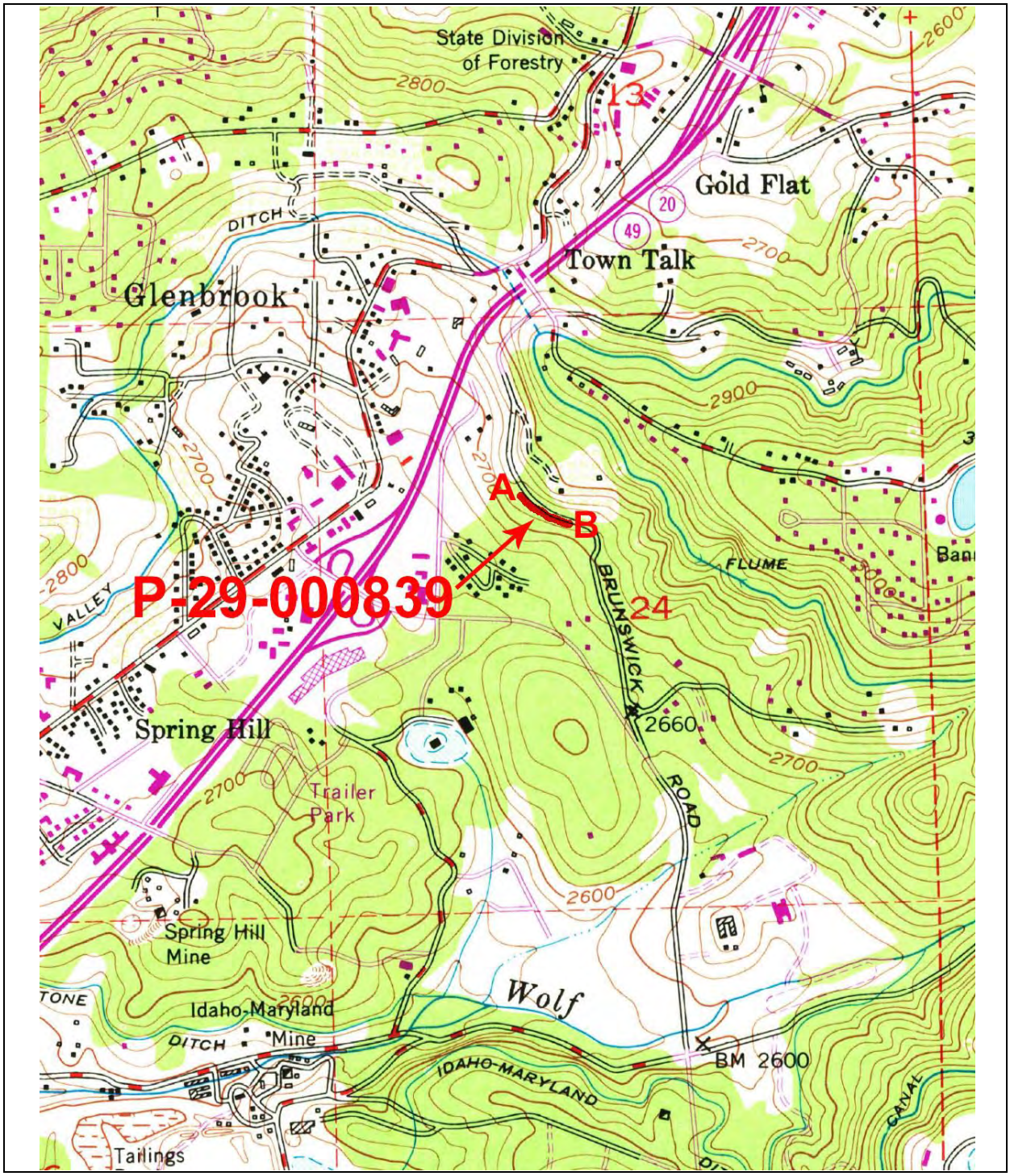


State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-29-000839 (Update)
HRI#
Trinomial CA-NEV-1590H (Update)

Page 6 **of** 6 ***Resource Name or #:** Nevada County Narrow Gauge Railroad
***Map Name:** Grass Valley, Calif. ***Scale:** 1:24,000 ***Date of Map:** 1949 (1973)



DPR 523J (1/95) *Required information

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code
Other Listings Review Code	Reviewer Date

Page 1 **of** 6 ***Resource Name or #: PA-19-01**

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** X **Unrestricted** ***a. County:** Nevada

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Grass Valley **Date:** 1949 (1973) **T** 16N; **R** 8E ; SE **¼ of** NW **¼ of Sec** 24 **;** M.D.B.M.

c. Address: N/A City: Zip:

d. UTM: Zone: 10 ; Point A: 669950 mE; 4344800 mN. Pont B: 670000 mE; 4342750 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 2720 (south end) – 2730 (north end). The concrete barrier is located approximately 80 feet east of commercial buildings (Safeway, Rite Aid, etc.) in a commercial development located off Sutton Way, northeast of the intersection of Sutton Way and Brunswick Road in Grass Valley, Nevada County, California.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The resource consists of a linear low, six inch high by six inch wide, concrete retaining barrier/wall located above a cut in a hillside that ws evidently installed to help control surface erosion and to stabilize the cut face located on the hillside below it.

***P3b. Resource Attributes:** (List attributes and codes) AH11– Wall

***P4. Resources Present:** ☐Building ☐Structure ☐Object X Site ☐District ☐Element of District ☐Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Close up of a typical section of the concrete retaining wall. 2/12/19. Acc. 201901fr828crop.

***P6. Date Constructed/Age and Sources: x** Historic

☐Prehistoric ☐Both

Unknown. Assume associated with former houses located below feature that are shown on a 1949 USGS topographic map.

***P7. Owner and Address:**

Unknown

***P8. Recorded by:** (Name, affiliation, and address) Neal Neuenschwander Peak & Associaes, Inc. 3161 Godman Avenue, Chico, CA 95973

***P9. Date Recorded:** 2/12/19

***P10. Survey Type:** (Describe)

Complete, intensive.

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Determination of Eligibility and Effect for the Brunswick Commons Apartment Complex Project, City of Grass Valley, Nevada County, California.* Peak & Associates, Inc. 2019

***Attachments:** ☐NONE x Location Map ☐Sketch Map x Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record x Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #
Trinomial

LINEAR FEATURE RECORD

 Resource Name or #: (Assigned by recorder) **PA-19-01**

L1. Historic and/or Common Name:

L2a. Portion Described: ☐ Entire Resource X Segment ☐ Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) See page 1 of 6 (523a) form for UTM information.

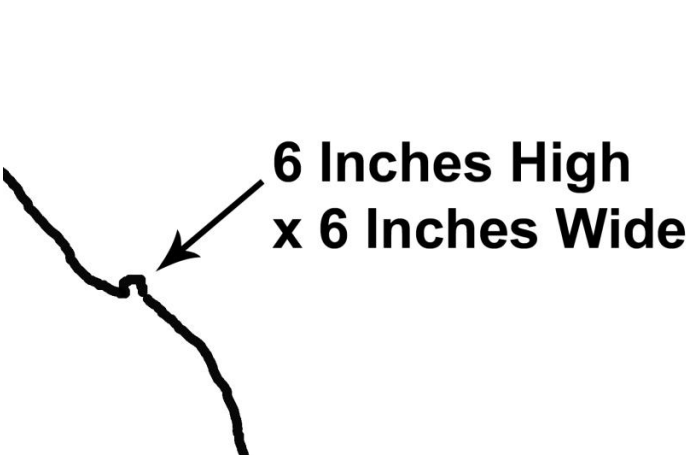
L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) The resource consists of a low, approximately six inches high and wide concrete retaining barrier/wall that runs parallel along a southwestern facing hillside above an excavated cut (formerly single family homes, now commercial development below).

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width: 6 inches
b. Bottom Width: 6 inches
c. Height or Depth: 6 inches
d. Length of Segment: 270 feet

L5. Associated Resources: None observed

Facing: Southeast



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) The retaining wall parallels a southwestern facing hillside above an artificial cut.

L7. Integrity Considerations: The retaining wall looks to have been originally constructed to protect a cluster of homes shown to the west of this feature on the 1949 USUS Grass Valley edition. A more modern concrete feature (see L8b below) has been added and incorporated into the older retaining wall apparently to further help control surface runoff. This more recent addition was likely added when the current commercial complex located below was developed.



L8b. Description of Photo, Map, or Drawing (View, scale, etc.) View of segment with more modern concrete addition looking southwest.

L9. Remarks:

L10. Form Prepared by: (Name, affiliation, and address) Neal Neuenschwander Peak & Associates, Inc. 3161 Godman Avenue, Chico, CA 95973

L11. Date: 2/12/19



A) View of a section of the low retaining wall located near the southwestern boundary of the project area looking east. 2/12/19. Acc. #201902fr828.



B) View of a more recent addition to the low retaining wall located near the southwestern boundary of the project area looking southwest. 2/2/19. Acc. #201902fr826.



C) View of a section of the low retaining wall located near the southwestern boundary of the project area looking south. 2/12/19. Acc. #201902fr825.

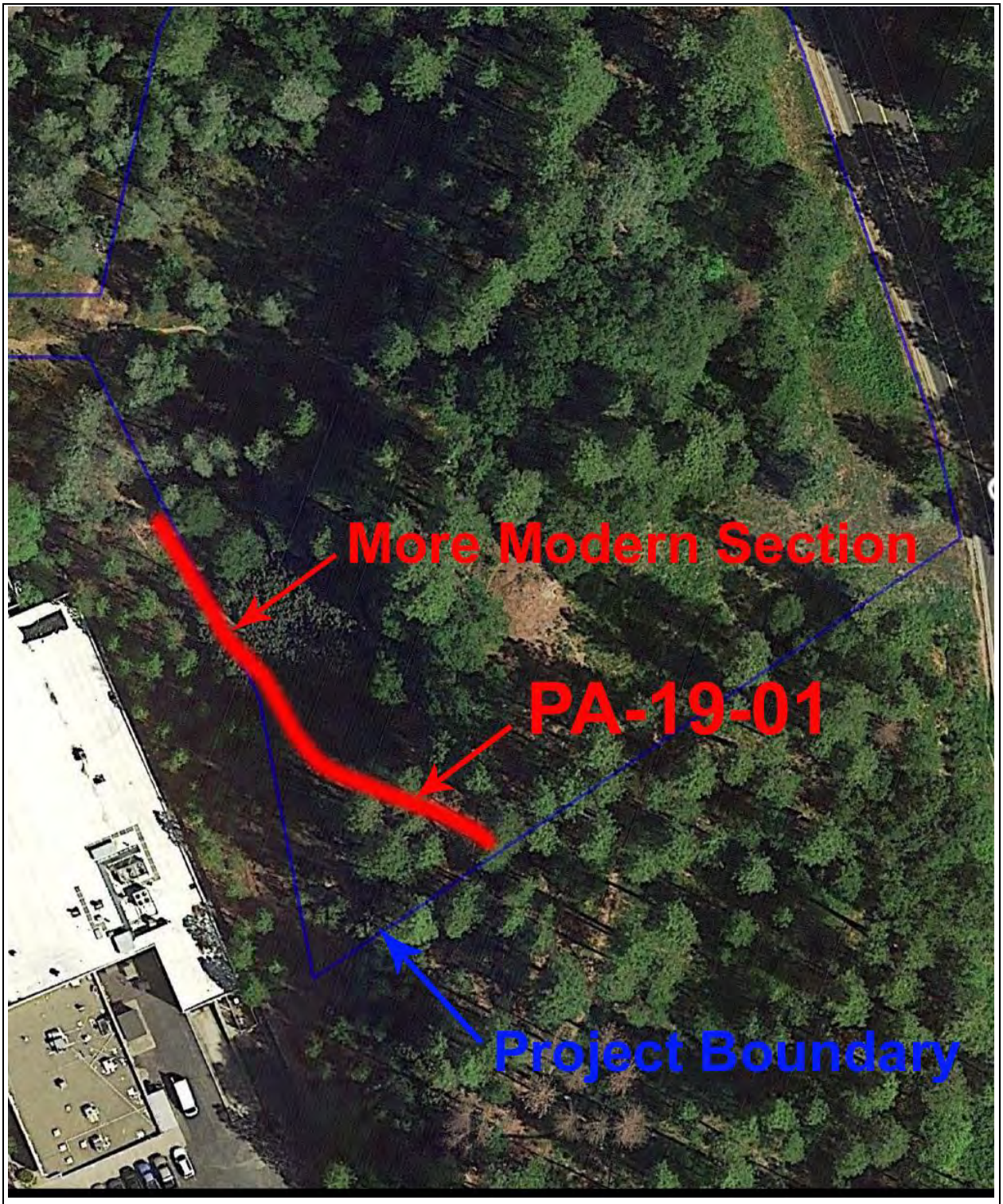
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #** (Assigned by recorder) **PA-19-01**

***Drawn By:** Neal Neuenschwander ***Date** 2/12/19



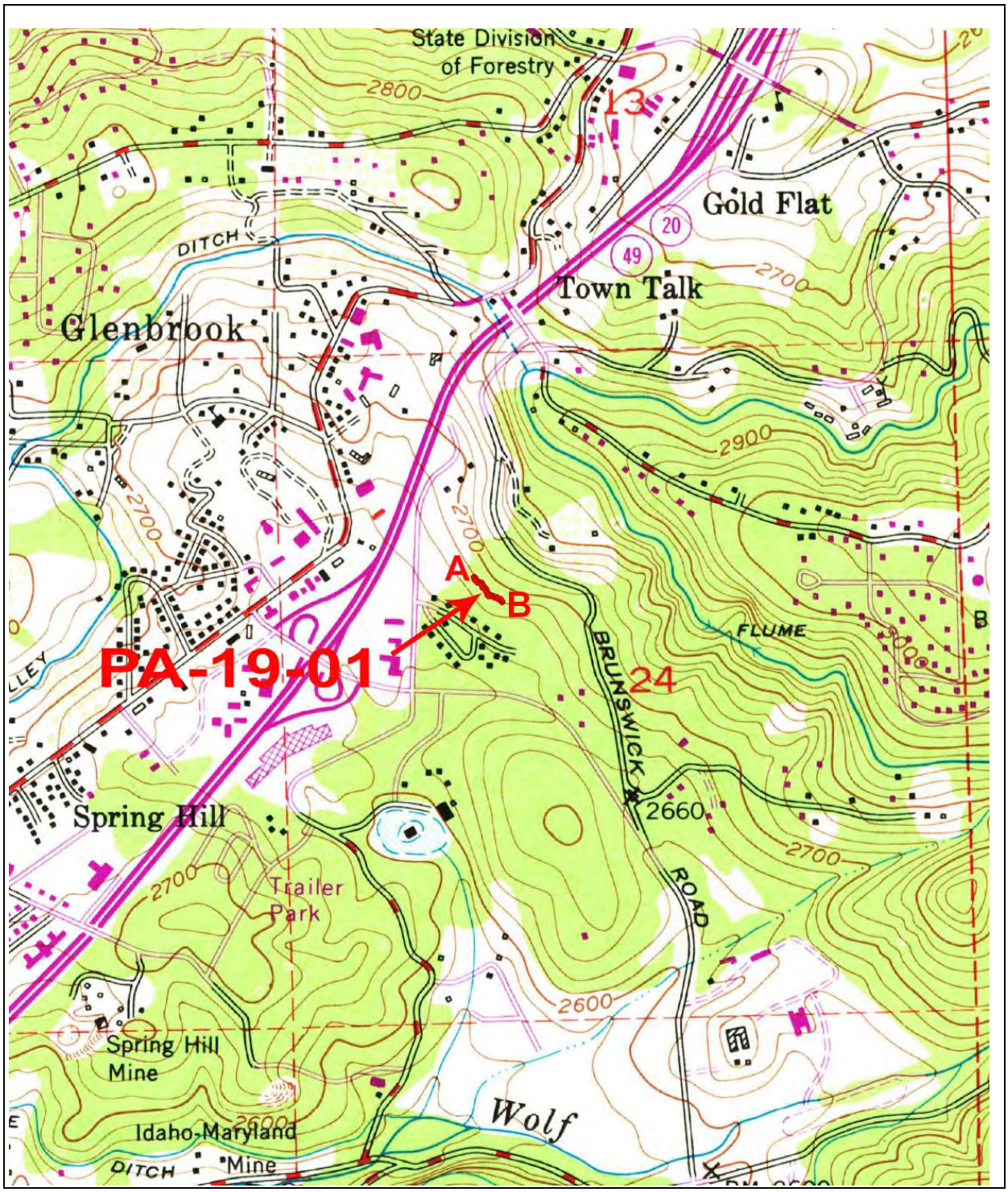
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

 *Resource Name or #: PA-19-01

*Map Name: Grass Valley, Calif. *Scale: 1:24,000 *Date of Map: 1949 (1973)



*Required information

G. City Planning / CEQA

NEVADA COUNTY, CALIFORNIA
INITIAL STUDY

TO:

Nevada County Building Department	Nevada County Department of Public Works
Nevada County Environmental Health Department	Nevada County Transportation Comm. / NCALUC
Nevada County DPW – Transit	Nevada County Airport Manager
City of Grass Valley	Department of Water Resources
Native American Heritage Commission	United Auburn Indian Community
Nevada City Rancheria Nisenan Tribe	Nevada County Contractors' Association
Greater Grass Valley Chamber of Commerce	Nevada Irrigation District
Cal Trans Aeronautics	CA Fish & Wildlife
AT&T	Central Valley Regional Water Quality Control
US Fish & Wildlife	PG&E
Northern Sierra Air Quality Management District	Air Resources Control Board
Bear Yuba Land Trust	Rural Quality Coalition
LAFCO	FREED
California Native Plant Society – Redbud Chapter	Resource Conservation District
Nevada County Economic Resource Council	General Plan Defense Fund
Sierra Nevada Group/Sierra Club	FCC
U. S. Army Corps of Engineers	Friends of Nevada City
Kevin Johnston Nevada County Fire Protection Planner	F.O.N.A FAA
Grass Valley Fire Department	County Executive Office
Supervisor Hall – District I	Supervisor Miller, District III
Tyler Barrington, Principal Planner	County Counsel *

**receives full report, others receive NOA only with report available online.*

Date: May 17, 2019

Prepared by:
Neil O'Hara, consultant
RNC Environnemental, LLC
151 Nursery St
Ashland, OR 97520
888.485.3330
neil@rnc-enviro.com

File Number(s): ***TBD***

Project Location: 936 Old Tunnel Road; an irregularly-shaped 5.0± acre parcel, located on the west side of Old Tunnel Road just north of the intersection of Town Talk Road, in the City of Grass Valley.

Assessor's Parcel Number: 035-400-054

Co-Applicants: Pacific West Communities, Inc.
430 E. State St., Ste 100
Eagle, ID 83616

Regional Housing Authority
1455 Butte House Road
Yuba City, CA 95993

County of Nevada

Property Owner: County of Nevada

Zoning District(s): [City of Grass Valley] OP - Office / Professional

General Plan: [City of Grass Valley] OP - Office / Professional

Project Description:

The proposed project involves two separate but related projects, both to be located on the subject parcel, and proposed as a mixed-use project. The site is owned by Nevada County, who will retain ownership and lease the property for a period of 99 years pursuant to a disposition and development agreement with developer. The County Board of Supervisors will retain responsibility for reviewing and approving the design and development of the project, which will be built and operated by applicant on behalf of the County.

Brunswick Commons is a proposed 41-unit affordable rental apartment project, designed to provide housing targeting the homeless and mentally ill. A single residential building, plus off-street parking, a community garden, a barbecue/picnic area, bicycle lockers, and a playground area, will occupy 2.32± acres of the 5-acre parcel. The project will include a mix of 33 one-bedroom units and 8 two-bedroom units. A community center also located in the building will provide an office, maintenance room, computer learning center, exercise room, community room with a communal kitchen, and laundry facilities. Supportive services for residents will be provided within the community center facility.

Construction will be wood frame supported by perimeter foundations with concrete slab flooring. Due to the slope of the site, the east (uphill) side of the building will be two stories, and the west (downhill) side will be three stories.

The project applicant has requested a density bonus, based on a restriction of all units (except the manager's) to homeless households earning40% of the AreaMedianIncome(AMI) or below. This will allow the third story, a maximum height of 42', and a unit density of 17.67 per acre, compared to zoning limits of 2 stories, 35 feet, and 15 units per acre.

A 1± acre portion of the parcel, south of the apartments, will be the site of a County Resource Center, intended to provide social services to project residents as well as other members of the community in need. The facility will be a 10,558 sq. ft. building that will provide services for homeless individuals and families. The services to be provided include self-care facilities, general mail service/lockers, facilities and services for pets of the homeless, case management services, housing services, mental health services, substance abuse services, benefit/application services, veterans benefit services, self-help groups/meetings, domestic violence counseling/ resources, legal aid, disability and advocacy services, employment services, and transportation services. Brunswick Commons Resource Center will also provide nine Transitional Housing units that will be available to support the process of moving the individual and family clients into permanent housing.

A 20' by 275' strip of land extend from the west side of the site to Sutton Way. A pedestrian path will be constructed within this strip, connecting the apartments and the resource center to Sutton Way. A 1.7± acre portion, in the northwest area of the parcel, will remain undeveloped at this time.

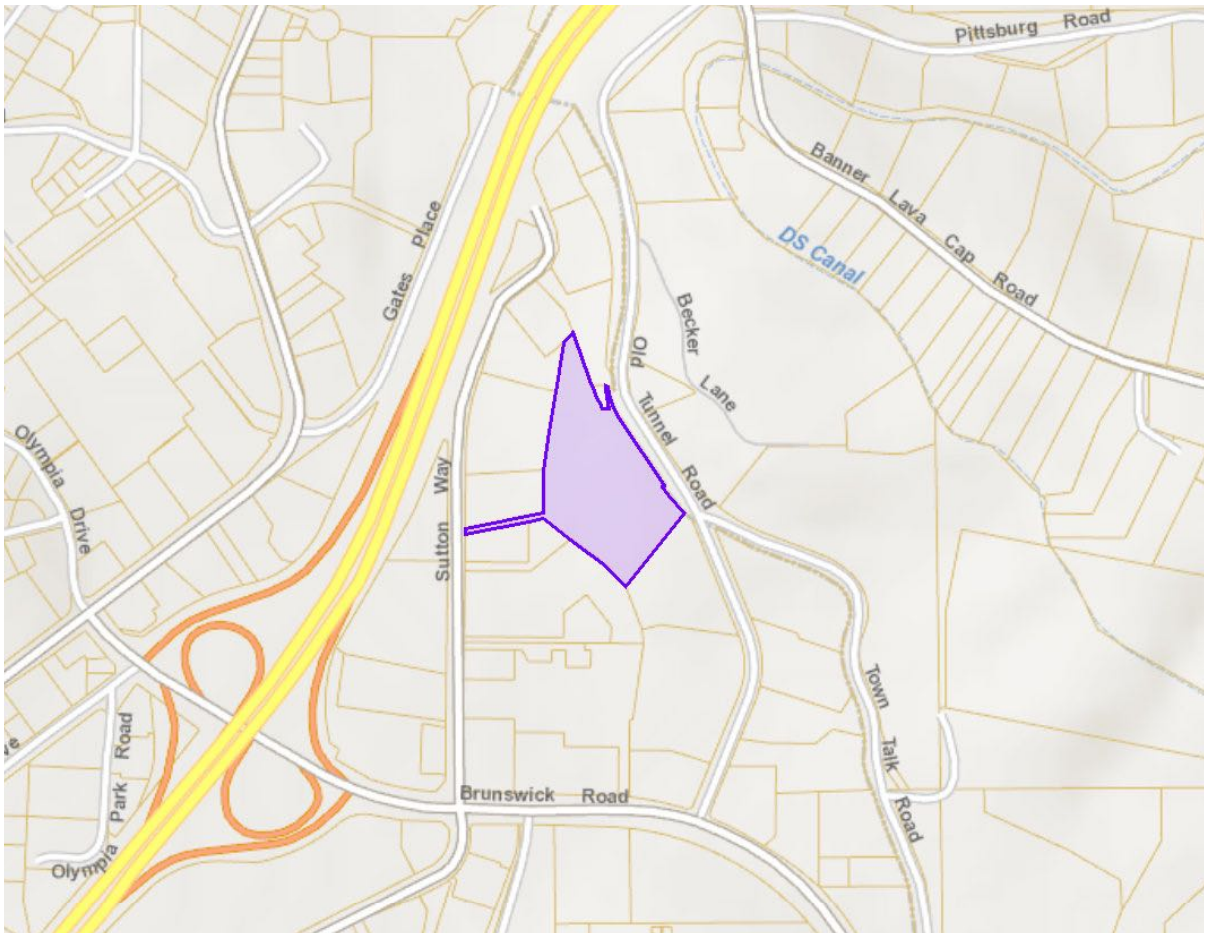


Figure 1. Project location

Project Location Description and Surrounding Land Zoning and Uses:

The subject property consists of an irregularly-shaped 5.0± acre parcel, located on the west side of Old Tunnel Road just north of the intersection of Town Talk Road, in the City of Grass Valley, Nevada County, California. The street address is 936 Old Tunnel Road; Assessor's Parcel number is 035-400-054. The site is within the city limit of Grass Valley; adjacent lands to the northeast across Old Tunnel Road are outside the city. The site is sloped down to the southwest, and is covered with ponderosa pine forest. The site is accessed from Old Tunnel Road, with a narrow strip of land also connecting to Sutton Way.

The property is designated in the Grass Valley General Plan as Office-Professional. Downslope (west and southwest) of the site is a shopping center and commercial area along Sutton Way. Anchor tenants in the shopping center include a Safeway supermarket and a CVS pharmacy. Various small restaurants and retail establishments also occupy space in the shopping center. East of the shopping center are professional offices and free-standing retail businesses.

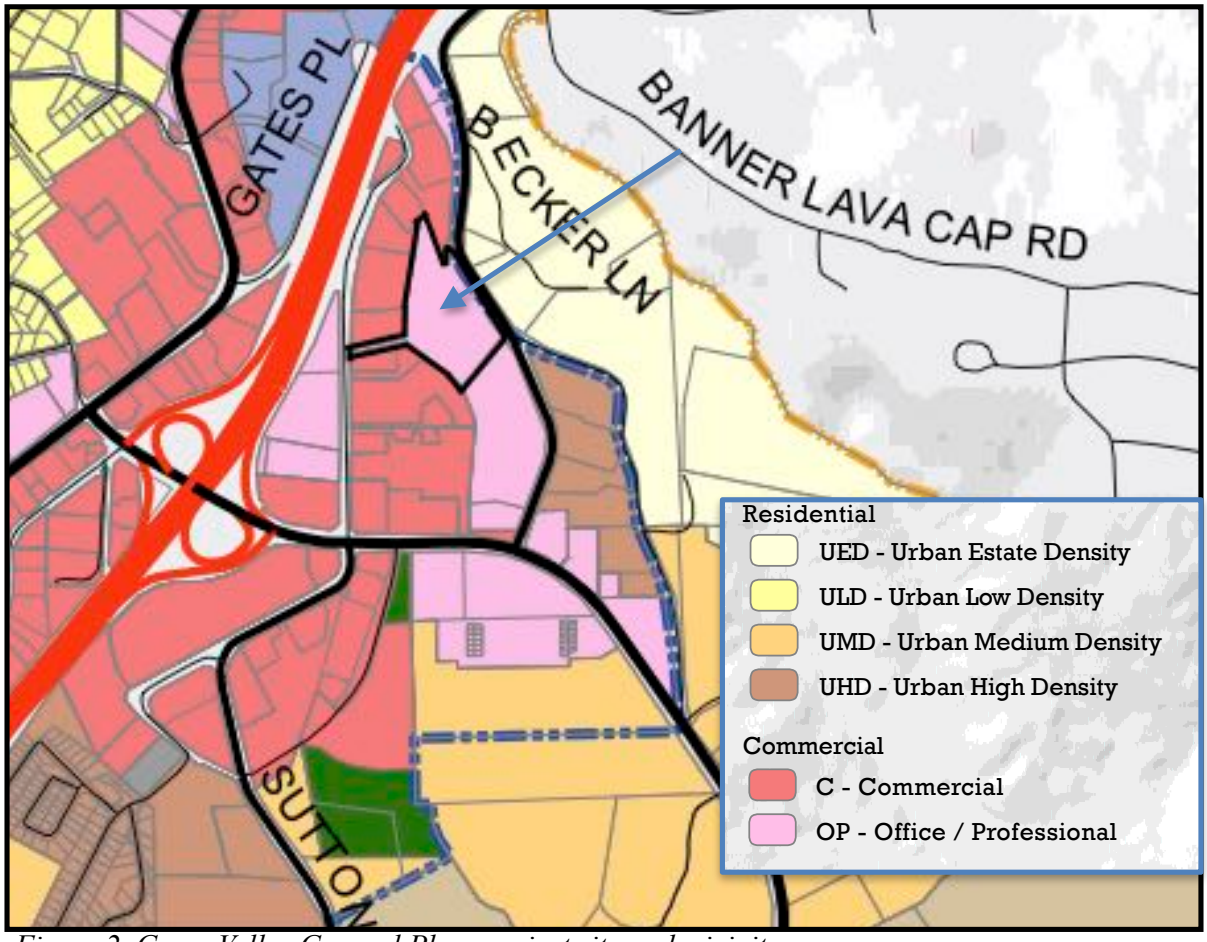


Figure 2. Grass Valley General Plan; project site and vicinity



Figure 4. Proposed Apartments



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BRUNSWICK COMMON'S RESOURCE CENTER

NEVADA COUNTY HOSPITALITY HOUSE

Proj. No.:	2018023
Date:	4/15/2019
Scale:	
Drawn By:	RMW

WallisDesignStudio.com
(530) 264-7010

Drawing Title:

SCHEMATIC PERSPECTIVE

Drawing Number:

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BRUNSWICK COMMON'S RESOURCE CENTER

NEVADA COUNTY HOSPITALITY HOUSE

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Drawing Title:

SCHEMATIC PERSPECTIVE

Drawing Number:

01

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Figure 5. Resource Center



Figure 6. Resource Center floor plan

Other Permits Which May Be Necessary:

The project site is crossed by an ephemeral drainage, which enters the property through a culvert under Old Tunnel Road, and enters the city storm drain system beneath the adjacent shopping center. Due to site grading restrains, this channel will need to be placed in a culvert for its entire length. A permit will be required from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act for placement of fill into Waters of the United States. The project is expected to qualify under Nationwide Permit 39, as an impact of less than one-half acre. Water Quality Certification, under Section 401 of the Clean Water Act, will be required from the Regional Water Quality Control Board in order to validate the permit.

Fire plans will need approval from the Grass Valley Fire Department.

Building permits will be issued by the Nevada County Building Department.

Tribal Consultation:

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?

California Native American Tribes with ancestral land within the project area were provided notification of the project as a part of the Cultural Resources Study. The United Auburn Indian Community (UAIC) requested consultation on March 26, 2019, and provided requested mitigation measures. The California Native American Tribes will be sent a Notice of Availability for Public Review and Notice of Intent to Adopt a Mitigated Negative Declaration for this project, which will allow the California Native American Tribes the opportunity to comment on the analysis of environmental impacts. Mitigation has been included in Sections 5 and 18 of this Initial Study to address a plan for further consultation, if needed.

SUMMARY OF IMPACTS AND PROPOSED MITIGATION MEASURES

Environmental Factors Potentially Affected:
All of the following environmental factors have been considered. Those environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation" as indicated by the checklist on the following pages.

__	1. Aesthetics	__	2. Agriculture / Forestry Resources	_X_	3. Air Quality
_X_	4. Biological Resources	_X_	5. Cultural Resources	__	6. Energy
_X_	7. Geology / Soils	__	8 Greenhouse Gas Emissions	__	9. Hazards / Hazardous Materials
X	10. Hydrology / Water Quality	__	11. Land Use / Planning	__	12. Mineral Resources
__	13. Noise	__	14. Population / Housing	__	15. Public Services
__	16. Recreation	_X_	17. Transportation	_X_	18. Tribal Cultural Resources
___	19. Utilities / Service Systems	__	20. Wildfire	_X_	21. Mandatory Findings of Significance

Summary of Impacts and Recommended Mitigation Measures

Mitigation Monitoring Matrix:

MEASURE	MONITORING AUTHORITY	WHEN IMPLEMENTED
3A: Implement dust control measures.	Northern Sierra Air Quality Management District	Prior to issuance of Grading Permits, Building Permits or Improvement Plans; ongoing during construction
3B: Minimize Construction Equipment Idling.	Planning and Building Department, Code Compliance Division	Prior to issuance of Grading Permits, Building Permits or Improvement Plans; ongoing during construction

3C: Use Alternative Methods to Open Burning for Vegetation Disposal	Northern Sierra Air Quality Management District	Prior to issuance of Grading Permits, Building Permits or Improvement Plans; ongoing during construction
3D: Comply with the Asbestos Airborne Toxic Control Measure	Northern Sierra Air Quality Management District	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
4A: Avoid impacts to nesting raptors and migratory birds.	Nevada County Planning Department	Prior to tree removal
4B: Authorization to fill wetlands and other Waters of the U.S. under the Section 404 of the federal CWA must be obtained	Nevada County Planning Department; U. S. Army Corps of Engineers	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
4C: A Water Quality Certification or waiver pursuant to Section 401 must be obtained	Nevada County Planning Department; Regional Water Quality Control Board	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
4D: A Streambed Alteration Agreement pursuant to Section 1602 of the California Fish and Game Code must be obtained	Nevada County Planning Department; California Department of Fish and Wildlife	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
5A: Halt work and contact the appropriate agencies if Cultural Resources are discovered during construction	Nevada County Planning Department	If Cultural Resources are discovered
7A: Prepare and Implement an Erosion and Sediment Control Plan	Nevada County Planning Department	Prior to issuance of Grading Permits, Building Permits or Improvement Plans; ongoing during construction
7B: Prepare a Final Soils and Geotechnical Report for Project Grading and Structural Work	Nevada County Planning Department	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
7C: Limit the grading season.	Nevada County Planning Department	Prior to issuance of Grading Permits, Building Permits or Improvement Plans
17A: Limit Timing of Soil Import.	Planning and Building Department,	Approval of grading and improvement plans; ongoing during construction
18A: If potential tribal cultural resources are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease within 100 feet of the find	Nevada County Planning Department and United Auburn Indian Community	A note shall be shown on the final grading plans; During construction, if a discovery is made
18B. A minimum of seven days prior to beginning soil disturbance, activities, the United Auburn Indian Community (UAIC) shall be invited to inspect the project site.	Nevada County Planning Department and United Auburn Indian Community	Prior to start of construction. Construction contractor to provide documentation to Nevada County Planning Department that contact was made.

18C. A consultant and construction worker tribal cultural resources awareness brochure and training program will be developed	Nevada County Planning Department and United Auburn Indian Community	Prior to issuance of Grading Permits, Building Permits or Improvement Plans

***Mitigation Measure 3A*:** Implement dust control measures. Prior to the approval of any Grading or Building Permits, to reduce short-term construction impacts, all future development permits shall comply with the following standards to the satisfaction of the Northern Sierra Air Quality Management District, which shall be noted on all grading plans and shall be included in project bidding documents:

- The applicant shall implement all dust control measures in a timely manner during all phases of project development and construction.
- All material excavated, stockpiled or graded shall be sufficiently watered, treated or converted to prevent fugitive dust form leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas (including unpaved roads) with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
- All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
- All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
- All inactive disturbed portions of the development site shall be covered, seeded or watered until a suitable cover is established. Alternatively, the applicant shall be responsible for applying non-toxic soil stabilizers to all inactive construction areas.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance.
- Paved streets adjacent to the project shall be swept or washed at the end of each day, or as required to remove excessive accumulation of silt and/or mud which may have resulted from activities at the project site.

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

Mitigation Measure 3B: Minimize Construction Equipment Idling. In order to reduce emissions from construction equipment, the applicant shall include the following standard note on all Grading Plans, Site Plans or Improvement Plans: "During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel powered equipment. Signs shall be posted in the designated queuing areas of the construction site to remind off-road equipment operators that idling is limited to a maximum of 5 minutes. Idling of construction-related equipment and construction related vehicles is not recommended within 1,000 feet of any sensitive receptor."

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans

Reporting: Planning Department approval of Grading Permits or Building Permits / Complaint driven
Responsible Agencies: Planning and Building Department, Code Compliance Division

Mitigation Measure 3C: Use Alternative Methods to Open Burning for Vegetation Disposal. Open burning of site-cleared vegetation is prohibited. Among suitable alternatives are chipping, grinding, hauling to an approved disposal site, cutting for firewood, and conversion to biomass fuel.

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans and during construction
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

Mitigation Measure 3D: Comply with the Asbestos Airborne Toxic Control Measure (ACTM) for construction. If serpentine, ultramafic rock, or naturally occurring asbestos is discovered during construction or grading, the Northern Sierra Air Quality Management District shall be notified no later than the following business day and specific requirements contained in Section 93105 of Title 17 of the California Code of Regulations shall be strictly complied with. This measure shall be included as a note on all grading and improvement plans.

Timing: Prior to issuance of the grading permits and improvement plans and during grading activity
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

Mitigation Measure 4A: Avoid impacts to nesting raptors and migratory birds. If construction occurs between February 1 and August 31, pre-construction surveys for nesting raptors and migratory birds shall be conducted pursuant to California Department of Fish and Wildlife requirements and according to the Migratory Bird Treaty Act. These surveys should be accomplished within 7 days prior to commencement of grading activities. If a legally-protected species nest is located in a tree for removal, the removal shall be deferred until after August 31 or until the adults and young are no longer dependent on the nest, as determined by a qualified biologist.

If any active nests are located onsite, an appropriate no disturbance buffer zone shall be established around the nests, as determined by the qualified biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of the breeding season or until the young have successfully fledged. Buffer zones are 100 feet for migratory bird nests and 250 feet for raptor nests. If active nests are found in areas of work, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist may reduce the buffer depending on the species and daily monitoring is required to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied.

Timing: Prior to tree removal
Reporting: Approval of the grading and improvement permits

Responsible Agency: Nevada County Planning Department

Mitigation Measure 4B: Authorization to fill wetlands and other Waters of the U.S. under the Section 404 of the federal CWA (Section 404 Permit) must be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit to ensure no-net-loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Permit for the Project will be prepared and submitted to USACE and will include direct, avoided, and preserved acreages to Waters of the U.S. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however final mitigation requirements will be developed in consultation with USACE.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, U.S. Army Corps of Engineers

Mitigation Measure 4C: A Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions. Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State within the Project site will be developed in consultation with the RWQCB.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, Regional Water Quality Control Board

Mitigation Measure 4D: A Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the California Fish and Game Code must be obtained for any activity that will impact the bed, bank, or channel of any river, stream, or lake. Mitigation measures will be developed during consultation with CDFW as part of the SAA permit process to ensure protections for affected fish and wildlife resources.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, California Department of Fish and Wildlife

Mitigation Measure 5A: Halt work and contact the appropriate agencies if Cultural Resources are discovered during construction. All equipment operators and employees involved in any form of ground disturbance shall be advised of the remote possibility of encountering subsurface cultural resources. If such resources are encountered or suspected, work shall be halted immediately and the Nevada County Planning Department shall be contacted. A professional archaeologist shall be retained by the developer and consulted to access any discoveries and develop appropriate management recommendations for archaeological resource treatment. If bones are encountered and appear to be human, California Law requires that the Nevada County Coroner and the Native American Heritage Commission be contacted and, if Native American resources are involved, Native American Organizations and individuals recognized by the

County shall be notified and consulted about any plans for treatment. A note to this effect shall be included on the grading and construction plans for any future projects.

Timing: Prior to issuance of future grading permits or improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Nevada County Planning Department

Mitigation Measure 7A: Prepare and Implement an Erosion and Sediment Control Plan. Prior to issuance of a Grading Permit or improvement plans for all project-related grading including driveway construction and drainage improvements, all plans shall incorporate, at a minimum, the following erosion and sediment control measures, which shall be implemented throughout the construction phase:

1. During construction, Best Management Practices (BMPs) for temporary erosion control shall be implemented to control any pollutants that could potentially affect the quality of storm water discharges from the site. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in accordance with California State Water Resources Control Board (SWRCB) requirements. The SWPPP shall include the implementation of BMPs for Erosion Control, Sediment Control, Tracking Control, Wind Erosion Control, Waste Management and Materials Pollution Control and Low Impact Development (LID)/post-construction standards that include a hydromodification component and shall be provided to the Nevada County Planning, Building and Public Works Departments prior to issuance of grading permits or approval of improvement plans.

2. Topsoil that will be used as fill material shall be removed and stockpiled for later reuse prior to excavation activities. Topsoil shall be identified by the soil-revegetation specialist who will identify both extent and depth of the topsoil to be removed.

3. Upon completion of grading, stockpiled topsoil shall be combined with wood chips, compost and other soil amendments for placement on all graded areas. Revegetation shall consist of native seed mixes only. The primary objectives of the soil amendments and revegetation is to create site conditions that keep sediment on site, produce a stable soil surface, resist erosion and are similar to the surrounding native ecosystem.

4. Geo-fabrics, jutes or other mats may be used in conjunction with revegetation and soil stabilization.

5. All construction and grading plans shall include a Note outlining the requirements provided below to ensure there is no introduction of noxious Weeds onto the subject parcel. If straw bales are used for erosion control, or if straw is broadcast over seeded areas, only certified weed-free straw or rice straw shall be utilized to minimize the risk of introducing or spreading noxious weeds such as Scotch Broom, yellow star thistle, or Italian thistle. Inspect all construction equipment to ensure that it does not transport noxious weeds into the project area.

6. To ensure the proper timely implementation of all Standard Construction Conditions, the applicant shall distribute copies of these measures and any other permit requirements to the contractors prior to construction commencing.

Timing: Prior to Issuance of Grading Permit or Building Permit and throughout construction

Reporting: Planning Department Approval of Grading and Construction Permits.
Responsible Agency: Planning Department and Building Department

Mitigation Measure 7B: Prepare a Final Soils and Geotechnical Report for Project Grading and Structural Work. Prior to issuance of a Grading Permit or improvement plans, a final Soils and Geotechnical Report shall be shall be prepared a licensed engineer and submitted to the Nevada County Planning and Building Departments, and recommendations therein followed for all subsequent grading and structural work. The Nevada County Building Department shall verify that the recommendations are being implemented during the plan review and inspection stages of the permit process.

Timing: Prior to issuance of the Grading Permit and improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Planning Department, Department of Public Works, Building Department

Mitigation Measure 7C: Limit the grading season. Grading plans shall include the time of year for construction activities. No grading shall occur after October 15 or before May 1 unless the Chief Building Inspector or his/her authorized agent determines project soil conditions to be adequate to accommodate construction activities.

Timing: Prior to issuance of the grading permits or improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Building Department

Mitigation Measure 17A: Limit Timing of Soil Import. The importation of soil material from off-site shall only be hauled to the project site during non-peak hours (9 am to 4 pm), Monday through Friday. The importation of activities shall meet all identified noise thresholds and dust control measures shall implemented at the project site. Grading plans shall include a Note that reflects the restricted hours and days for soil import activities.

Timing/Plan Requirements: A note shall be shown on the final grading plans
Reporting: Approval of grading and improvement plans
Responsible Agency: Planning and Building Departments

Mitigation Measure 18A: If potential tribal cultural resources (TCRs), archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease within 100 feet of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from a traditionally and culturally affiliated Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from traditionally and culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe.

Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. These recommendations will be documented in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with UAIC and other traditionally and culturally affiliated Native American Tribes regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

Timing: A note shall be shown on the final grading plans; During construction, if a discovery is made
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department and United Auburn Indian Community

Mitigation Measure 18B. A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the applicant shall notify the United Auburn Indian Community (UAIC) of the proposed earthwork start-date. A UAIC tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of ground breaking activity. During this inspection, a site meeting of construction personnel shall also be held in order to afford the tribal representative the opportunity to provide tribal cultural resources awareness information. If any tribal cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the project applicant shall immediately notify the CEQA lead agency representative. The project applicant shall coordinate any necessary investigation of the site with a UAIC tribal representative, a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the UAIC and provide proper management recommendations should potential impacts to the resources be found by the CEQA lead agency representative to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the CEQA lead agency representative by the qualified archaeologist. Possible management recommendations for tribal cultural resources, historical, or unique archaeological resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by CEQA lead agency representative staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources, including the use of a Native American Monitor whenever work is occurring within 100 feet of the find.

Timing: A note shall be shown on the final grading plans; During construction, if a discovery is made
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department and United Auburn Indian Community

Mitigation Measure 18C. A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

Timing: Prior to issuance of the grading permits or improvement plans
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department and United Auburn Indian Community

INITIAL STUDY AND CHECKLIST

Introduction: This checklist is to be completed for all projects that are not exempt from environmental review under the California Environmental Quality Act (CEQA). The information, analysis and conclusions contained in the checklist are the basis for deciding whether an Environmental Impact Report (EIR) or Negative Declaration is to be prepared. If an EIR is determined to be necessary based on the conclusions of the Initial Study, the checklist is used to focus the EIR on the effects determined to be potentially significant. This Initial Study uses the following terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- **No Impact**: An impact that would result in no adverse changes to the environment.
- **Less than Significant Impact**: An impact that is potentially adverse but does not exceed the thresholds of significance as identified in the impact discussions. Less than significant impacts do not require mitigation.
- **Less than Significant with Mitigation Measures** An environmental effect that may cause a substantial adverse change in the environment without mitigation, but which is reduced to a level that is less than significant with mitigation identified in the Initial Study.
- **Potentially Significant Impact**: An environmental effect that may cause a substantial adverse change in the environment; either additional information is needed regarding the extent of the impact to make the significance determination, or the impact would or could cause a substantial adverse change in the environment. A finding of a potentially significant impact would result in the determination to prepare an EIR.

1. AESTHETICS

Existing Setting

The project parcel is located at the edge of the City of Grass Valley in western Nevada County. The area is a transition from the more densely developed urban area within the city to the unincorporated rural County. The terrain slopes down from Old Tunnel Road on the northeast side to the rear of a shopping center on Sutton Way. The elevation ranges from about 2,650 to 2,750 feet above mean sea level. The site is covered in Sierran mixed conifer forest dominated by ponderosa pine, incense cedar and scattered black oak.

Except as provide in Public Resources Code Section 21099, would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Have a substantial adverse effect on a scenic vista?			X		A, L
b. Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X	A, L, 18

Except as provide in Public Resources Code Section 21099, would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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		A
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X		A

Impact Discussion

1 a, c. The project site is viewable from Brunswick Road, Sutton Way, and the SR 20/49 freeway. From all of these viewing angles, the foreground view is of the Safeway/CVS shopping center. An apartment building and a resource center on the hill above and behind the shopping center will blend into the foreground and will not significantly alter the view. In addition, the site will not be fully cleared; retention of trees on the lower portion of the property will partially screen the view from below. **Less than Significant Impact.**

1 b. The project site is not located on a state scenic highway and does not house scenic resources. Therefore, there would be no impact related to damaging scenic resources on a state scenic highway. **No impact.**

1 d. Exterior lighting on the project buildings and of the parking lot will be downward-directed, and designed not to illuminate off-site. To the extent that outdoor lighting is visible form off-site, it will blend with the lighting of the shopping center. **Less than Significant Impact.**

Mitigation Measures

None.

2. AGRICULTURAL/FORESTRY RESOURCES

Existing Setting

The project site is mapped as "Urban and Built-Up" as the farmland designation by the California Department of Conservation (2016). Neither the site nor any neighboring sites have been determined to contain any Important Farmlands. There are no known agricultural resources in the vicinity of the project. The project site does not contain any land within a Williamson Act contract, nor is the parcel within a Timberland Production Zone.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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 Department of Conservation's Division of Land Resource Protection, to non-agricultural use?				X	A, 7
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				X	A, 18
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g)), timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X	A, 18
d. Result in the loss of forest land or conversion of forest land to non-forest use?			X		A, 21
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	A, L, 7

Impact Discussion

2 a. The subject parcel is identified as Urban and Built-Up Land and therefore does not contain any Important Farmlands as identified by the Farmland Mapping and Monitoring Program of the California Department of Conservation's Division of Land Resource Protection. Parcels which are located to the northeast of the subject parcel are zoned Residential - Urban Estate Density, and are identified as Other Land on the Farmland Mapping and Monitoring Program and have been developed with single-family residences. **No impact.**

2 b. Neither the subject parcel, nor any adjacent parcel, has a recent history of agricultural use, and are not currently used for agricultural purposes. None are zoned or designated as Farmland, nor are they within a Williamson Act Contract. **No impact.**

2 c. The subject parcel is not within a Timberland Production Zone. **No impact.**

2 d. The project site is currently forested land, and will be converted to non-forest use. The site is located within the City of Grass Valley, is adjacent to urbanized property, and is not used for timber resources. **Less than Significant Impact.**

2 e. The project site is within the City of Grass Valley, and is adjacent to urbanized land. No agricultural land is nearby. **No impact.**

Mitigation Measures

None.

3. AIR QUALITY

Existing Setting

Nevada County is located in the Mountain Counties Air Basin. The overall air quality in Nevada County has improved over the past decade, largely due to vehicles becoming cleaner. State and Federal air quality standards have been established for specific "criteria" air pollutants including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter. In addition, there are State standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. State standards are called California Ambient Air Quality Standards (CAAQS) and federal standards are called National Ambient Air Quality Standards (NAAQS). NAAQS are composed of health-based primary standards and welfare-based secondary standards.

Western Nevada County is classified as a Serious Nonattainment Area for the 2008 ozone NAAQS and Moderate Nonattainment for the 2015 ozone NAAQS. It is also Nonattainment for the ozone CAAQS. The area is also Marginal Nonattainment for the 2008 ozone NAAQS and is Nonattainment for the ozone CAAQS. Most of western Nevada County's ozone is transported to the area by wind from the Sacramento area and, to a lesser extent, the San Francisco Bay Area. Ozone is created by the interaction of Nitrogen Oxides and Reactive Organic Gases (also known as Volatile Organic Compounds) in the presence of sunlight, especially when the temperature is high. Ozone is mainly a summertime problem, with the highest concentrations generally observed in July and August, especially in the late afternoon and evening hours.

Nevada County is also Nonattainment for the PM10 CAAQS, but Unclassified for the PM10 NAAQS due to lack of available recent data. The number after "PM" refers to maximum particle size in microns. PM10 is a mixture of dust, combustion particles (smoke) and aerosols, whereas PM2.5 is mostly smoke and aerosol particles. PM2.5 sources include woodstoves and fireplaces, vehicle engines, wildfires and open burning. PM10 sources include the PM2.5 plus dust, such as from surface disturbances, road sand, vehicle tires, and leaf blowers. Some pollen and mold spores are also included in PM10, but most are larger than 10 microns. All of Nevada County is Unclassifiable/Attainment for the PM2.5 NAAQS and Unclassified for the PM2.5 CAAQS (US Environmental Protection Agency, 2015).

Ultramafic rock and its altered form, serpentine rock (or serpentinite), both typically contain asbestos, a cancer-causing agent. Ultramafic rock and serpentine are likely to exist in several areas of western Nevada County; however, the area of the project site is not mapped as an area that is likely to contain natural occurrences of asbestos (California Department of Conservation, 2000, Northern Sierra Air Quality Management District).

Would the proposed project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Conflict with or obstruct implementation of the applicable air quality plan.		X			A,G, 25
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?		X			A,G,25

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
c. Expose sensitive receptors to substantial pollutant concentrations?		X			A,G
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X	A,G
e. Generate substantial smoke ash or dust?		X			A,G

Impact Discussion

3 a. As shown below on Table 2, it is anticipated that long-term development of the project site would have little effect as the residential apartments and resource center will not involve activities that generate significant quantities of air pollutants.

The proposed project would result in short-term project construction activities which have the potential to generate dust and impact local ambient air quality with grading and excavation as well as construction activities from site preparation. The preliminary grading plan for the project projects a total volume of 3,539 cubic yards of cut and 13,337 cubic yards of fill, for a net import of fill soil of almost 10,000 cubic yards.

Grass Valley's General Plan does not contain a specific Air Quality Element. It makes several general comments about how encouraging non-motorized transportation and reducing wildfire risk are beneficial for air quality. Policy 17-COSI states that the City will "[i]ncorporate applicable mitigation measures specified in the *Indirect Source Review Guidelines of the Northern Sierra Air Quality Management District, 1996-1997*, in all future discretionary land use approvals."

Northern Sierra Air Quality Management District Rule 226 requires dust control measures. A dust control plan must be submitted to and approved by the Air Pollution Control Officer before topsoil is disturbed on any project where more than one (1) acre of natural surface area is to be altered or where the natural ground cover is removed. Mitigation Measure 3A below addresses this requirement.

By assessing air pollution and emissions associated with the proposed project and recommending mitigation measures based on Thresholds of Significance established by the Northern Sierra Air Quality Management District (NSAQMD), the project as proposed would comply with Northern Sierra Air Quality Management District regulations. In addition, based on the County's review of the NSAQMD Rules and Guidelines for Assessing and Mitigation Air Quality Impacts of Land Use Projects, it appears several of the objectives of the NSAQMD regulations are achieved through the application of mitigation measures provided below and due to the size and type of the project. This includes the fact the proposed buildings will not utilize wood heat, the minimization of heavy equipment idling times, use of alternative methods to open burning for vegetation disposal, and the compliance with Asbestos Airborne Toxic Control Measures.

Therefore, given the above discussion, the project itself will not violate any established policies or standards for the protection of air quality nor would it conflict with or obstruct implementation of any quality plan. **Less than significant impact with mitigation.**

3 b-e. Western Nevada County is in non-attainment for the Federal 8-hour ozone standard, and the entirety of Nevada County is in non-attainment for the State 1- and 8-hour ozone standards and PM10 standards. While most of the ozone in the County is transported from urban areas to the southwest, PM10 sources primarily come from within the County. PM10 violations in winter are largely due to wood smoke from the use of woodstoves and fireplaces, while summer and fall violations often occur during forest fires or periods of open burning. The proposed project would result in a temporary but incrementally small net increase in pollutants due to construction vehicle and equipment emissions. However, Mitigation Measure 3A, as well as compliance with the applicable grading ordinance, would reduce impacts to the extent that the project would not contribute to a cumulatively considerable net increase for ozone and PM10, for which the County is in non-attainment. **Less than Significant Impact**.

Construction and Operational Impacts

The California Emissions Estimation Model (CalEEMod) provides a means to estimate potential emissions associated with both construction and operation of land use projects. Using the parameters specific to this proposed project, the CalEEMod model identified potential increases in the pollutants of concern during various stages of the construction phase of the project (CalEEMod Version 2016.3.2). Construction including site preparation and grading was assumed to occur over a period of a year provide a conservative analysis. The highest amount in any given year over the life of construction was used, with the default variables for a typical low-rise apartment development and a general office building were used. The impacts associated with the cut and fill volumes identified in the preliminary grading plan are also included here.

Table 1. Project Construction Air Quality Impacts

Pollutant	NSAQMD Threshold*	Project Impact
NOx	24-136 lbs/day	8.73 lbs/day (1.5929 tons/year)
ROG	24-136 lbs/day	4.75 lbs/day (0.8671 tons/year)
PM10	79-136 lbs/day	0.86 lbs/day (0.1577 tons/year)
CO	N/A	7.73 lbs/day (1.4110 tons/year)
*These thresholds are “Level B” in NSAQMD’s Guidelines. All projects require basic mitigations under Level A, which is under 24 pounds per day of any pollutant shown above.		

As shown above on Table 1, although all pollutant levels would increase marginally with the project, none would exceed thresholds established by NSAQMD. Although PM10 is not anticipated to exceed the per diem threshold adopted by NSAQMD, this constituent has been identified in Nevada County as exceeding ambient air quality standards and

should be mitigated to the extent possible through dust control measures such as watering and stabilizing of excavated materials, slow vehicle speeds on-site, and halting work during windy periods as required in Mitigation Measure 3A.

Short-term project construction activities have the potential of generating dust and impacting the local ambient air quality with grading and excavation, vegetation removal, and construction activities from site preparation, the installation of underground utilities, and associated storm water detention facilities. If improperly managed or controlled, and depending upon the time of year and air conditions, the construction activities associated with this project may have the potential to produce off-site dust impacts. The NSAQMD therefore recommends mitigation during the construction phase of this project including Mitigation Measure 3B requiring that diesel construction equipment not be idled for more than 5 minutes to prevent smoke and ozone precursors and a requirement for alternatives to open burning of cleared vegetation, as outlined in Mitigation Measure 3C.

As shown below on Table 2, it is anticipated that long-term development of the project site would have little effect on ambient air quality.

Table 2. Project Operation Air Quality Impacts

Pollutant	NSAQMD Threshold*	Project Impact
NOx	24-136 lbs/day	3.98 lbs/day (0.7265 tons/year)
ROG	24-136 lbs/day	2.84 lbs/day (0.5174 tons/year)
PM10	79-136 lbs/day	2.22 lbs/day (0.4052 tons/year)
CO	N/A	14.25 lbs/day (2.5999 tons/year)
*These thresholds are “Level B” in NSAQMD’s Guidelines. All projects require basic mitigations under Level A, which is under 24 pounds per day of any pollutant shown above.		

Ultramafic Rock

The project site has the potential to contain ultramafic rock according to the Northern Sierra Air Quality Management District. Ultramafic rock may contain naturally occurring asbestos, a cancer-causing agent. Disturbance of this rock and nearby soil during project construction can result in the release of microscopic cancer-causing asbestos fibers into the air, resulting in potential health and safety hazards. Health risks related to project grading would be reduced by the incorporation of Mitigation Measure 3D, which would require compliance with the Asbestos Airborne Toxic Control Measure (ACTM) for construction.

Impact: **Less than significant with mitigation.**

Mitigation Measures

***Mitigation Measure 3A*:** Implement dust control measures. Prior to the approval of any Grading or Building Permits, to reduce short-term construction impacts, all future development permits shall comply with the following standards to the satisfaction of the Northern Sierra Air Quality

Management District, which shall be noted on all grading plans and shall be included in project bidding documents:

- The applicant shall implement all dust control measures in a timely manner during all phases of project development and construction.
- All material excavated, stockpiled or graded shall be sufficiently watered, treated or converted to prevent fugitive dust form leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas (including unpaved roads) with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
- All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
- All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
- All inactive disturbed portions of the development site shall be covered, seeded or watered until a suitable cover is established. Alternatively, the applicant shall be responsible for applying non-toxic soil stabilizers to all inactive construction areas.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance.
- Paved streets adjacent to the project shall be swept or washed at the end of each day, or as required to remove excessive accumulation of silt and/or mud which may have resulted from activities at the project site.

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

Mitigation Measure 3B: Minimize Construction Equipment Idling. In order to reduce emissions from construction equipment, the applicant shall include the following standard note on all Grading Plans, Site Plans or Improvement Plans: "During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel powered equipment. Signs shall be posted in the designated queuing areas of the construction site to remind off-road equipment operators that idling is limited to a maximum of 5 minutes. Idling of construction-related equipment and construction related vehicles is not recommended within 1,000 feet of any sensitive receptor."

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans
Reporting: Planning Department approval of Grading Permits or Building Permits / Complaint driven
Responsible Agencies: Planning and Building Department, Code Compliance Division

Mitigation Measure 3C: Use Alternative Methods to Open Burning for Vegetation Disposal. Open burning of site-cleared vegetation is prohibited. Among suitable alternatives are chipping,

grinding, hauling to an approved disposal site, cutting for firewood, and conversion to biomass fuel.

Timing: Prior to issuance of Grading Permits, Building Permits or Improvement Plans and during construction
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

***Mitigation Measure 3D**:* Comply with the Asbestos Airborne Toxic Control Measure (ACTM) for construction. If serpentine, ultramafic rock, or naturally occurring asbestos is discovered during construction or grading, the Northern Sierra Air Quality Management District shall be notified no later than the following business day and specific requirements contained in Section 93105 of Title 17 of the California Code of Regulations shall be strictly complied with. This measure shall be included as a note on all grading and improvement plans.

Timing: Prior to issuance of the grading permits and improvement plans and during grading activity
Reporting: Approval of the grading permit and improvement plans
Responsible Agency: Northern Sierra Air Quality Management District

4. BIOLOGICAL RESOURCES

Existing Setting

The proposed project is sited on sloping terrain within an elevation range of about 2,650 and 2,750 feet above Mean Sea Level. Vegetation on most of the site is ponderosa pine forest. This vegetation community is characterized by a tall tree canopy dominated primarily by ponderosa pine. Other tree species present in the overstory include incense cedar (Calocedrus decurrens) and California black oak (Quercus kelloggii). The understory of this plant community is sparsely vegetated with blue wild rye (Elymus glaucus), pink honeysuckle (Lonicera hispidula), Himalayan blackberry (Rubus armeniacus), and Scotch broom (Cytisus scoparius). Openings in the tree canopy are dominated by white leaf manzanita (Arctostaphylos viscida), and buck brush (Ceanothus cuneatus), and blue wild rye.

Disturbed portions of the site include a narrow portion of the Project site that extends to the west through a landscaped portion of the adjacent shopping center, and a disturbed area in the southwest portion of the site. These areas appear frequently disturbed by vehicles and/or pedestrians. The disturbed areas are dominated by hedge parsley (Torilis arvensis).

One ephemeral drainage, of 0.038 acre in area, occurs in the southeastern portion of the Project site. Ephemeral drainages are linear features that exhibit a bed and bank and an ordinary high-water mark. These features typically convey runoff for short periods of time during and immediately following rain events and are not influenced by groundwater sources at any time during the year. This feature is a steep, narrow, deeply incised channel that enters the property via a culvert under Old Tunnel Road. It is primarily unvegetated due to scour. Portions are sparsely vegetated with Himalayan blackberry and umbrella sedge (Cypress eragrostis).

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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			21
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?				X	21
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			21
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	21
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X	21
f. Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X	21
g. Introduce any factors (light, fencing, noise, human presence and/or domesticated animals) which could hinder the normal activities of wildlife?				X	21

Impact Discussion

4 a. A Biological Resources Assessment was conducted for the project site by ECORP, Inc., of Rocklin, CA. The Assessment identified two species listed as threatened under both state and federal endangered species acts, with a low potential to occur on the project site, due to the presence of marginal habitat. They are the fisher *(Pekania pennanti)* and the Sierra Nevada red fox *(Vulpes vulpes necator)*.

An additional 22 species considered rare, or listed as Species of Special Concern by the California Department of Fish and Wildlife, but not listed as threatened or endangered:

Common Name (Scientific Name)	Habitat Description	Potential To Occur Onsite
Sanborn's onion (Allium sanbornii var. sanbornii)	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentinite soils (853'–4,954').	Low Potential-marginal habitat present onsite.

True's manzanita (Arctostaphylos mewukka ssp. truei)	Chaparral or lower montane coniferous forest, sometimes on roadsides (1,394'–4,560').	Potential-suitable habitat present onsite.
Brandegee's clarkia (Clarkia biloba ssp. brandegeeae)	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (246'– 3,002').	Potential-suitable habitat present onsite.
Streambank spring beauty (Claytonia parviflora ssp. grandiflora)	Occurs in rocky cismontane woodland (820'–3,937').	Low potential-marginal habitat present onsite.
California lady's–slipper (Cypripedium californicum)	Usually within serpentinite seeps and streambanks of bogs and ferns, and lower montane coniferous forest (98'–9,022').	Low potential-marginal habitat present onsite.
Northern Sierra daisy (Erigeron petrophilus var. sierrensis)	In sometimes serpentinite cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest (984'–6,801').	Low potential-marginal habitat present onsite.
Butte County fritillary (Fritillaria eastwoodiae)	Chaparral, cismontane woodland, and openings in lower montane coniferous forest and occasionally is found on serpentinite soils (164'–4,921').	Potential-suitable habitat present onsite.
Finger rush (Juncus digitatus)	Openings within cismontane woodland and lower montane coniferous forest, as well as xeric vernal pools (2,165'–2,592).	Potential- suitable habitat present onsite.
Dubious Pea (Lathyrus sulphureus var. argillaceus)	Cismontane woodland, lower montane coniferous forest and upper montane coniferous forest. (492'–3,051').	Potential-suitable habitat present onsite.
Humboldt Lily (Lilium humboldtii ssp. humboldtii)	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (295'– 4,199').	Potential-suitable habitat present onsite.
Elongate copper moss (Mielichhoferia elongata)	Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate within broad-leafed upland forest, chaparral, cismontane coniferous forest, meadows and seeps, and subalpine coniferous forest. (0'–6,430').	Low potential-marginal habitat present onsite.
Cedar Crest popcornflower (Plagiobothrys glyptocarpus var. modestus)	Cismontane woodland and mesic valley and foothill grasslands (108'–2,945).	Potential-suitable habitat present onsite.
Sierra blue grass (Poa sierrae)	Lower montane coniferous forest openings (1,198'–4,921').	Potential-suitable habitat present onsite.
Brownish beaked–rush (Rhynchospora capitellata)	Mesic areas in lower montane coniferous forest, upper montane coniferous forests, meadows, seeps, marshes, and swamps (148'–6,562').	Low potential-marginal habitat present onsite.
Long–fruit jewelflower (Streptanthus longisiliquus)	Openings in cismontane woodland and lower montane coniferous forest (2,346'–4,921').	Potential-suitable habitat present onsite.
Blainville's (Coast) horned lizard (Phrynosoma blainvillii formerly Phrynosoma coronatum frontale)	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Needs open areas for basking, but with bushes and shaded areas for cover. A dietary specialist on native ants.	Low potential to occur.
Cooper's hawk (Accipiter cooperii)	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	Potential to occur.
Fisher- West Coast Distinct Population Segment (Pekania pennanti)	Northern coniferous and mixed forests of Canada and northern United States.	Low potential to occur.

Ringtail (Bassariscus astutus)	Rare, permanent resident of the Sierra Nevada, Cascade, and Klamath mountain ranges. Occur in intermediate to large- tree coniferous forests and deciduous riparian habitats. Dens are generally found in cavities of trees but can also be in brush piles and logs.	Low potential to occur.
Sierra Nevada red fox (Vulpes vulpes necator)	Found in the Cascades in Siskiyou County, and from Lassen County south to Tulare County, rare in the Sierra Nevada. Sierra Nevada populations may be found in a variety of habitats, including alpine dwarf-shrub, wet meadow subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. Most sightings in Sierra Nevada area above 7,000 feet but range from 3,900 to 11,900 feet.	Low potential to occur.
Townsend's big-eared bat (Corynorhinus townsendii)	Caves, mines, buildings, rock crevices, trees.	Low potential to occur.

If any of these species are actually present on the site, the project will have an adverse effect on them. Mitigation measures will include in-season surveys to confirm presence/absence of each species, and consultation with CDFW in the event any are found to be present.

4 b, d, e, f. The Biological Resources Assessment identified no sensitive communities present on the site. The site is not a wildlife corridor or nursery area, there are no local polices or habitat conservations plans that apply. **Less than significant impact with mitigation.**

4 c. An ephemeral drainage is present on the site. Because it is saturated only during and immediately after rains, and has minimal vegetation, it is not a wetland. It is, however, a Water of the United States, and federal and state permits will be required to place fill in this area. Due to site grading and drainage constraints, the entire 0.038 acre drainage will be either filled or otherwise impacted, with a pipe placed to convey flows. Permits will be required from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the State Water Resources Control Board, as described in Mitigation Measures 4B-D. Specific mitigation activities will be defined by the terms and conditions of those permits. **Less than significant impact with mitigation.**

Mitigation Measures

Mitigation Measure 4A: Avoid impacts to nesting raptors and migratory birds. If construction occurs between February 1 and August 31, pre-construction surveys for nesting raptors and migratory birds shall be conducted pursuant to California Department of Fish and Wildlife requirements and according to the Migratory Bird Treaty Act. These surveys should be accomplished within 7 days prior to commencement of grading activities. If a legally-protected species nest is located in a tree for removal, the removal shall be deferred until after August 31 or until the adults and young are no longer dependent on the nest, as determined by a qualified biologist.

If any active nests are located onsite, an appropriate no disturbance buffer zone shall be established around the nests, as determined by the qualified biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of

the breeding season or until the young have successfully fledged. Buffer zones are 100 feet for migratory bird nests and 250 feet for raptor nests. If active nests are found in areas of work, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If establishing the typical buffer zone is impractical, the qualified biologist may reduce the buffer depending on the species and daily monitoring is required to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied.

Timing: Prior to tree removal
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department

Mitigation Measure 4B: Authorization to fill wetlands and other Waters of the U.S. under the Section 404 of the federal CWA (Section 404 Permit) must be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit to ensure no-net-loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Permit for the Project will be prepared and submitted to USACE and will include direct, avoided, and preserved acreages to Waters of the U.S. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however final mitigation requirements will be developed in consultation with USACE.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, U.S. Army Corps of Engineers

Mitigation Measure 4C: A Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions. Pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State within the Project site will be developed in consultation with the RWQCB.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, Regional Water Quality Control Board

Mitigation Measure 4D: A Streambed Alteration Agreement (SAA) pursuant to Section 1602 of the California Fish and Game Code must be obtained for any activity that will impact the bed, bank, or channel of any river, stream, or lake. Mitigation measures will be developed during consultation with CDFW as part of the SAA permit process to ensure protections for affected fish and wildlife resources.

Timing: Prior to issuance of the grading and improvement permits
Reporting: Approval of the grading and improvement permits
Responsible Agency: Nevada County Planning Department, California Department of Fish and Wildlife

5. CULTURAL RESOURCES

Existing Setting

Much of Nevada County is the traditional home to the Nisenan or Southern Maidu nation. The Nisenan had permanent settlements along major rivers in the Sacramento Valley and foothills, and would travel yearly into higher elevations to hunt or gather seasonal plant resources. The Hill Nisenan lived along the foothills of the Sierra Nevada, primarily in small villages with family groups living outside the area of the main village. The main village was located in the Grass Valley area; although the exact location has not been matched to a known archaeological site.

Non-native settlement of the area began during the California Gold Rush as early as 1848. The proposed project area lies within one of the major early mining districts of the state, the Grass Valley Mining District. In 1848, gold was discovered on Wolf Creek near Grass Valley. Although the placer mines were soon exhausted, quartz lodes were discovered that would support a very active mining industry for the next century.

The project area was inspected on February 12, 2019 by Neal Neuenschwander of Peak & Associates, Inc., who performed a complete, intensive pedestrian survey using 10-meter wide transects of the entire project area (Figure 4).

A Cultural Resource Study by Peak & Associates (March 28, 2019), found that a section of the grade associated with the former Nevada County Narrow Gauge Railroad, P-29000839/CA-NEV-1590H, was identified within the project area. The former railroad corridor/grade parallels Old Tunnel Road about 30 to 50 feet west of the road embankment. At the northern end of the project, fill associated with the berm of Old Tunnel Road has encroached on part of the former grade. Generally, the grade is about a 10' – 12' wide clearing with a gentle grade increasing from south to north. The former railroad grade no longer has tracks, ties, trestles, or other indicators of previous rail activity within this inspected segment. The grade is basically indistinguishable from an unimproved dirt road. The resource no longer conveys any sense of setting, place, feeling or association or possess any integrity after its abandonment 77 years ago.

A second, previously unidentified historic period resource was identified during the February 12, 2019 field inspection. It consists of a low, about six-inch high and six-inch wide linear concrete barrier located along a southwestern facing hillside above a cut (excavation). The concrete barrier appears to have been installed to control surface erosion and protect the excavated hillside below. The barrier was likely originally installed to protect a group of homes below the excavated face that are shown on a 1949 edition of the USGS topographic map for Grass Valley. A more modern concrete section with rubber discharge hose was added to the system at some point, probably when the commercial development below was constructed. The linear concrete erosion control feature does not appear to be associated with any important person or events, nor embodies any distinctive characteristics of type, period, or method of construction, nor represents the work of a master, or possess high artistic values. It has not yielded, or may be likely to yield, information important in history.

Neither resource meets criteria to be considered an eligible historic property.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X	20
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				X	20
c. Disturb any human remains, including those interred outside of formal cemeteries?		X			20

Impact Discussion

5 a, b. No eligible historic properties or archaeological resources are present on to the project site, or within the area of potential effect. **No impact.**

5 c. There is no evidence that human remains are present on the site. As with any project involving excavation and grading, there is a potential that previously unknown remains could be discovered. The standard mitigation measure will be implemented in such an event. **Less than significant impact with mitigation.**

Mitigation Measures

Mitigation Measure 5A: Halt work and contact the appropriate agencies if Cultural Resources are discovered during construction. All equipment operators and employees involved in any form of ground disturbance shall be advised of the remote possibility of encountering subsurface cultural resources. If such resources are encountered or suspected, work shall be halted immediately and the Nevada County Planning Department shall be contacted. A professional archaeologist shall be retained by the developer and consulted to access any discoveries and develop appropriate management recommendations for archaeological resource treatment. If bones are encountered and appear to be human, California Law requires that the Nevada County Coroner and the Native American Heritage Commission be contacted and, if Native American resources are involved, Native American Organizations and individuals recognized by the County shall be notified and consulted about any plans for treatment. A note to this effect shall be included on the grading and construction plans for any future projects.

Timing: Prior to issuance of future grading permits or improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Nevada County Planning Department

6. ENERGY

Existing Setting

Electric and natural gas facilities are provided in Western Nevada County by the Pacific Gas & Electric Company (PG&E). There are 5 PG&E substations within the County. Four of these

substations have distribution voltages of 12kV and one substation has a distribution voltage of 21kV. Three of the substations are served via 60kV transmission lines and two substations are served via 115kV transmission lines. The transmission lines are networked and generation for these transmission lines comes from generators located throughout the state. The transmission lines are operated by California Independent System Operators, CALISO. Propane is a common fuel source used in Nevada County by individual homes and businesses.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation?				X	A, 25
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X	A, D, 25

Impact Discussion

6 a, b. The proposed buildings will be new construction and will therefore be required to meet all current building standards including but not limited to the 2016 California Building Code, 2016 California Electrical Code, 2016 California Energy Code (Title 24) as well as the City of Grass Valley Building Code. As shown on the submitted floor plan and elevation drawings, the buildings would be designed to be as energy efficient as possible and would include LED lighting, double pane aluminum windows with Low "E" glazing which are designed to maintain energy efficiency as well as other requirements required by the 2016 California Energy Code. **Less than significant impact.**

Mitigation Measures

None.

7. GEOLOGY / SOILS

Existing Setting

According to the Natural Resources Conservation Service, Web Soil Survey, the property is underlain by Cohasset loam, shoulders, 3 to 20 percent slopes; Cohasset loam, backslopes, 5 to 30 percent slopes; and Secca-Rock outcrop complex, 2 to 50 percent slopes.

The Cohasset soils consist of residuum weathered from volcanic breccia and/or conglomerate. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Shrink-swell potential is low. The Secca soil consists of basic colluvium derived from igneous and metamorphic rock and/or residuum weathered from igneous and metamorphic rock. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Shrink-swell potential is high.

The County's Master Environmental Inventory shows the project site as being in an area of low potential for landslide activity and does not map the site as being near a known earthquake fault (Nevada County 1991).

The Alquist-Priolo Earthquake Fault Zoning Act was adopted in 1972 to prevent the construction of buildings in areas where active faults have surface expression. Ground or fault rupture is generally defined as the displacement that occurs along the surface of a fault during an earthquake. The project site is not within an Alquist-Priolo Earthquake Fault Zone, and there are no known faults that cross through the project site. Generally, western Nevada County is located in the low intensity zone for earthquake severity.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Directly or indirectly cause potential substantial adverse effects, including 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**	A, D, L, 9, 12
b. Result in substantial soil erosion or the loss of topsoil?		**X**			A, D, L, 9, 12
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				**X**	A, D, L, 9, 12
d. Be located on expansive soil creating substantial direct or indirect risks to life or property?		**X**			A, D, L, 9, 12
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 wastewater?				**X**	A, D, L, 9, 12
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				**X**	A, D, L, 9, 12
g. Result in substantial grading on slopes over 30 percent?				**X**	A, D, L, 9, 12

Impact Discussion

7 a, c. The County's Master Environmental Inventory shows the project site as being in an area of low potential for landslide activity and does not map the site as being near a known earthquake fault (Nevada County 1991). The Alquist-Priolo Earthquake Fault Zoning Act was adopted in 1972 to prevent the construction of buildings in areas where active faults have surface expression. Ground or fault rupture is generally defined as the displacement

that occurs along the surface of a fault during an earthquake. The project site is not within an Alquist-Priolo Earthquake Fault Zone, and there are no known faults that cross through the project site. Generally, western Nevada County is located in the low intensity zone for earthquake severity. The site is not geologically unstable. **No impact.**

7 b. The project is located on a parcel with an average 20% slope. While the apartment building is designed to fit onto the slope, with an additional story on the lower side of the building, site grading will be required for driveways, parking, foundations, and level outdoor use areas. A grading permit will be required, and the project will comply with all requirements of both the Nevada County and City of Grass Valley grading ordinances. The project development will require a Storm Water Pollution Prevention Plan in compliance with the National Pollutant Discharge Elimination System because these improvements would exceed one gross acre. Therefore, as required by current regulations in conformance with the State of California Regional Water Quality Control Board, Mitigation Measure 7A is recommended to require the approval of Storm Water Pollution Prevention Plan (SWPPP). In addition, the Mitigation Measure requires the approval of an Erosion and Sediment Control Plan prior to issuance of a Grading Permit or other improvement permit. **Less than significant impact with mitigation.**

7 d. The site contains soils with variable levels of shrink-swell potential. Pursuant to City and County Building Department requirements, a geotechnical report will be prepared to mitigate possible adverse impacts from excavation, such as the suitability of the underlying material. Recommendations made in the report will be implemented to assure site safety and building stability. Therefore, Mitigation Measure 7B is recommended to require the submission of a final Soils and Geotechnical Report prior to grading/building permit issuance to reduce any potential impacts with unstable soils and structural stability. **Less than significant impact with mitigation.**

7 e. The project will be served by the City of Grass Valley wastewater treatment system. City has provided a will-serve letter, which includes a statement that "[t]he owner of the Property must pay all applicable fees, charges, and assessments by COGV; submitting to COGV, and COGV's approval thereof, appropriate plans and specifications for sewer facilities serving the Property consistent with COGV's standards; and complying with applicable rules and regulations, including those of COGV." **No impact.**

7 f. There are no known paleontological resources or unique geological features in or around the project site. Being that there will be ground disturbance for grading and construction of the proposed buildings, off-street parking lot, storm water retention ponds and associated infrastructure improvements, Mitigation Measure 5A would require work to halt in the event that there is an unanticipated discovery of paleontological resources. Direct or indirect damage to paleontological resources is anticipated to be less than significant with mitigation. **Less than significant impact with mitigation.**

7 g. Slopes on the project site are generally not steeper than 20%. **No impact.**

Mitigation Measures

***Mitigation Measure 7A*:** Prepare and Implement an Erosion and Sediment Control Plan. Prior to issuance of a Grading Permit or improvement plans for all project-related grading including

driveway construction and drainage improvements, all plans shall incorporate, at a minimum, the following erosion and sediment control measures, which shall be implemented throughout the construction phase:

1. During construction, Best Management Practices (BMPs) for temporary erosion control shall be implemented to control any pollutants that could potentially affect the quality of storm water discharges from the site. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in accordance with California State Water Resources Control Board (SWRCB) requirements. The SWPPP shall include the implementation of BMPs for Erosion Control, Sediment Control, Tracking Control, Wind Erosion Control, Waste Management and Materials Pollution Control and Low Impact Development (LID)/post-construction standards that include a hydromodification component and shall be provided to the Nevada County Planning, Building and Public Works Departments prior to issuance of grading permits or approval of improvement plans.

2. Topsoil that will be used as fill material shall be removed and stockpiled for later reuse prior to excavation activities. Topsoil shall be identified by the soil-revegetation specialist who will identify both extent and depth of the topsoil to be removed.

3. Upon completion of grading, stockpiled topsoil shall be combined with wood chips, compost and other soil amendments for placement on all graded areas. Revegetation shall consist of native seed mixes only. The primary objectives of the soil amendments and revegetation is to create site conditions that keep sediment on site, produce a stable soil surface, resist erosion and are similar to the surrounding native ecosystem.

4. Geo-fabrics, jutes or other mats may be used in conjunction with revegetation and soil stabilization.

5. All construction and grading plans shall include a Note outlining the requirements provided below to ensure there is no introduction of noxious Weeds onto the subject parcel. If straw bales are used for erosion control, or if straw is broadcast over seeded areas, only certified weed-free straw or rice straw shall be utilized to minimize the risk of introducing or spreading noxious weeds such as Scotch Broom, yellow star thistle, or Italian thistle. Inspect all construction equipment to ensure that it does not transport noxious weeds into the project area.

6. To ensure the proper timely implementation of all Standard Construction Conditions, the applicant shall distribute copies of these measures and any other permit requirements to the contractors prior to construction commencing.

Timing: Prior to Issuance of Grading Permit or Building Permit and throughout construction
Reporting: Planning Department Approval of Grading and Construction Permits.
Responsible Agency: Planning Department and Building Department

Mitigation Measure 7B: Prepare a Final Soils and Geotechnical Report for Project Grading and Structural Work. Prior to issuance of a Grading Permit or improvement plans, a final Soils and Geotechnical Report shall be shall be prepared a licensed engineer and submitted to the Nevada County Planning and Building Departments, and recommendations therein followed for all subsequent grading and structural work. The Nevada County Building Department shall verify

that the recommendations are being implemented during the plan review and inspection stages of the permit process.

Timing: Prior to issuance of the Grading Permit and improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Planning Department, Department of Public Works, Building Department

Mitigation Measure 7C: Limit the grading season. Grading plans shall include the time of year for construction activities. No grading shall occur after October 15 or before May 1 unless the Chief Building Inspector or his/her authorized agent determines project soil conditions to be adequate to accommodate construction activities.

Timing: Prior to issuance of the grading permits or improvement plans
Reporting: Agency approval of permits or plans
Responsible Agency: Building Department

8. GREENHOUSE GAS EMISSIONS

Existing Setting

Greenhouse gases (GHGs) are those gases that trap heat in the atmosphere. GHGs are emitted by natural and industrial processes, and the accumulation of GHGs in the atmosphere regulates the earth's temperature. GHGs that are regulated by the State and/or EPA are carbon dioxide (CO 2), methane (CH 4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF 6) and nitrous oxide (NO 2). CO 2 emissions are largely from fossil fuel combustion. In California, approximately 43 percent of the CO 2 emissions come from cars and trucks. Electricity generation is another important source of CO 2 emissions. Agriculture is a major source of both methane and NO 2 , with additional methane coming primarily from landfills. Most HFC emissions come from refrigerants, solvents, propellant agents and industrial processes, and persist in the atmosphere for longer periods of time and have greater effects at lower concentrations compared to CO 2 . The adverse impacts of global warming include impacts to air quality, water supply, ecosystem balance, sea level rise (flooding), fire hazards, and an increase in health related problems.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, was adopted in September 2006 and requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through regulations to reduce emissions from stationary sources and from vehicles. The California Air Resources Board (ARB) is the State agency responsible for developing rules and regulations to cap and reduce GHG emissions. In addition, the Governor signed Senate Bill 97 in 2007 directing the California Office of Planning and Research to develop guidelines for the analysis and mitigation of the effects of greenhouse gas emissions and mandating that GHG impacts be evaluated in CEQA documents. CEQA Guidelines Amendments for GHG Emissions were adopted by OPR on December 30, 2009. The Northern Sierra Air Quality Management District (NSAQMD) has prepared a guidance document, Guidelines for Assessing Air Quality Impacts of Land Use Projects. Therefore, in order to satisfy CEQA requirements, projects should make a reasonable attempt to quantify, minimize and mitigate GHG emissions as feasible.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		X			A, G, 25
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				X	A, G, 25

Impact Discussion

8 a, b. Given the complex interactions between various global and regional-scale physical, chemical, atmospheric, terrestrial, and aquatic systems, it is not possible to determine to what extent this project's CO2 emissions would result in any altered physical conditions. In considering this project's GHG emissions within the context of statewide and regional emissions, it is assumed they will be minimal, given the small scale of the proposed project. The proposed project is anticipated to result in incremental increases in CO2 levels with some new vehicle trips building heating and cooling.

Short-term GHG emission impacts would result from construction of the site. The CalEEMOD.2016.3.2 model described in the Air Quality section of this Initial Study found that construction impacts will generate approximately 312 tons of CO2e (CO2e is Carbon Dioxide Equivalent, a measurement that expresses units of different greenhouse gases as equivalent to units of carbon dioxide in the ability to affect global warming).

Following construction, the major source of GHG emissions generated by the proposed project would be vehicle source CO2e emissions. In total, all operational CO2e would be approximately 516 tons per year. Pursuant to Section 3 – Air Quality of this Initial Study, Mitigation Measure 3B is recommended which would limit construction equipment idling time to a maximum of 5 minutes to reduce GHG emissions to less than significant with mitigation. Therefore, with the implementation of Mitigation Measures 3B, short-term construction impacts and long-term operational impacts related to CO2e emissions are anticipated to be **less than significant with mitigation**.

Mitigation Measures

See Mitigation Measure 3B.

9. HAZARDS / HAZARDOUS MATERIALS

Existing Setting

A Phase I Environmental Site Assessment was prepared for the property by RNC Environmental. The assessment found no evidence of any past use of the property, except that it was crossed by the tracks of the Nevada County Narrow Gauge Rail Road, which operated from 1876 to 1943. Surrounding properties were rural until about 1975. Following construction of a SR 20/49 freeway, with an interchange southwest of the subject property at Brunswick Road, retail, commercial, and office development began in the area. A shopping center now occupies

the adjacent property to the west and southwest. Properties to the north and east remain rural residential.

Two businesses in the shopping center are small quantity generators of hazardous wastes. There is no evidence that activities there have impacted the subject property. Eleven Leaking Underground Fuel Tank sites were identified with a half mile of the subject property. All have been closed with no evidence of migratory contamination. No other regulated hazardous materials sites or facilities were identified in the surrounding area. The assessment found no evidence of recognized environmental conditions on the subject property.

A Phase II environmental site assessment was prepared by NV5. The report, dated October 9, 2018, evaluated potential concerns associated with properties located in historic mining areas. The assessment found no evidence of soil or groundwater contamination on the property. The NV5 report did note the presence of arsenic in the soil in concentrations of 4.2 to 8.6 mg/kg. This concentration significantly exceed the regulatory Environmental Screening Level (ESL) of . 067 mg/kg. However, arsenic is a common naturally occurring element in soils, and is often found to exceed the ESL. The California Department of Toxic Substances Control has determined that concentrations of up to 12 mg/kg can generally be considered naturally occurring, and do not require consideration as chemicals of concern.

The Nevada County Airport Land Use Compatibility Plan (NCALUCP) was adopted by the Nevada County Airport Land Use Commission (ALUC) on September 21, 2011. The NCALUCP indicates that the project site is within Zone D* - "Urban Overlay Zone". The plan further indicates that ALUC review is required for the following actions affecting land uses within Compatibility Zone D*:

(1) Any proposal for development projects having an average density of 21 or more residential dwelling units per acre.

(2) Any proposal requiring discretionary local agency approval for development projects regularly attracting more than 200 people to outdoor activities on the project site.

(3) Any obstruction reviewed by the Federal Aviation Administration in accordance with Part 77 of the Federal Aviation Regulations that receives a finding of anything other than "not a hazard to air navigation."

(4) Any project having the potential to create electrical or visual hazards to aircraft in flight, including:

Electrical interference with radio communications or navigational signals;
Lighting which could be mistaken for airport lighting;
Glare in the eyes of pilots of aircraft using the airport; and
Impaired visibility near the airport.

(5) Projects having the potential to cause increased attraction of birds or other wildlife that can be hazardous to aircraft operations within the vicinity of an airport.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X	19
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X	19
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	19
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, create a significant hazard to the public or the environment?				X	19
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		A
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	A
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X		A

Impact Discussion

9 a-d. The proposed project includes a residential development and a social services facility. No industrial or other business activities will be involved in its operation. Any hazardous materials on the project site will be limited to retail quantities. There is no risk of exposure to residents, clients, the public, or any nearby schools. The site is not listed on the Cortese List (Government Code Section 65962.5), nor is there any other known chemical hazard on the property. **No impact.**

9 e. The proposed project will not involve attendance at outdoor activities. The project does not induce features represent an obstruction to aviation, will not create electrical or visual hazards, and will not attract birds or other wildlife. The proposed residential unit density is 17.67 units per acre. Therefore, ALUC review is not required. **No impact.**

9 f. No emergency response or evacuation plan will be affected by the project. **No impact.**

9 g. The project site is within the Very High Fire Hazard Severity Zone as mapped by CalFire. As a new construction site, the project will meet emergency vehicle accessibility

standards and have a defensible space around structures where brush and flammable vegetation is reduced or removed. The project will be designed to meet Grass Valley Fire Department standards, and will be reviewed for compliance with these standards prior to building permit issuance, as well as during building inspections during construction and at its completion. These requirements reduce impacts regarding fire safety and prevention. **Less than significant**.

Mitigation Measures
None.

10. HYDROLOGY / WATER QUALITY

Existing Setting
The project parcel is part of Rattlesnake Creek-Wolf Creek Watershed which flows into the Upper Bear River sub-basin within the American River subregion. An ephemeral drainage crosses the southern portion of the parcel. The property is classified as a Zone X per the Flood Insurance Rate Maps which means it lies outside the 500-year floodplain. Onsite storm water traverses the site in a combination of sheet and channel flows to the southwest and within the ephemeral stream. The site will be served by Nevada Irrigation District (NID) for domestic water and the City of Grass Valley wastewater system.

There is currently a roadway cross culvert that conveys upstream drainage from east to west across Old Tunnel Road onto the site. Drainage then flows in the southwesterly direction through a season drainage swale. The project proposes to extend the existing culvert across the site and connecting it to the existing City storm drain system located in Sutton Way.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X			A, D, J
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X	A, C, E

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i. result in substantial erosion or siltation on- or 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 run off; or iv. impeded or redirect flood flows?			X		A, D, L 9,19, 21
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X	L,9,13
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X	A, D
f. Place housing within a 100-year flood hazard area as mapped on a federal Flood hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X	L,9,13
g. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X	L,13

Impact Discussion

10 a. Project grading activities will require a City or County grading permit. Additionally, construction activities greater than one acre in disturbance require a Construction Storm Water General Permit, consistent with Construction General Permit Order No. 2009-009-DWQ, issued by the State Water Resources Control Board to address storm water runoff. The permit will address clearing, grading, grubbing, and disturbances to the ground, such as stockpiling, or excavation. This permit will also require the developer to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) with the intent of keeping all products of erosion from moving off site into receiving waters. The SWPPP includes Best Management Practices (BMPs) to prevent construction pollutants from entering storm water runoff. Mitigation Measure 7C, limits grading to the dry season, and Mitigation Measure 7A, requires a SWPPP prior to grading permit issuance. **Less than significant impact with mitigation**.

10 b. The proposed project will be served by public NID water. It will not directly or indirectly utilize groundwater supplies. **No impact.**

10 c. A preliminary Drainage Plan prepared for the apartment site. The proposed apartment building will have a footprint of approximately 18,956 square feet and adjacent

impervious areas will total 55,142 sf. The project will include three on-site bio-retention basins. The basins were designed to effectively detain or "hold back" the necessary volume of water, only releasing the pre-project 2-year storm peak flow rate.

In addition, the project proposes to improve storm water quality by including the following components within the bio-retention basin:

- Installation of an 18" layer of highly permeable planting material located at the bottom of the basin to allow for percolation into the underlying soils;
- Installation of appropriate plant species that will allow for evapotranspiration of storm water;
- Installation a 4" perforated pipe set in a 12" thick section of drain rock (underdrain) to transport any filtered water that the underlying soil strata will not accept to the outlet structure.
- The underdrain will also help keep the basin dry and fee of any standing water.

According to architect Robert Wallis, "It is our intent that the grading on the resource center site be kept to a minimum. We will utilize a combination of raised floor with perimeter a foundation and slab on grade foundations to accomplish this. Retaining wall height to be kept under 6 feet." A stormwater retention in a basin will be provided toward in the lower portion of the site, or beneath the parking lot in a vault.

Less than significant impact.

10 d-g. There is no flood hazard or designated flood zone on the project site; the project is not in a tsunami or seiche zone. It does not conflict or obstruct the implementation of a water quality control plan. **No impact.**

Mitigation Measures
See mitigation measures 7A and 7C.

11. LAND USE / PLANNING

Existing Setting
The project site is located within the City of Grass Valley. The City has designated the site as OP- Office Professional. According to Thomas Last, Community Development Director, establishment of a Homeless Day Resource Center would be considered a Social Service Organization and is a permitted use in the OP zone. The new construction of 41 units of Permanent Supportive Housing, and 9 units of transitional housing at the resource center, will require approval of a Use Permit.

According to the City of Grass Valley General Plan Housing Element, there are an estimated 120 homeless persons currently living in the city. Among the goals in the Housing Element is to address special housing needs as defined by state law and local conditions (GOAL B). Policy 5 under that goal states that the City shall allow overnight shelters and transitional housing facilities for homeless individuals and families in appropriate zoning districts.

Section65915(e)(1) of the California Government Code, AssemblyBill 2162 and Section17.32 of the Grass Valley Development Code allow for a Density Bonus for restricted-income projects.

The primary purpose of the Housing Accountability Act and "Density BonusLaw" is to assist in the feasibility of affordable housing through the use of concessions that lead to cost savings and/ or a reduction of the cost of land per unit.

The project site is located on land owned by the County of Nevada, but is within the limits of the City of Grass Valley. As a result, the County will be approving and authorizing development of the proposed project, while making every effort to comply with the City of Grass Valley policies. The Nevada County Building Department will be responsible for issuance of building permits.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Physically divide an established community?				X	A, M, 9
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	26

Impact Discussion

11 a. The project site is located at the edge of the Grass Valley city limit. It is adjacent to a shopping center and professional office sites on the south and west, and rural residences across Old Tunnel Road to the north and east. No community will be divided. **No impact.**

11 b. The project will be consistent with both the Grass Valley General Plan, and the Nevada County General Plan. It is also consistent with state and local Density Bonus regulations. With the exception of the manager's unit, all units will be restricted to homeless households earning 40% of the Area Median Income (AMI) or below. A density bonus requested by the applicant includes the following:

1. The Project consists of 41 units located on a 2.32 acre site, which is a density of 17.67 units per acre. The current zoning allows 15 units per acre; a maximum density bonus of 35% would allow 23.8 units per acre.

2. The maximum allowable height in the Office Professional zone is 35ft and 2- stories. The proposed project is a 3 story building with a height of 41'-11⅛".

3. The Grass Valley Development Code has no specific parking requirements for Permanent Supportive Housing projects. The project proposes 28 parking spaces, which equates to roughly 0.68 spaces per unit.

No impact.

Mitigation Measures

None.

12. MINERAL RESOURCES

Existing Setting

The project area is not mapped within a Mineral Resource Zone (MRZ), or area of known valuable mineral deposits according to the State Department of Mines and Geology. It lies in proximity to mapped mineral resources around Grass Valley and about a tenth of a mile south of the recorded Boreham mine. The historical survey has called out potential tailings piles on site, but there are no known mineral resources at this location.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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	F
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	F

Impact Discussion

12 a, b. The proposed project is not mapped within a known mineral resource area or MRZ and would not change existing land uses on the project site. **No impact.**

Mitigation Measures

None.

13. NOISE

Existing Setting

The apartment portion of the project is to be partially funded through the U.S. Department of Housing and Urban Development (HUD) Project-Based Vouchers. As such, it will be required to meet HUD noise standards, which specify that the Day-Night Noise Level (LDN) shall not exceed 65 dB on the exterior of the buildings. Assuming normal construction materials, this will provide for an interior LDN of no more than 45 dB.

The two potentially significant noise sources near the site are the Golden Center Freeway (State Route 20/49), which is approximately 500 feet west of the proposed apartment building site; and the Nevada County Airport, which lies approximately 1.5 miles to the southeast.

Would the proposed project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?			X		A,17,18,27

Would the proposed project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
b. Generation of excessive ground borne vibration or ground borne noise levels?				X	A
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	A,L, 27

Impact Discussion

13 a. The nearest sensitive receptors to the project site are low-density residential uses east of the project area. Other surrounding properties are retail, commercial and office spaces, and are not considered noise sensitive.

Construction would result in temporary, low-level noise impacts at the nearest residences. The project will be required to comply with City and County noise standards, which limit construction work to the hours of 7 AM to 7 PM Monday through Saturday. **Less than significant impact.**

The apartment portion of the project will not be a significant source of noise. The Resource Center includes a dog kennel, which will be located adjacent to the southwest corner of the building. The kennel is intended for day use only by dog-owning clients of the Resource Center, and will not be a source of nighttime noise. It's location will also provide the greatest shielding between the kennel and the apartments, as well as from adjacent residences across Old Tunnel Road. **Less than significant impact.**

13 b. The proposed project includes grading for improvements to construction the building pad and associated off-street parking lot. The proposed project would not result in blasting or other activities that could cause substantial vibration impacts. **No impact.**

13 c. HUD's Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from nearby airports and from roadway and railway traffic. According to CalTrans traffic data, the average daily traffic volume on the Golden Center Freeway at Brunswick Road is 30,550 cars, 975 medium trucks and 975 large trucks. The HUD calculator shows that this will result in a DNL of 63.37 at the west side of the apartments. The Nevada County Airport Land Use Compatibility Plan shows that the project site is 3,500 feet outside the 55 dB airport noise contour, indicating that the airport is not a significant source of noise to the project site. The combined noise environment at the site is a **Less than significant impact.**

Mitigation Measures

None.

14. POPULATION / HOUSING

Existing Setting:
In 2018, the State of California Department of Finance estimated that unincorporated Nevada County had a population of 66,207 and consisted of 31,182 housing units. Grass Valley is the largest city in western Nevada County, with a population of 12,785 with 6,696 housing units. Small towns and rural development that is largely integrated into the natural environment characterize the remainder of the County. Almost half of the housing units in Grass Valley are multi-family.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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	A
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X	A

Impact Discussion

14 a. The project is intended to provide housing and services for persons already living in the Nevada County area, but who are lacking permanent housing. The project will not generate new population growth. The project will have a potential beneficial impact by providing a permanent or transitional housing solution to those without housing. **No impact.**

14 b. The project site is presently vacant. No people or housing will be displaced. **No impact.**

Mitigation Measures
None.

15. PUBLIC SERVICES

Existing Setting:
The following public services are provided to this site:

- The Grass Valley Fire Department provides fire protection services to this site.
- The Grass Valley Police Department provides law enforcement services.
- The Grass Valley Public Works Department has responsibility for streets and street lighting, drainage systems, water and wastewater systems, and parks/recreation facilities.
- The Grass Valley Elementary School District and the Nevada Joint Union High School District serve this site.
- Solid waste generated during and after construction is disposed of at the McCourtney Road Transfer Station, which is maintained by the County of Nevada County, who contracts with a solid waste disposal company to haul material to a permitted sanitary landfill.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Result in substantial adverse physical impacts associated with the provision of or 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 following the public services:					
1) Fire protection?			X		N
2) Police protection?			X		N
3) Schools?			X		N
4) Parks?				X	N
5) Other public services or facilities?			X		N

Impact Discussion

15 a. The project proponent will obtain will-serve letters from each of these agencies. The project will be required to pay developer fees, which will offset the cumulative impacts to physical facility needs for each of these services; and will be required to cover any costs directly required for development of the project site. **Less than significant impact.**

Mitigation Measures

None.

16. RECREATION

Existing Setting

There are several recreational facilities near the proposed land division. The parcel is within the Grass Valley Community Region and just over a mile from Empire Mine State Historic Park. The current city parks system is comprised of approximately 108 acres of park land consisting of seven developed park sites and one undeveloped park site. Facilities contained within these parks include 2 baseball fields, 1 softball field, 1 soccer field, 1 skatepark, 1 disc golf course, 2 outdoor basketball courts, 4 tennis courts, 1 volleyball court, 4 playgrounds, several picnic areas, a museum and a swimming pool. The City parks also contain 3 public meeting rooms of varying size.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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	N

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X	N
c. Conflict with established recreation use of the area, including biking, equestrian and/or hiking trails?				X	N

Impact Discussion

16 a, b. People without permanent housing often rely on public parks and other public facilities to meed many of their basic needs - restroom facilities, picnic areas, and informal campsites. The project will provide permanent housing for a portion of this population, and should result in reduced use of parks for these purposes.

The project also includes basic recreational facilities for residents, including a barbecue / picnic area, and a children's play structure. **No impact.**

16 c. There is no established recreational use of the project site or surrounding properties. **No impact.**

Mitigation Measures

None.

17. TRANSPORTATION

Existing Setting

The site is approximately a quarter mile northeast of the intersection of Highway 49/20 and Brunswick Road in Grass Valley. The primary access to the site would from Brunswick Road via Old Tunnel Road.

Gold Country Stage provides public transit throughout western Nevada County, with connections to Auburn. Route 4BB serves the vicinity of the project, with two stops located along Sutton Way, and two stops on Old Tunnel Road; the nearest stop is at the Nevada City Senior Apartments, 500 feet south of the project site.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle or pedestrian facilities?			X		A,B
b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X	A,B
c. Substantially increase hazards due to a geometric design feature (e.g., a sharp curve or dangerous intersection) or incompatible uses (e.g., farm equipment)?				X	A,H,M
d. Result in inadequate emergency access?				X	H,M
e. Result in an increase in traffic hazards to motor vehicles, bicyclists, or pedestrians, including short-term construction and long-term operational traffic?		X			A,H,M

Impact Discussion

17 a, b. According to a traffic analysis prepared by K.D. Anderson & Associates, the City of Grass Valley has determined that a project causing fewer than 63 p.m. peak hour trips is judged to have traffic impacts that are less than significant. The traffic analysis indicates that the apartments can be expected to generate 23 p.m. peak hour trips, and the resource center 22. A total of 45 project-related p.m. peak hour trips is below the 63-trip threshold. The project will be required to pay City of Grass Valley traffic mitigation fees, and the Nevada County Regional Transportation Mitigation Fee; which will further reduce any cumulative impact on traffic.

The Grass Valley Development Code has no specific parking requirements for Permanent Supportive Housing projects. The project proposes 28 parking spaces, which equates to roughly 0.68 spaces per unit. The low-income target tenants are somewhat less likely to own cars, plus the availability of public transportation and directly adjacent shopping facilities will make carless living feasible. It is therefore expected that the proposed number of parking spaces will be sufficient.

Less than significant impact.

17 c. As shown in the proposed site plan, the entrance driveway to the project will be off Old Tunnel Road. The driveway includes sufficient off-street clearance to allow vehicles to maneuver into the Service Center's parking lot, or the access gate to the apartments. No hazard will be created. **No impact.**

17 d. As shown in the proposed site plan, access to the project site will be off Old Tunnel Road. There will be both a main access driveway at the south end of the site, and a secondary emergency access. **No impact.**

17 e. The project will result in an increase in local pedestrian and bicycle traffic, as some residents are likely to be without cars. As shown in the proposed site plan, the project

site includes a narrow strip of land which extends between adjacent properties and connects to Sutton Way. A pedestrian/bicycle path is to be constructed within this strip, allowing project residents safe, car-free access to adjacent businesses and services.

However, short-term truck traffic for the importation of materials including soil, during construction may present a unique traffic hazard on both local roads and high use roadway such as Brunswick Road. The large slow-moving equipment typically used to haul large quantities of material is not viewed as compatible with urban traffic uses such as public transit, bicyclists, and pedestrians. As part of the proposed project the applicant has indicated that the construction of the proposed project may require the importation of as much as 10,000 cubic yards of material to be balanced on site as fill. Therefore, Mitigation Measure 17A is proposed which would limit the time and duration of soil import so as to avoid hours of peak traffic. With this mitigation, it is anticipated that impacts related to traffic safety would be **less than significant with mitigation.**

Mitigation Measures

Mitigation Measure 17A: Limit Timing of Soil Import. The importation of soil material from off-site shall only be hauled to the project site during non-peak hours (9 am to 4 pm), Monday through Friday. The importation of activities shall meet all identified noise thresholds and dust control measures shall implemented at the project site. Grading plans shall include a Note that reflects the restricted hours and days for soil import activities.

Timing/Plan Requirements: A note shall be shown on the final grading plans
Reporting: Approval of grading and improvement plans
Responsible Agency: Planning and Building Departments

18. TRIBAL CULTURAL RESOURCES

Existing Setting

A Cultural Resource Study by Peak & Associates (March 28, 2019), included contacting tribes with interests in the Nevada County Area, requesting their input. The United Auburn Indian Community of the Auburn Rancheria (UAIC) responded with a request for consultation on projects falling within their delineated ancestral lands. See Section 5 for additional information regarding cultural resources.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. 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: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X			20

Impact Discussion

18 a. No known tribal resources are present on the project site. Because the project involves excavation and soil disturbance, there is a potential the previously unknown resources may be discovered. The United Auburn Indian Community of the Auburn Rancheria (UAIC) requested that mitigation measures be implemented in order to address this potential. **Less than significant impact with mitigation.**

Mitigation Measures

Mitigation Measure 18A: If potential tribal cultural resources (TCRs), archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease within 100 feet of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from a traditionally and culturally affiliated Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from traditionally and culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe.

Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. These recommendations will be documented in the

project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with UAIC and other traditionally and culturally affiliated Native American Tribes regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

Timing: *Prior to issuance of permits for construction*
Reporting: *Approval of construction permits*
Responsible Agency: *Nevada County Planning Department and United Auburn Indian Community (UAIC)*

Mitigation Measure 18B. A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the applicant shall notify the United Auburn Indian Community (UAIC) of the proposed earthwork start-date. A UAIC tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of ground breaking activity. During this inspection, a site meeting of construction personnel shall also be held in order to afford the tribal representative the opportunity to provide tribal cultural resources awareness information. If any tribal cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the project applicant shall immediately notify the CEQA lead agency representative. The project applicant shall coordinate any necessary investigation of the site with a UAIC tribal representative, a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the UAIC and provide proper management recommendations should potential impacts to the resources be found by the CEQA lead agency representative to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the CEQA lead agency representative by the qualified archaeologist. Possible management recommendations for tribal cultural resources, historical, or unique archaeological resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by CEQA lead agency representative staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources, including the use of a Native American Monitor whenever work is occurring within 100 feet of the find.

Timing: *Prior to start of construction*
Reporting: *Construction contractor to provide documentation to Nevada County Planning Department that contact was made.*
Responsible Agency: *Nevada County Planning Department and United Auburn Indian Community (UAIC)*

Mitigation Measure 18C. A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be

distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

Timing: *Prior to issuance of permits for construction*
Reporting: *Approval of construction permits*
Responsible Agency: *Nevada County Planning Department and United Auburn Indian Community (UAIC)*

19. UTILITIES / SERVICE SYSTEMS

Existing Setting

Electrical service is provided to this area by Pacific Gas & Electric and is currently available on the site. Natural gas is not available in this area, but the site will be served by one of several private propane companies that serve western Nevada County. Public water is available to this property by Nevada Irrigation District. Solid waste generated either during the development of the site or after occupancy, is processed at the McCourtney Road Transfer Site, which is maintained by the County of Nevada, who contracts with a solid waste disposal company to haul material to a permitted sanitary landfill. There are a number of wireless telephone services available in western Nevada County but with variable coverage depending upon the carrier. AT&T provides land line phone service to this area. Sewage treatment and disposal will be provided by the City of Grass Valley.

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
a. Require or result in the relocation or the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?			X		A,D
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X		A
c. 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 goals?			X		C

Would the proposed project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
d. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X		C

Impact Discussion

19a-b: The proposed project would not result in development that would create a need for the extension of electrical power, storm drainage facilities, or water or wastewater treatment facilities. The project is adjacent to a developed area and within the city limits of Grass Valley. Services are already provided to or adjacent to the site. NID will provide treated water to the subject parcel and PG&E provides electrical power to the site, and the project would be served by these utilities. The project will connect to the Grass Valley public sewer service. **Less than significant impact**.

19c-d: The operational phase of the proposed project will result in the production of typical residential solid waste. Solid waste generated by the project would be stored onsite in the trash enclosure shown on the site plan, and then disposed of at the McCourtney Road Transfer Station. Construction activities, however, typically produce solid waste in the form of construction materials, vegetation, or industrial toxic waste like glues, paint, and petroleum products. Neither stumps nor industrial toxic waste (petroleum and other chemical products) are accepted at the McCourtney Road transfer station; if encountered, the contractor will be required to comply with legal requirements for proper disposal of such materials. **Less than significant impact**.

Mitigation Measures
None.

20. WILDFIRE

Existing Setting
The Disaster Mitigation Act of 2000 (DMA), requires that each State develop a hazard mitigation plan, in order to receive future disaster mitigation funding following a disaster. The DMA also requires the development of local plans for that particular jurisdiction to be eligible for post-disaster mitigation funding. The purpose of these requirements is to encourage State and local government to engage in systematic and nationally uniform planning efforts that will result in locally tailored programs and projects that help minimize loss of life, destruction of property, damage to the environment and the total cost of disasters before they occur. The Nevada County Office of Emergency Services (OES), in coordination with the Nevada County Operational Area Emergency Services Council, has developed a Local Hazard Mitigation Plan (LHMP) for Nevada County to meet the requirements of the DMA on behalf of the County, its incorporated cities and towns and participating districts. Approved by the Nevada County Board of Supervisors, the LHMP enables Nevada County to be eligible for future post-disaster mitigation

funding. The LHMP recognizes the threat of natural and man-made disasters and hazards pose to people and property within Nevada County and that undertaking hazard mitigation action delineated in the LHMP reduces the potential for harm to people and property from future disaster and hazardous incidents.

If located in or near state responsibility areas or lands classified as very high fire severity hazard zones, would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**	**Reference Source (Appendix A)**
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?				X	A,H,M, 23
b. Due to slope, prevailing winds, or other factor, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?			X		A,B,H,M, 18
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	A,H,M
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		A,H,M, 12

Impact Discussion

20 a-d**.** As noted above, he project site is within the Very High Fire Hazard Severity Zone as mapped by CalFire. As a new construction site, the project will meet emergency vehicle accessibility standards and have a defensible space around structures where brush and flammable vegetation is reduced or removed. The project will be designed to meet Grass Valley Fire Department (GVFD) standards, and will be reviewed for compliance with these standards prior to building permit issuance, as well as during building inspections during construction and at its completion. GVFD will also require an on site hydrant and vegetation management plan. These requirements reduce impacts regarding fire safety and prevention. **Less than significant**.

Mitigation Measures

None.

21. MANDATORY FINDINGS OF SIGNIFICANT ENVIRONMENTAL EFFECT

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Reference Source (Appendix A)
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 major periods of California's history or prehistory?		X			A
b. Does the project have environmental effects that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of the project are considered when viewed in connection with the effects of past, current, and probable future projects.)			X		A
c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		X			A

Impact Discussion

21 a, c. As discussed in Sections 1 through 20, development of the proposed project would comply with all local, state, and federal laws governing general welfare and environmental protection. Project implementation during construction and operation could result in potentially adverse impacts to Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Greenhouse Gas Emissions, Hydrology/ Water Quality, Transportation, Tribal Cultural Resources and possible impacts to Utilities/Services. Each of those impacts is mitigated to levels that are ***less than significant with mitigation*** as outlined in each section.

21 b. A project's cumulative impacts are considered significant when the incremental effects of the project are "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. Reasonably foreseeable projects that could have similar impacts to the proposed project include other anticipated projects within the project vicinity that could be constructed or operated within the same timeframe as the project. All of the proposed project's impacts, including operational impacts, can be reduced to a less than significant level with implementation of the mitigation measures identified in this Initial Study and compliance with existing federal, state, and local regulations. Therefore, the

proposed project would have ***less than significant*** environmental effects that are individually limited but cumulatively considerable.

Mitigation Measures
See all above.

RECOMMENDATION OF THE PROJECT PLANNER:

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.

_X_ 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 a "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.

Preparer:_____ Date: 5/22/19

APPENDIX A – REFERENCE SOURCES

A. Planning Department
B. Department of Public Works
C. Environmental Health Department
D. Building Department
E. Nevada Irrigation District
F. Natural Resource Conservation Service/Resource Conservation District
G. Northern Sierra Air Quality Management District
H. Caltrans
I. CALFIRE / Nevada County Consolidated Fire Protection District
J. Regional Water Quality Control Board *(Central Valley* Region)
K. North Central Information Service, Anthropology Department, California State University, Sac.
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Phase I
Environmental Site Assessment
(ASTM E1527-13)

Brunswick Commons
APN 035-400-054
936 Old Tunnel Road
Grass Valley, Nevada County, California 95945



Prepared For:
Pacific West Communities, Inc
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April 19, 2019
RNC Project Number 1905A

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Phase I Environmental Site Assessment
Brunswick Commons
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936 Old Tunnel Road
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Phase I Environmental Site Assessment
Brunswick Commons
APN 035-400-054
936 Old Tunnel Road
Grass Valley, California

1. SUMMARY

RNC Environmental, LLC (RNC) has been retained by Pacific West Communities, Inc., to conduct a Phase I Environmental Site Assessment for the property identified as Assessor's Parcel Number 035-400-054, located at 936 Old Tunnel Road in the City of Grass Valley, Nevada County, California. This site is proposed for development as the "Brunswick Commons." The primary investigator for the assessment was Neil O'Hara, Environmental Professional.

The standards and practices implemented in this assessment are intended to result in the identification of conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property. The assessment seeks to identify current and past property uses of the property, uses of hazardous substances on the property, and activities that could have caused releases or threatened releases of hazardous substances. The assessment also seeks to identify and evaluate adjoining and nearby properties where environmental conditions may exist that could have resulted the migration of hazardous substances onto the subject property.

Sources of this information include interviews with present and (as necessary) past owners and operators of the property; a review of historical sources such as aerial photographs, maps, and building records; a search for environmental cleanup liens on the property; a review of government records of hazardous material storage facilities, known or threatened releases, waste generation, cleanup sites, etc., for the subject and surrounding properties; a visual inspection of the subject and adjacent properties, and a review of various information provided by the client.

This assessment has found that the subject property consists of a vacant 5.0± acre parcel, located at the eastern edge of the city of Grass Valley. No past use of the property has been identified, except that it was crossed by the tracks of the Nevada County Narrow Gauge Rail Road, which operated from 1876 to 1943. Surrounding properties were rural until about 1975. Following construction of a SR 20/49 freeway, with an interchange southwest of the subject property at Brunswick Road, retail, commercial, and office development began in the area. A

shopping center now occupies the adjacent property to the west and southwest. Properties to the north and east remain rural residential.

Two businesses in the shopping center are small quantity generators of hazardous wastes. There is no evidence that activities there have impacted the subject property. Eleven leaking UST sites were identified with a half mile of the subject property. All have been closed with no evidence of migratory contamination. No other regulated hazardous materials sites or facilities were identified in the surrounding area. Introduction

This assessment has found no evidence of recognized environmental conditions on the subject property.

1.1. Location and Legal Description of Subject Property

The subject property consists of an irregularly-shaped 5.0± acre parcel, located on the west side of Old Tunnel Road just north of the intersection of Town Talk Road, in the City of Grass Valley, Nevada County, California. The street address is 936 Old Tunnel Road.

The property includes Assessor's Parcel 035-400-054. The full legal description of the property is provided in the preliminary title report, Appendix F.

Location maps and site maps of the subject property are attached to this report as Appendix A. Photographs of the subject property are attached to this report as Appendix B.

1.2. Purpose

This report is intended to constitute an "inquiry by an environmental professional" for All Appropriate Inquiry under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As such, it presents the results of an effort to identify whether *recognized environmental conditions* may exist on the property.

The term *recognized environmental conditions* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

This report was commissioned in association with the potential development of the property for use as affordable rental housing, including compliance with a National Environmental Policy Act (NEPA) Environmental Assessment under HUD regulations at 24 CFR Part 58.

1.3. Scope of Work

RNC Environmental, LLC, has contractually agreed to conduct a Phase I Environmental Site Assessment, utilizing methods and procedures consistent with the nationally recognized standard, ASTM E1527-13, and with EPA All Appropriate Inquiry regulations.

The definition of *recognized environmental conditions* includes the encroachment of hazardous vapors onto the property. Where not otherwise specified, this assessment uses the guidelines

defined by ASTM E2600-10 to determine whether a vapor encroachment condition is potentially present.

No special terms or conditions were specified by the user. Should there be a need to conduct an investigation into a specific question not addressed in this report, contact our office immediately regarding your concerns.

1.4. LIMITATIONS AND EXCEPTIONS

This report was compiled as a Phase I Environmental Site Assessment for the subject project. This report contains information and data provided to RNC by several sources. RNC in no way warrants the accuracy or completeness of the information provided by those sources.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. A Phase I Environmental Site Assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost. All appropriate inquiries does not mean an exhaustive assessment of a property. This assessment represents a balance between the competing goals of limiting the costs and time demands and the reduction of uncertainty about unknown conditions resulting from additional information.

For this assessment, no additional project-specific limitations arose, and no exceptions were made to the assessment process as defined by ASTM E1527-13.

1.5. USER RELIANCE

This report was prepared for the exclusive use of Pacific West Communities, Inc, and its successors and/or assigns. It also may be relied upon by lenders, investors, government agencies (including, but not limited to, the California Department of Housing and Community Development, the USDA Rural Development Program, and the California Tax Credit Allocation Committee) and/or nonprofit entities which may provide financial assistance for the proposed development of the subject property. No other person or entity is entitled to rely upon this report without the specific written authorization of RNC. Any such reliance is subject to the same limitations, terms, and conditions as the original contract with the client. RNC specifically disclaims any responsibility for any unauthorized use of this report.

All users of this report, whether identified in this section, provided authorization in a separate reliance letter, or for any reason using this report without specific authorization, should be aware that Landowner Liability Protection under CERCLA is also contingent upon the user's compliance with certain additional responsibilities, as specified in ASTM E1527-13, §6. This includes recording your own knowledge (or lack thereof) regarding the property; we have provided a blank user questionnaire in Appendix G for this purpose. RNC cannot be responsible for any user's failure to comply with these responsibilities.

1.6. Validity of Report

This report may be presumed to be valid for one year from its cover date, excepting that if acquisition of the property occurs more than 180 days after the cover date of this report, certain information in the report must be updated in accordance with ASTM E1527-13, §4.6.

2. User Provided Information

2.1. Title Records

A Preliminary Title Report regarding the subject property, prepared by First American Title Company and dated December 5, 2018, was provided.

2.2. Environmental Liens or Activity and Use Limitations

Based on a review of the title documents, no Environmental Liens and/or Activity Use Limitations, which indicate a past or present release of a hazardous substance or petroleum products, were recorded. No other knowledge of environmental liens was identified by the user.

2.3. Owner, Property Manager, and Occupant Information

According to the Preliminary Title Report, the property is owned by "Leo R. Granucci, Trustee Leo R. Granucci Family Revocable 1997 Trust Dated March 16, 1997."

Additional Grant Deed documents provided with the title report show that the property was acquired by the County of Nevada on January 22, 2019.

2.4. User Questionnaire

A User Questionnaire was completed by Cameron Johnson on behalf of Pacific West Communities, Inc.

2.4.1. Specialized Knowledge

The user reported no specialized knowledge of the property.

2.4.2. Commonly Known or Reasonably Ascertainable Information

The user reported no commonly known or reasonably ascertainable information of environmental significance with regard to the property.

2.4.3. Valuation Reduction for Environmental Issues

The user reported that the purchase price of the property is consistent with current market value.

2.5. Additional Documents

Previous Phase I and Phase II environmental site assessments, prepared by NV5, were provided. The Phase I report, dated May 10, 2018, was an incomplete copy and has been

disregarded for this report. The Phase II report, dated October 9, 2018, evaluated potential concerns associated with properties located in historic mining areas. The assessment found no evidence of soil or groundwater contamination on the property. The report is included here in Appendix H, and is discussed in more detail below.

3. RECORDS REVIEW

3.1. PHYSICAL SETTING

3.1.1. TOPOGRAPHY

According to the USGS topographic map[1] covering the subject property and vicinity, the subject property is on a hillside sloping down to the southwest. The elevation ranges from about 2,650 to 2,750 feet above mean sea level.

Regional surface water drains generally toward the west, eventually joining the Yuba River.

3.1.2. GEOLOGY AND SOILS

The subject property is located in the northern Sierra Nevada foothills. The Geologic Map of California indicates that the property is located on Miocene-Pliocene volcanic rocks.

According to the Natural Resources Conservation Service, Web Soil Survey, the property is underlain by Cohasset loam, shoulders, 3 to 20 percent slopes; Cohasset loam, backslopes, 5 to 30 percent slopes; and Secca-Rock outcrop complex, 2 to 50 percent slopes.

The Cohasset soils are on volcanic ridges on mountains. The parent material consists of residuum weathered from volcanic breccia and/or conglomerate. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 96 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 80 percent. Below this thin organic horizon the organic matter content is about 8 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

The Secca soil is on hills, mountains. The parent material consists of basic colluvium derived from igneous and metamorphic rock and/or residuum weathered from igneous and metamorphic rock. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell

[1] Grass Valley, California 7.5′ quadrangle; 1998.

potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 6e. This soil does not meet hydric criteria.

3.1.3. GROUNDWATER

Based on the site topography and the presence of a small ephemeral drainage channel, shallow groundwater is likely present on the site, with a gradient to the southwest. Actual depth to groundwater and gradient may vary considerably based on the presence and orientation of bedrock fractures.

3.1.4. RADON

The National Radon Database has been developed by the U.S. Environmental Protection Agency and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

The US EPA has designated Nevada County as Radon Zone 2, where average radon level in the area is between 2.0 and 4.0 pCi/L (pico curies per liter of air) for the first floor living area. This is only a general estimation of the radon levels for the area in which the subject property is located. Actual indoor radon concentrations may vary.

3.2. ENVIRONMENTAL RECORDS SOURCES

On March 28, 2019, RNC conducted a review of data files obtained from various local, state and federal regulatory agencies, to determine whether there are publicly available records regarding hazardous materials for the subject and surrounding properties. All sources and minimum search distances specified by ASTM E1527-13 were utilized.

A full report of the findings, including a detailed description of the agencies contacted and sources reviewed is provided in **Appendix E**.

3.2.1. FUEL STORAGE AND WASTE MANAGEMENT ACTIVITIES

- The California State Water Resources Control Board GeoTracker[2] system was reviewed to identify registered underground storage tanks on the subject and adjacent properties.
- The California State Water Resources Control Board historical database was reviewed to identify historical registered underground storage tanks on the subject and adjacent properties.
- The US Environmental Protection Agency EnviroMapper[3] system was reviewed to identify hazardous waste generators on the subject and adjacent properties.

[2] http://geotracker.waterboards.ca.gov

[3] https://www.epa.gov/emefdata/em4ef.home

- The California Department of Toxic Substances Control Hazardous Waste Tracking System was reviewed to identify any hazardous waste manifests associated with the subject property.
- The California Division of Oil, Gas and Geothermal Resources Well Finder[4] was reviewed for active and historic oil and gas wells on the site or adjacent properties.

Neither the subject property nor any adjacent property is listed as a hazardous waste generator or registered UST site. No oil or gas wells were identified.

Site	Address	Source	Status
CVS PHARMACY # 9155	1005 SUTTON WAY	RCRA	LQG
KNIGHTS PAINT	1219 SUTTON WAY	RCRA	Transporter

Both of these sites are retail businesses which handle small to moderate volumes of hazardous materials. No evidence of poor housekeeping was observed at either site. Both are located at the base of the slope below the subject property, where there is no potential for uphill migration of any spills onto the subject property.

3.2.2. Liens and Use Restrictions

- As noted above, no lien or land use restriction appears on the Preliminary Title Report for the property.
- The California State Water Resources Control Board GeoTracker[5] system was reviewed to identify whether the subject property is subject to a deed restriction, land use restriction, or covenants.
- The US Environmental Protection Agency EnviroMapper system was reviewed to identify hazardous waste generators on the subject and adjacent properties.
- The US Environmental Protection Agency's EnviroMapper and Cleanups in My Community[6] systems were reviewed to identify any liens and land use restrictions listed for the subject property.

The subject property is not listed in any of these sources as having a deed restriction or land use restriction.

[4] http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx

[5] http://geotracker.waterboards.ca.gov

[6] https://www.epa.gov/cleanups/cleanups-my-community

3.2.3. ACCIDENTAL SPILLS AND RELEASES

- The US Coast Guard National Response Center[7] (formerly the Emergency Response Notification System) was reviewed for records of accidental spills and releases of hazardous material on the subject property.

No accidental spills or releases were identified.

3.2.4. LEAKING UNDERGROUND FUEL TANKS

- The California State Water Resources Control Board GeoTracker system was reviewed to identify Leaking Underground Fuel Tank records within one-half mile of the subject property.

Eleven leaking UST sites were identified:

SITE NAME	SITE_TYPE	STATUS	ADDRESS
ARCO #2077	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1913 NEVADA CITY HWY
BERRIGAN RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10319 MANOR DR
CAL STATE HIGHWAY PATROL STN	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11900 SUTTON WAY
FLYER'S/EXXON	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12008 PLAZA DRIVE
GILES & ADA MAY TRUST	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10069 BANNER LAVA CAP RD
KEIL CHEVY/OLDS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10400 BRUNSWICK RD
MC PHERSON'S NURSURY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11293 HUBBARD RD
NELLA 1-STOP #41 (EXXON)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12001 NEVADA CITY HWY
SIERRA MOTOR SPORTS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12121 NEVADA CITY HWY
TOSCO - FACILITY #6096	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11912 NEVADA CITY HWY

[7] http://nrc.uscg.mil

SITE NAME	SITE_TYPE	STATUS	ADDRESS
YUBA RIVER LUMBER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12391 NEVADA CITY HWY

Agency file information for these sites were obtained through the Geotracker system.

All of these sites have been closed, and all are located downhill from the subject property. There is no evidence that any of these leaks have resulted in groundwater contamination under the subject property.

3.2.5. Waste Management Activities in Surrounding Area

- The US EPA's Enforcement and Compliance History Online (ECHO) system was reviewed to identify RCRA Treatment, Storage and Disposal Facilities within one-half mile of the subject property.
- The California Department of Resources Recycling and Recovery Facility Information Toolbox (FacIT) was reviewed to identify solid waste facilities within one-half mile of the subject property.

No hazardous waste facilities or landfills were identified.

3.2.6. Hazardous Waste Cleanup Sites

- The US Environmental Protection Agency's EnviroMapper and Enforcement and Compliance History Online systems were reviewed to identify RCRA Corrective Action (CORRACTS) sites within one mile of the subject property.
- The US Environmental Protection Agency's EnviroMapper and Cleanups in My Community systems were reviewed to identify "Superfund" National Priority List (NPL) sites within one mile of the subject property, and non-NPL CERCLIS sites within one-half mile of the subject property.
- The California Department of Toxic Substances Control EnviroStor[8] System was reviewed to identify State Superfund-equivalent ("State Response") sites and Voluntary Cleanup sites.
- The California State Water Resources Control Board GeoTracker system was reviewed to identify Spills, Leaks, Investigations and Cleanups (SLIC), overseen by the various Regional Water Quality Control Boards, within one-half mile of the subject property.

No cleanup sites were identified within the specified search distances.

[8] http://www.envirostor.dtsc.ca.gov/public/

3.2.7. PREVIOUSLY REGULATED HAZARDOUS WASTE SITES

- The US Environmental Protection Agency's EnviroMapper system was reviewed to identify Delisted NPL Sites, CERCLIS "No Further Action" sites, and Brownfield sites within one-half mile of the subject property.

No former cleanup or remediation sites were identified within one-half mile of the subject property.

3.2.8. CORTESE LIST

The California Environmental Protection Agency is responsible for compiling a list of known contaminated sites, generally referred to as the "Cortese List." The list is used for planning, rather than regulatory purposes, and is compiled from the following sources:

Contaminated or potentially contaminated hazardous waste sites listed in the CAL Sites database by DTSC;

Leaking Underground Storage Tanks with known groundwater contamination, listed by he California State Water Resources Control Board;

Landfills which have evidence of groundwater contamination or known migration of hazardous materials, listed by the California Integrated Waste Management Board.

Each of these sources is separately referenced in this report. The subject property is not reported on the Cortese List.

3.3. HISTORICAL USE INFORMATION

3.3.1. RECORDED LAND TITLE RECORDS

A chain of title report was not provided by the client for RNC's use in preparing this report. The Preliminary Title Report indicates that the subject parcel was originally platted in 1981, and that mineral rights were previously reserved in 1940.

A transfer of ownership was recorded on October 15, 2018, from John McManus, An Unmarried Man, to Leo R. Granucci, Trustee Leo R. Granucci Family Revocable 1997 Trust Dated March 16, 1997.

3.3.2. AERIAL PHOTOGRAPHS

Aerial photographs of the subject property were obtained from the U. S. Geological Survey, via EarthExplorer[9] and/or Google Earth. Copies of the aerial photos are included in Appendix D of this report.

1947: The subject property is vacant, with a few scattered trees. A road is present in the approximate location where Old Tunnel Road is today; a railroad grade crosses the property north-to-south. Surrounding properties are rural; numerous orchards are present in the vicinity.

[9] http://earthexplorer.usgs.gov/

1975: The subject property remains vacant; more trees are present than previously. The SR 20/49 freeway has been constructed; Sutton Way is present, with a few commercial buildings along its west side. The east side of Sutton Way (adjacent to the west of the subject property, is vacant except for a group of rural homes in the southern portion. Brunswick Road has been realigned to the modern freeway interchange.

1978: The Safeway store has been constructed on the east side of Sutton Way, south of the subject property, replacing the rural homes. The subject property remains vacant.

1987: The subject property is now densely wooded. The shopping center to the southwest has expanded, with the pharmacy now located adjacent to the southwest side of the subject property. Old Tunnel Road has been constructed in its modern alignment.

1998: The Knights Paint store has been added at the north end of Sutton Way, adjacent to the northwest side of the subject property. Apartments have been constructed southeast of the intersection of Old Tunnel and Town Talk Roads.

2005: Additional commercial buildings have filled in north of the pharmacy, completing the adjacent shopping area along the east side of Sutton Way.

2010, 2017: No significant changes are apparent.

3.3.3. USGS Topographic Maps

Historic U. S. Geologic Survey topographic maps were reviewed. Copies of the maps are included in Appendix D of this report.

1888: The Nevada County Rail Road crosses the property, and a road is shown in the approximate location of Old Tunnel Road. A "Fair Ground" is located just west of the property.

1895: A rail spur has been added just south of the subject property.

1949: Brunswick Road is located in the approximately alignment currently occupied by Old Tunnel Road. Homes are shown on several surrounding properties; no development is shown on the subject property. The railroad is no longer mapped.

1973: The SR 20/49 freeway has been constructed, and Brunswick Road has been realigned to a freeway interchange. Sutton Way has been added.

1998: The subject property remains undeveloped. Old Tunnel and Town Talk Roads are mapped in their present alignment; the shopping center to the southwest is mapped.

3.3.4. Sanborn Insurance Company Maps

The Sanborn Map Company produced a series of large-scale maps, dating from 1867 to the present and depicting the commercial, industrial, and residential sections of some twelve thousand cities and towns in North America. The maps show significant detail regarding

dwellings, commercial buildings, and factories. Where available, Sanborn maps are a valuable source of information about past land uses.

No Sanborn maps were identified which cover the subject property.

3.3.5. PROPERTY TAX FILES

County Assessor records indicate that the property is undeveloped.

3.3.6. PLANNING AND ZONING RECORDS

The Grass Valley 2020 General Plan land use map indicates the property is designated for Office-Professional use. The City of Grass Valley 2017 Zoning Map also shows the property zoned for Office-Professional use.

3.3.7. OTHER PUBLIC INFORMATION

A news report dated January 23, 2019[10], states that "Hospitality House, Nevada County, the Regional Housing Authority are working together to expand affordable housing and supportive wrap-around services in a day services center with the Brunswick Commons Resource Center project. … Earlier this month at the Board's January 8th meeting, the Board approved a Memorandum of Understanding (MOU) between Hospitality House, the County and the Regional Housing Authority to partner on the development of the Brunswick Commons project and approved the purchase of 5 acres of property for the project off of Old Tunnel Road." The report also notes that Leo Granucci is Chairman of the Board of Directors at Hospitality House.

Wikipedia reports that the Nevada County Narrow Gauge Railroad operated from 1876 to 1943.

4. SITE RECONNAISSANCE

A visual and physical reconnaissance of the subject property was conducted on February 9, 2019, by Neil O'Hara. The reconnaissance was conducted by walking around the entire perimeter of the property, and crossing the property as needed to assure that the entire site was observed. A site map and photographs of the subject property are attached to this report in Appendices A and B. A site visit/assessment checklist is attached to this report as Appendix C.

4.1. SITE AND VICINITY GENERAL CHARACTERISTICS

The property is located in a hilly mixed use area at the northern edge of the City of Grass Valley. Lands to the north and east (uphill) are rural and semi-rural residential. Lands to the south and west (downhill) are commercial/retail and office areas.

[10] https://yubanet.com/regional/nevada-county-board-of-supervisors-take-next-steps-towards-brunswick-commons-project/

4.2. CURRENT USE OF THE PROPERTY

The property is currently vacant.

4.2.1. DESCRIPTIONS OF STRUCTURES, ROADS, OTHER IMPROVEMENTS ON THE SITE

No structures, roads or other improvements exist on the property.

4.2.2. POTABLE WATER SUPPLY

Public water service is provided to the property. No service is currently active.

4.2.3. SEWAGE DISPOSAL SYSTEM

Public sewer service is provided to the property. No service is currently active.

4.2.4. OBSERVATIONS ON SUBJECT PROPERTY

Observation	YES	NO	Comments
Hazardous Substances Associated with Identified Uses		**X**	
Storage Tanks		**X**	
Drums		**X**	
Hazardous Materials Containers		**X**	
Unidentified Containers		**X**	
Pits, Ponds or Lagoons		**X**	
Drains or Sumps		**X**	
Pools of Liquid		**X**	
Wells (supply or monitoring)		**X**	
Odors		**X**	
Fill soil and debris		**X**	Minor amounts of trash.
Soil Stains, Stressed Vegetation		**X**	
Stains or Corrosion		**X**	

Observation	YES	NO	Comments
Potential Asbestos-Containing Materials		X	
Potential lead-based paint		X	

4.3. CURRENT USES OF THE ADJOINING PROPERTIES

A shopping center is located adjacent to the south and west of the property; cross Old Tunnel Road to the north and east are rural residential and/or vacant properties. The adjacent property to the south on the west side of Old Tunnel Road is also vacant.

4.3.1. OBSERVED CONDITIONS ON ADJOINING PROPERTIES

Observation	YES	NO	Comments
Hazardous Substances Associated with Identified Uses	X		Pharmacy and paint store will have retail quantities of paints, solvents, and similar materials.
Storage Tanks		X	
Drums		X	
Hazardous Materials Containers		X	
Unidentified Containers		X	
Pits, Ponds or Lagoons		X	
Drains or Sumps		X	
Pools of Liquid		X	
Wells (supply or monitoring)		X	
Odors		X	
Fill soil and debris		X	
Soil Stains, Stressed Vegetation		X	
Stains or Corrosion		X	

5. INTERVIEWS

5.1. OWNERS AND OCCUPANTS

An environmental questionnaire was completed by Mike Dent, Director of Housing and Community Services for Nevada County. Mr. Dent states that the property is vacant; he has no knowledge of any previous uses of the property. He is unaware of the presence of any hazardous materials on the property and is unaware of any lawsuits, liens or regulator actions against the property, either past, present, or pending.

5.2. GOVERNMENT OFFICIALS

5.2.1. NEVADA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

The Nevada County Environmental Health Department is the Certified Unified Program Agency ("CUPA") responsible for all oversight of hazardous materials storage, releases or spills, underground storage tanks, above ground storage tanks, and leaking underground storage tanks in Nevada County.

An information request form was submitted to the Department on April 11, 2019. Staff responded on April 19, 2019, that they have no file for the property.

6. PREVIOUS REPORTS

A Phase II site assessment was conducted by NV5, with a report issued on October 9, 2018. The report states that:

> The NCNGRR historically crossed the eastern portion of the property. Historical railroad operation is sometimes associated with soil contamination from petroleum products (e.g., diesel, oil, creosote). In addition, mine rock that was sometimes used as ballast between the railroad ties has the potential to contain elevated metals concentrations. We excavated exploratory trenches at discrete locations along the former railroad alignment, observed subsurface soil conditions, collected soil samples and analyzed the samples for petroleum products and metals. Selected samples were analyzed for semi-volatile organic compounds (SVOCS).
>
> Surface topography at the property indicated that two locations had the potential to contain imported fill material. We excavated exploratory trenches at these locations, observed subsurface soil conditions, collected discrete soil samples and analyzed the samples for petroleum products and metals.

The investigation found no evidence of mine waste or contamination (e.g., staining or odors) in the exploratory trenches. The laboratory analyses did not detect total concentrations of organic or inorganic constituents that exceeded the corresponding human health screening

levels, except for arsenic; total arsenic concentrations were consistent with naturally occurring background conditions and do represent a chemical of concern.

7. VAPOR ENCROACHMENT SCREENING

A Vapor Encroachment Screening, in accordance with ASTM Standard E2600-10, was conducted for this property, utilizing the information and sources discussed throughout this Phase I report.

7.1. TIER 1

Our review of the history of the site and vicinity identified no potential Chemicals of Concern associated with past uses of the property.

ASTM 2600-10 defines the Area of Concern to include petroleum hydrocarbon releases within one-tenth mile of the subject property, and other chemical releases within one-third mile. Based on the information sources utilized in this Phase I assessment, no following sites meet this criteria.

7.2. CONCLUSIONS

The presence of a Vapor Encroachment Condition (VEC) at the subject property can be ruled out. No potential source of Chemicals of Concern which could affect the property have been identified.

8. EVALUATION

8.1. FINDINGS

This assessment has found that:

- The subject property consists of a vacant 5.0± acre parcel, located at the eastern edge of the city of Grass Valley.
- No past use of the property has been identified, except that it was crossed by the tracks of the Nevada County Narrow Gauge Rail Road, which operated from 1876 to 1943.
- Surrounding properties were rural until about 1975. Following construction of a SR 20/49 freeway, with an interchange southwest of the subject property at Brunswick Road, retail, commercial, and office development began in the area. A shopping center now occupies the adjacent property to the west and southwest. Properties to the north and east remain rural residential.
- Two businesses in the shopping center are small quantity generators of hazardous wastes. There is no evidence that activities there have impacted the subject property.

- Eleven leaking UST sites were identified with a half mile of the subject property. All have been closed with no evidence of migratory contamination.
- No other regulated hazardous materials sites or facilities were identified in the surrounding area.

8.2. DATA GAPS

None of the limitations of this assessment has result in a data gap of any significance.

8.3. OPINIONS

No evidence suggestive of the potential presence of recognized environmental conditions has been identified.

No historic or controlled recognized environmental conditions associated with the subject property were identified.

8.4. CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13, of 936 Old Tunnel Road (APN 035-400-054), located in the city of Grass Valley, Nevada County, California, "the property". Any exceptions to, or deletions from, this practice are described in the Limitations Section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property.

9. SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

"I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in the §312.10 of 40 CFR part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR part 312."



4/19/19

Neil O'Hara
Environmental Professional

10. STATEMENT OF QUALIFICATIONS

The US EPA All Appropriate Inquiry rule defines an environmental professional as someone who "possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to a property, sufficient to meet the objectives and performance factors of the rule. In addition, an environmental professional must have either a state or tribal issued certification or license and three years of relevant full-time work experience; a Baccalaureate degree or higher in science or engineering and five years of relevant full-time work experience; or ten years of relevant full-time work experience."

Neil O'Hara meets and exceeds this requirement based on the following qualifications:

- Bachelor of Science, Environmental Planning & Management; University of California, Davis, 1974.
- 25+ years professional full-time experience, including:

RNC Environmental, LLC. Founding partner, 2004; sole proprietor since 2007.

Neil O. Anderson & Associates, Lodi, CA. Senior Environmental Specialist, 1998-2004.

O'Hara Environmental, Volcano, CA. Independent consultant, 1995-1998.

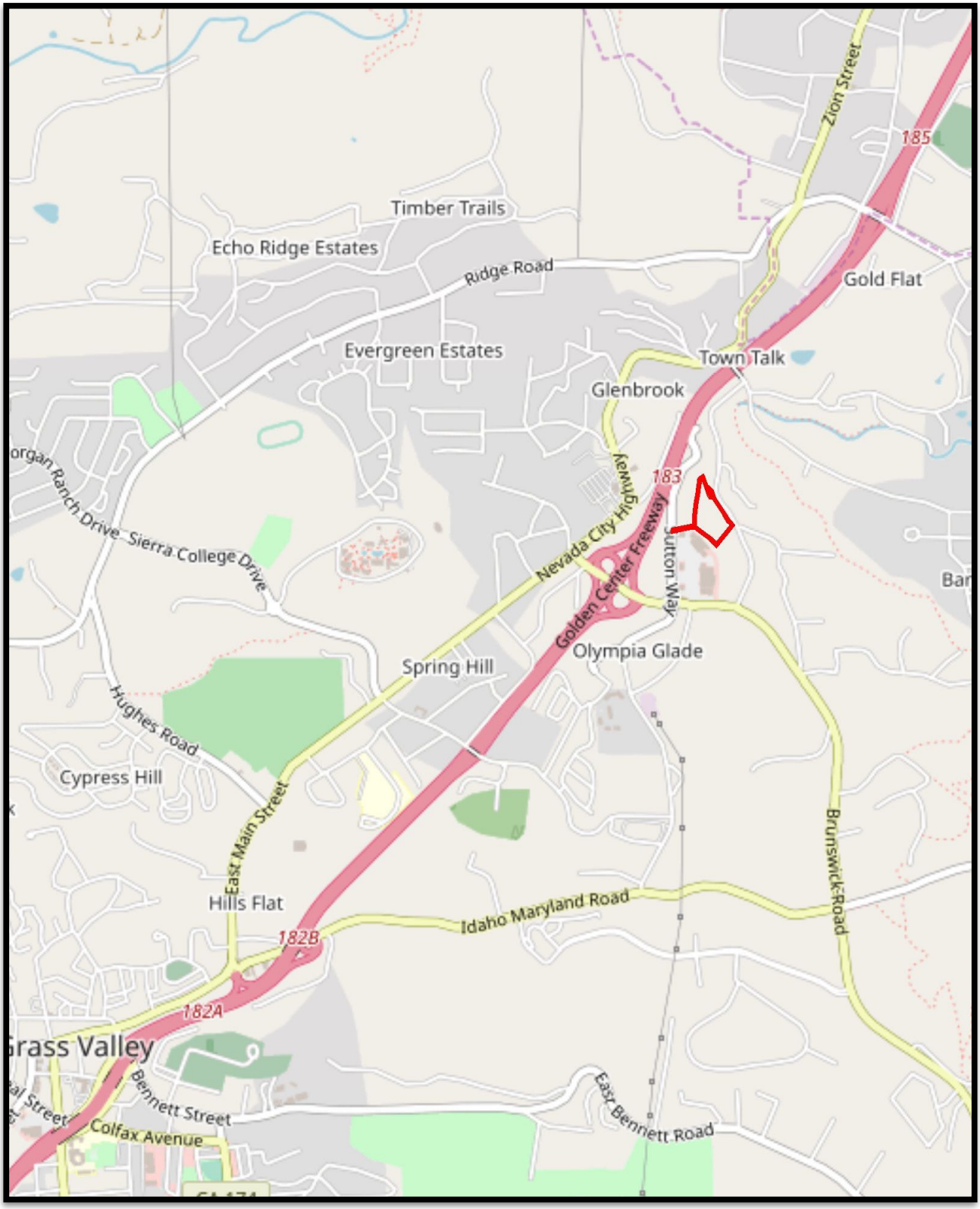
Sugnet & Associates, Roseville, CA. Water Quality Specialist, 1992-1995.

Limnion Corp., Concord, CA. Senior Biologist, 1989-1992.

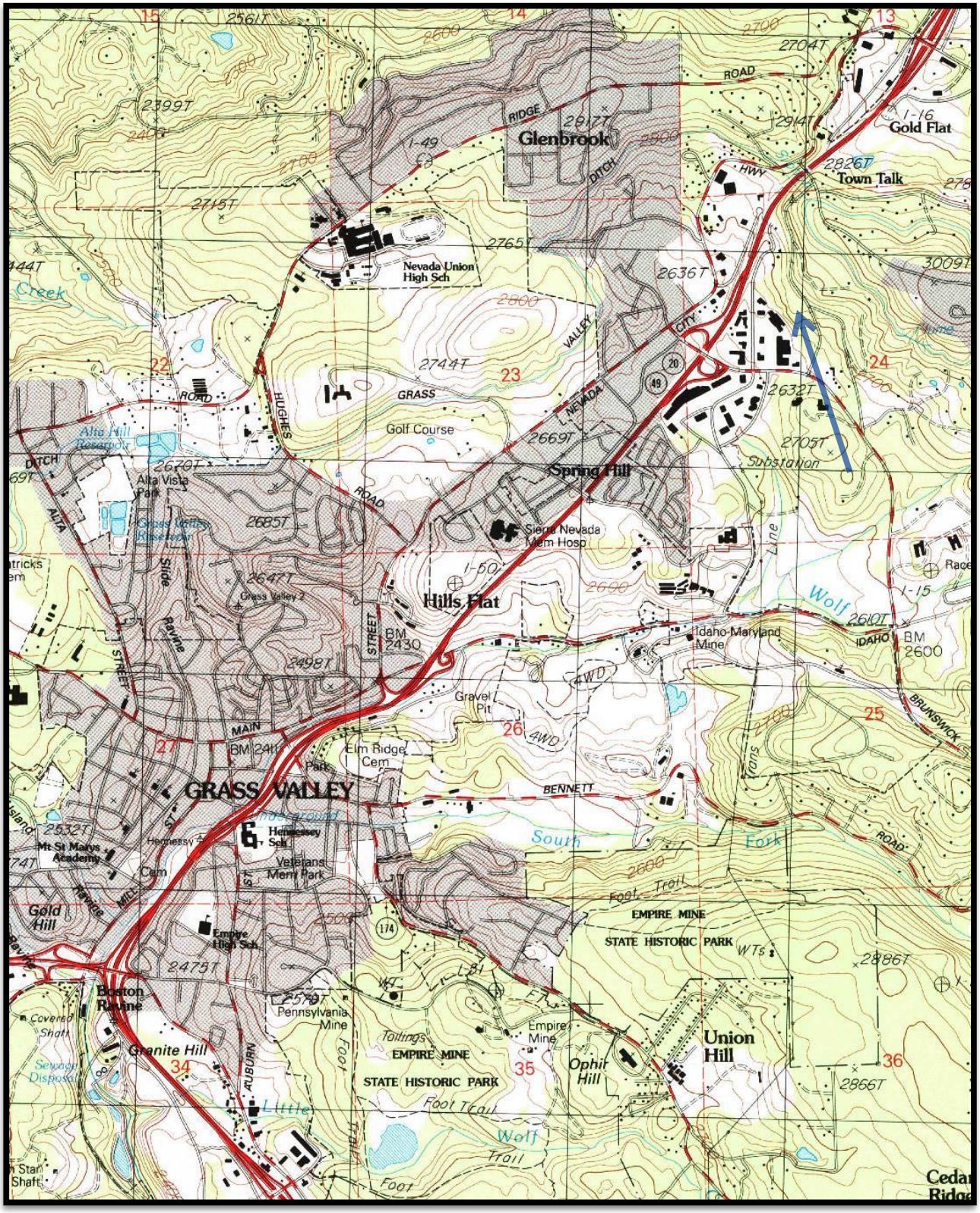
Mr. O'Hara was a California Registered Environmental Assessor (REA) from 1993 until the REA program was cancelled in 2012.

Mr. O'Hara's career in the environmental sciences includes 25+ years as a consultant and 15 years as an educator. His areas of expertise include environmental site assessment and due diligence, biological resources evaluation and wetlands assessment, CEQA compliance and regulatory compliance. He has conducted environmental assessments, trained and supported others in conducting such work, and provided third-party review services for a real estate investment fund. He has conducted over 200 Phase I Environmental Site Assessments, and provided third-party reviews for hundreds more.

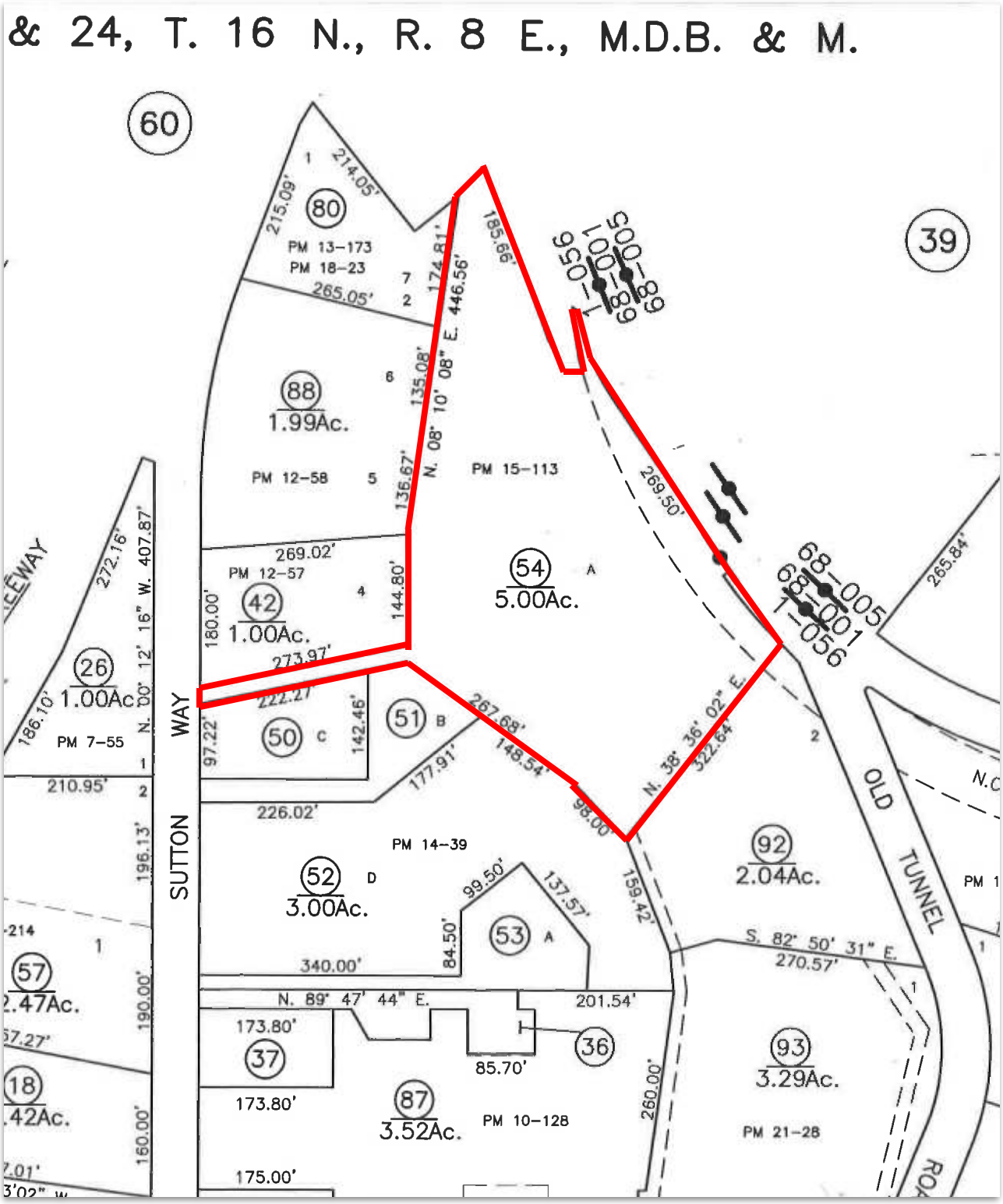
A. Location Maps



Location Map



USGS Topographic Map, Grass Valley quad, 1998



Assessor's Parcel Map



Aerial Photo. 2018

B. Photographs



Looking north along Old Tunnel Road



Looking south along Old Tunnel Road



Old railroad grade



Typical view, north end of property



Typical view, looking south across property



South end of property



Mine/prospect tailings



Steep bank below Old Tunnel Road



Strip of land extending west to Sutton Way



Small creek drainage crossing south portion of property



Adjacent properties to north



Steep bank and rear of shopping center to west



Typical trash pile



End of Town Talk Road to southeast of property, across Old Tunnel Road



Professional office to west, facing Sutton Way



Shopping center to west, facing Sutton Way



Sutton Way



Forest land to east, across Old Tunnel Road



Subject property is the forested slope behind shopping center



Hotel/conference center across Sutton Way

C. Site Assessment Checklist

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

Project #	Site location	Date	By
1905A	*Old Tunnel Road Grass Valley, CA*	*2/7/19*	*Neil O'Hara*

General Description of Property
Forested hill slope. Undeveloped, but with some evidence of historic activity, including mine/prospect tailings and old railroad grade

General Description of Buildings
None. East side of property abuts Old Tunnel Road.

	Observed Land Uses
Subject Property	*Vacant forest land*
North	*Forest; commercial buildings*
East	*Old Tunnel Road; vacant forest land*
South	*Vacant forested parcel*
West	*Shopping center: pharmacy, bank, professional offices, general retail*

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

Old Tunnel Road
Grass Valley, CA

Observed Hazardous Materials		
	Subject Property	**Adjacent Properties**
Any business typically associated with waste treatment, storage, disposal, processing, or recycling	[ ]Yes [✔]No	[ ]Yes [✔]No
Pesticides, batteries, paints, or other chemicals	[ ]Yes [✔]No	[ ]Yes [✔]No
Industrial drums or sacks of chemicals	[ ]Yes [✔]No	[ ]Yes [✔]No
Unidentified open or damaged containers	[ ]Yes [✔]No	[ ]Yes [✔]No
Evidence of underground/ aboveground storage tanks	[ ]Yes [✔]No	[ ]Yes [✔]No
Old or leaking electrical transformers	[ ]Yes [✔]No	[ ]Yes [✔]No
Comments		

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

Old Tunnel Road
Grass Valley, CA

Physical Observations		
	Subject Property	**Adjacent**
Stained Soil	[ ]Yes [✔]No	[ ]Yes [✔]No
Stressed/dead vegetation?(other than seasonal)	[ ]Yes [✔]No	[ ]Yes [✔]No
Odors	[ ]Yes [✔]No	[ ]Yes [✔]No
Trash and debris	[✔]Yes [ ]No *A few trash piles*	[ ]Yes [✔]No
Fill soil	[ ]Yes [✔]No *Shallow excavation area and adjacent spoils piles appear to be native soil*	[ ]Yes [✔]No
Wastewater discharges	[ ]Yes [✔]No	[ ]Yes [✔]No
Pits/ponds/lagoons	[ ]Yes [✔]No	[ ]Yes [✔]No
Monitoring wells	[ ]Yes [✔]No	[ ]Yes [✔]No
Comments		

Water and Wastewater	
Potable water supply	[ ] Public [ ] Private well [ ] Other [✔] None
Sewage disposal	[ ] Public [ ] Private septic [ ] Other [✔] None
Discharges to surface or pond	[ ] Yes [✔] No
Wetlands or surface waters	[✔] Yes [ ] No *Property is crossed by a small drainage channel*

D. Historical Photos and Maps



1947



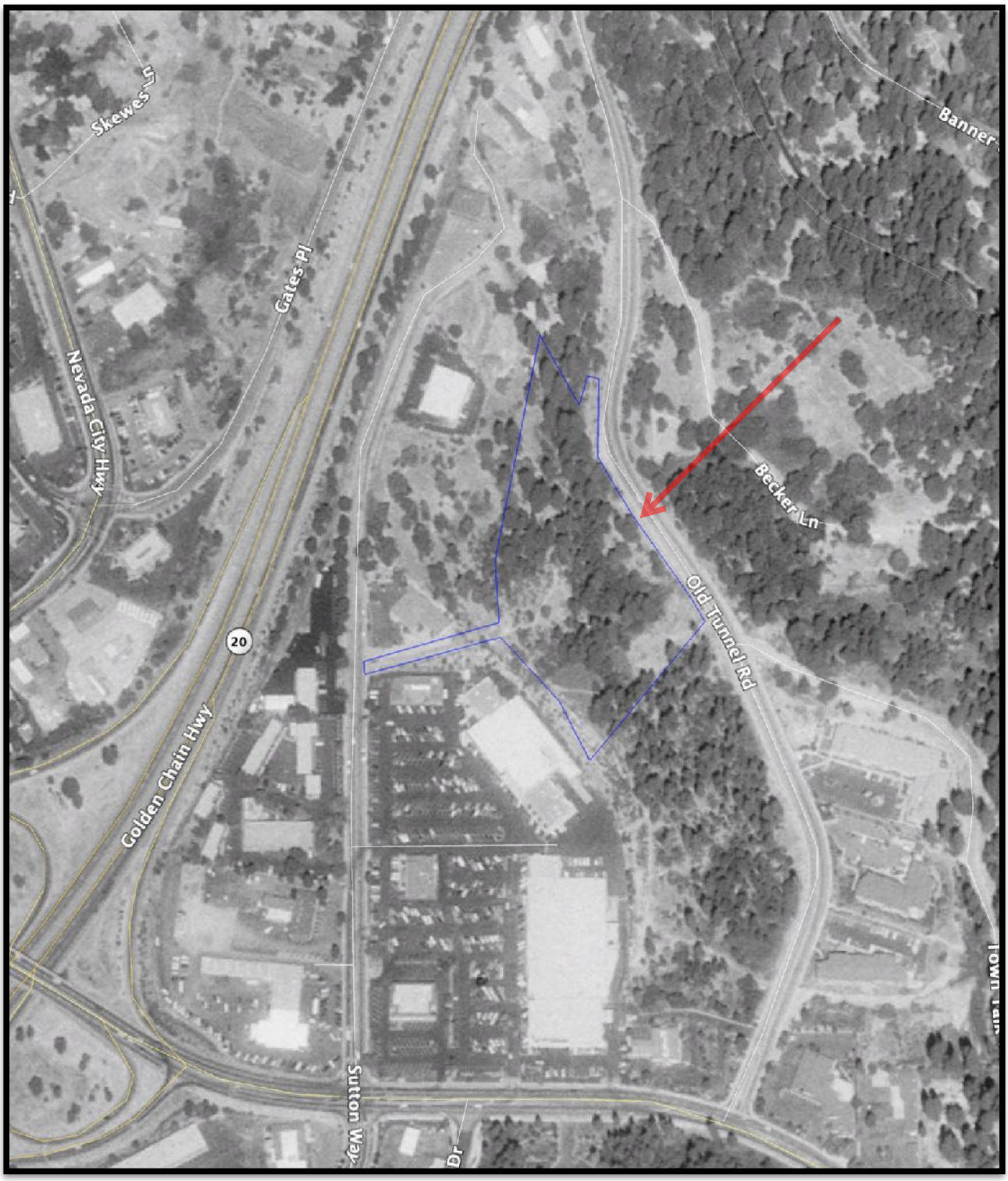
1975



1978



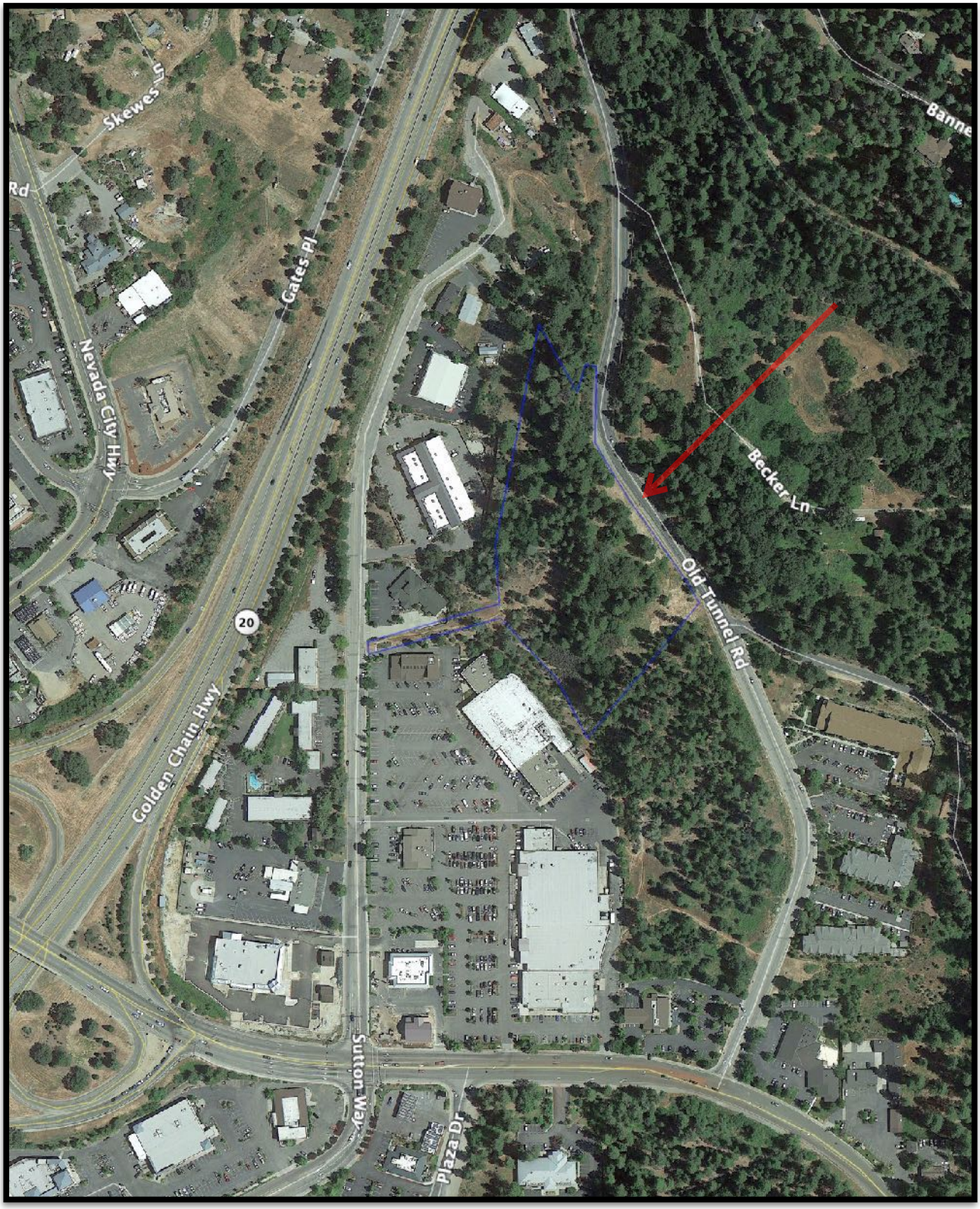
1987


Skewes Ln
Gates Pl
Nevada City Hwy
Banner
Becker Ln
Old Tunnel Rd
20
Golden Chain Hwy
Sutton Way
Dr

1998


Skewes Ln
Gates Pl
Nevada City Hwy
Banner Lav
Becker Ln
Old Tunnel Rd
20
Golden Chain Hwy
Sutton Way
Plaza Dr
Town Talk Rd

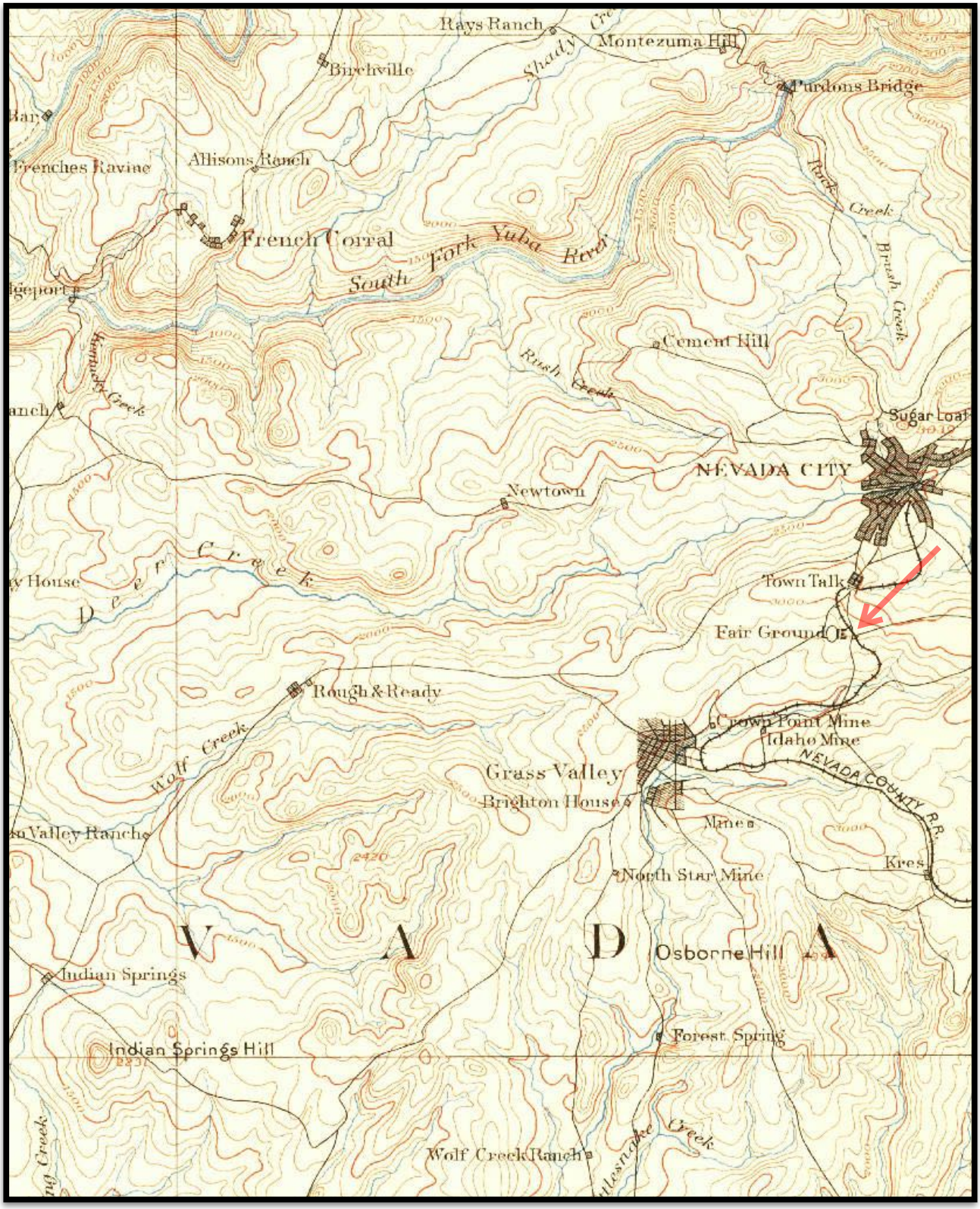
2005


Skewes Ln
Rd
Gates Pl
Nevada City Hwy
Becker Ln
Old Tunnel Rd
20
Golden Chain Hwy
Sutton Way
Plaza Dr

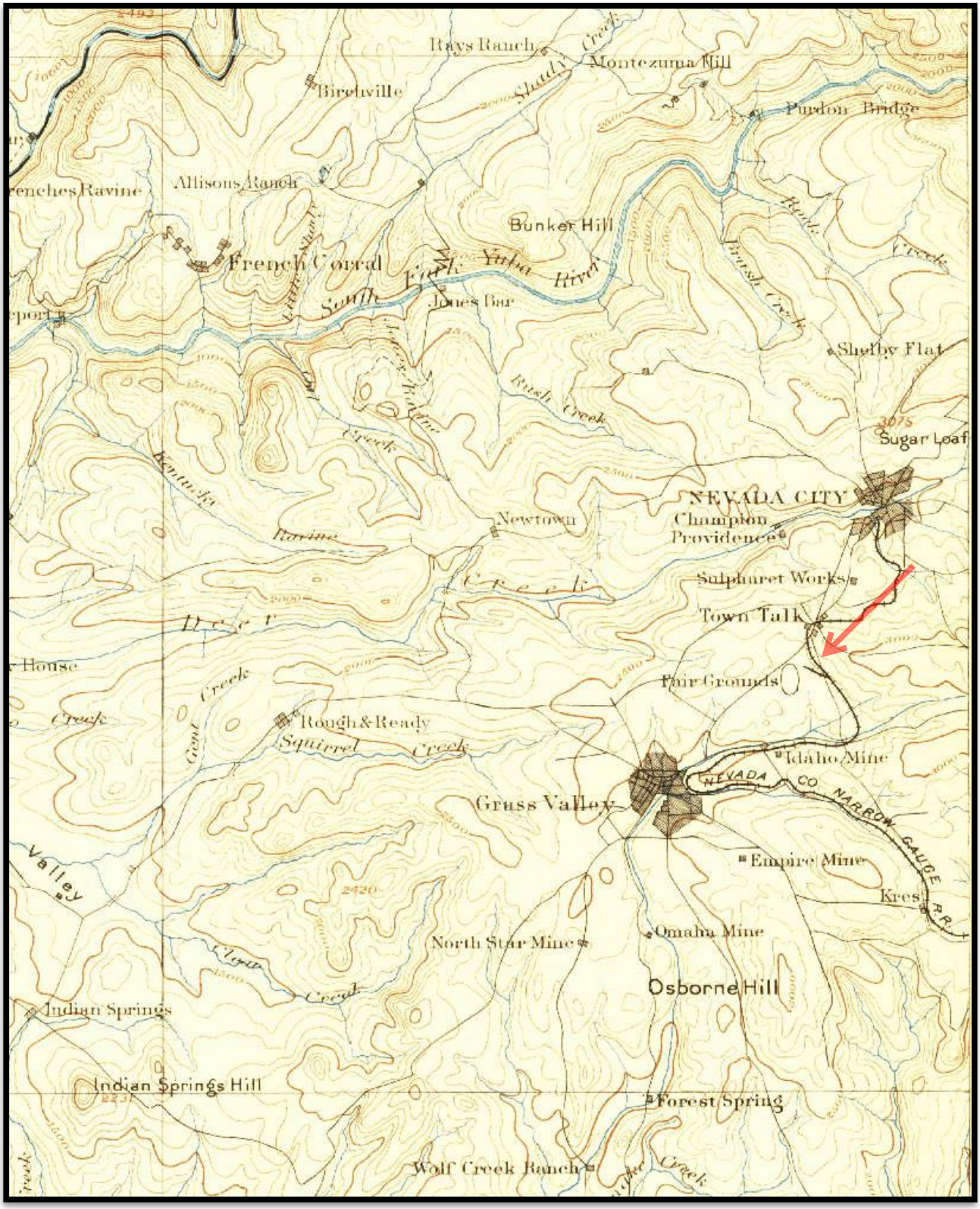
2010


Skewes Ln
Gates Pl
Nevada City Hwy
Becker Ln
Old Tunnel Rd
20
Golden Chain Hwy
Sutton Way
Plaza Dr

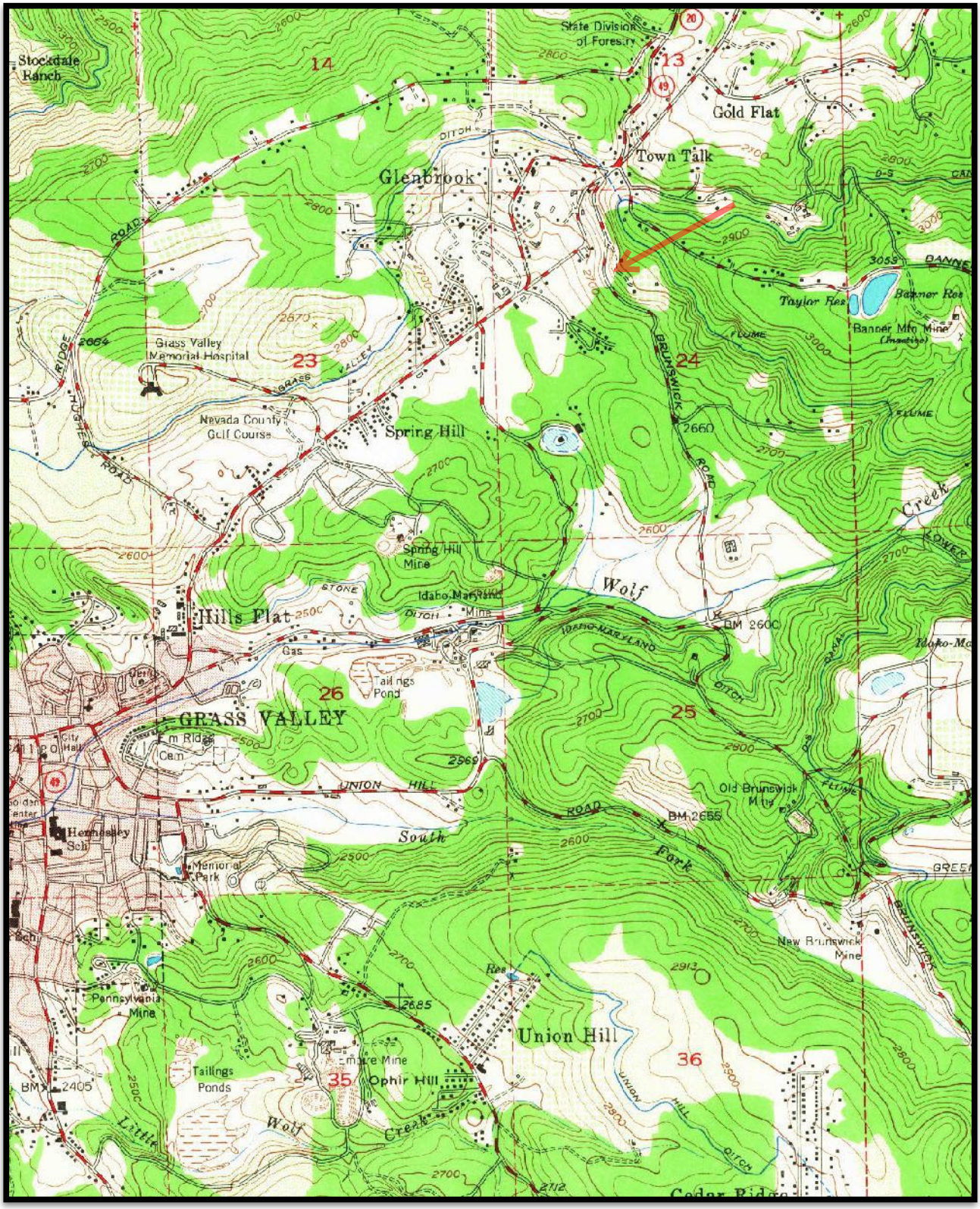
2017


Rays Ranch
Shady Cr
Montezuma Hill
Birchville
Purdons Bridge
Allisons Ranch
Trenches Ravine
French Corral
South Fork Yuba River
Rock Creek
Brush Creek
Cement Hill
Rush Creek
Sugar Loaf
NEVADA CITY
Newtown
Deer Creek
Town Talk
Fair Ground
Rough & Ready
Crown Point Mine
Idaho Mine
Wolf Creek
Grass Valley
Brighton House
NEVADA COUNTY R.R.
Valley Ranche
Kres
North Star Mine
Osborne Hill
Indian Springs
Indian Springs Hill
Forest Spring
Wolf Creek Ranch
Rattlesnake Creek

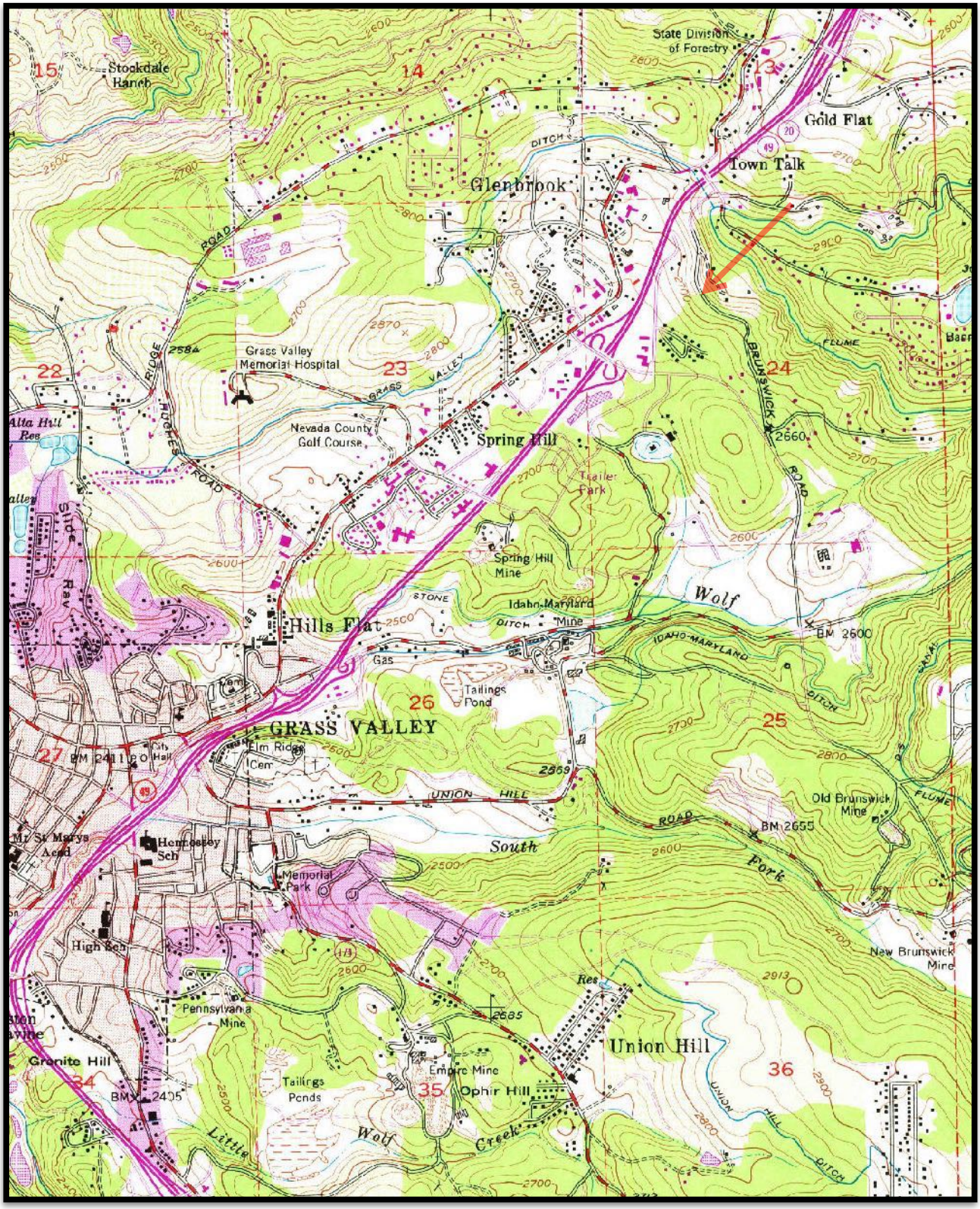
1888


Rays Ranch
Montezuma Mill
Birchville
Purdon Bridge
Allisons Ranch
Bunker Hill
French Corral
South Yuba River
Jones Bar
Shelby Flat
Rush Creek
Sugar Loaf
NEVADA CITY
Champion
Providence
Newtown
Sulphuret Works
Town Talk
Fair Grounds
Rough & Ready
Idaho Mine
Grass Valley
NEVADA CO NARROW GAUGE R.R.
Empire Mine
North Star Mine
Omaha Mine
Osborne Hill
Indian Springs
Indian Springs Hill
Forest Spring
Wolf Creek Ranch

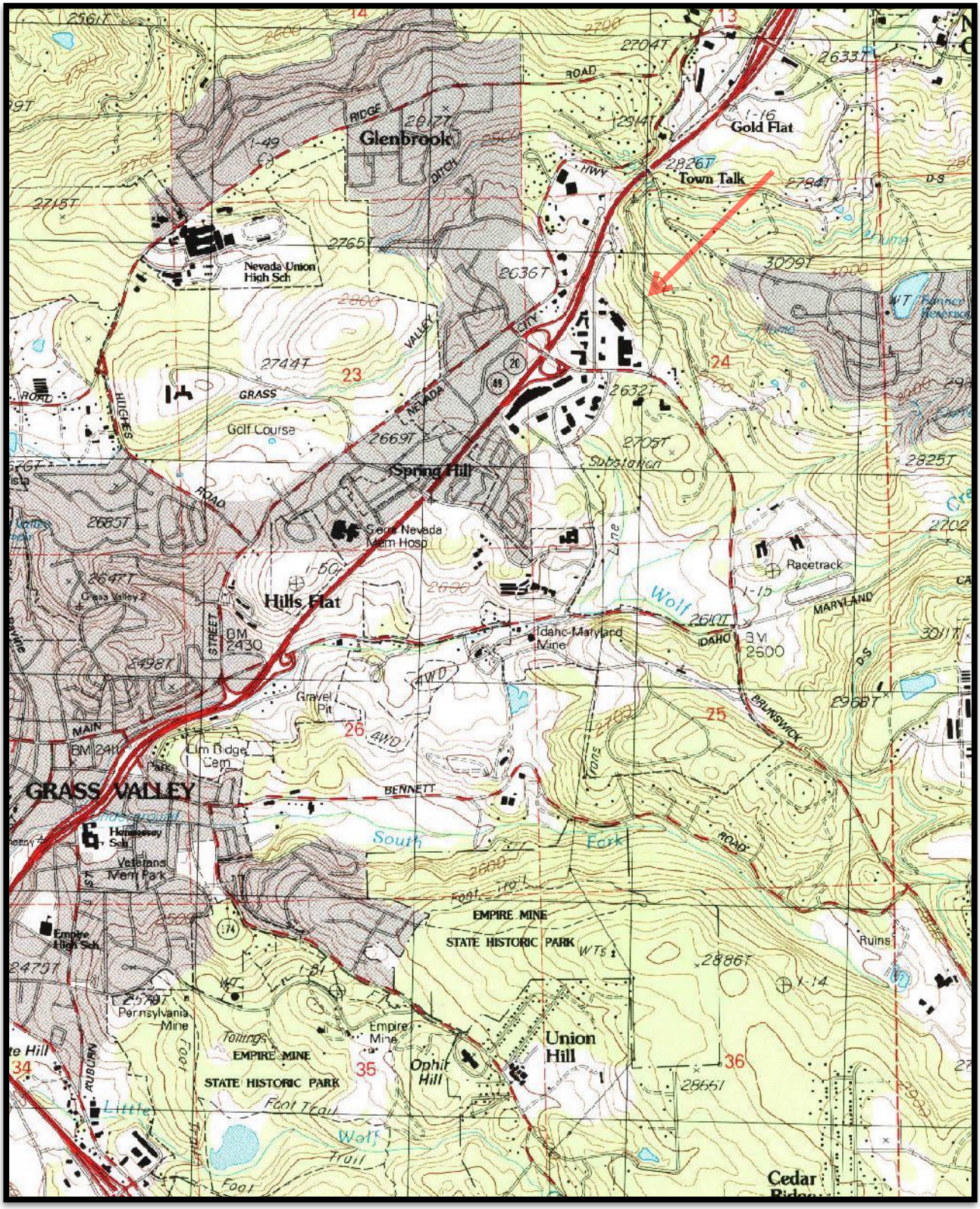
1895


Stockdale Ranch
State Division of Forestry
Gold Flat
Town Talk
Glenbrook
Banner Res
Taylor Res
Banner Mtn Mine
Grass Valley Memorial Hospital
Nevada County Golf Course
Spring Hill
Spring Hill Mine
Idaho-Maryland Mine
Hills Flat
GRASS VALLEY
Tailings Pond
Old Brunswick Mine
New Brunswick Mine
Hennessey Sch
Memorial Park
Pennsylvania Mine
Tailings Ponds
Empire Mine
Ophir Hill
Union Hill
Wolf Creek
Little Wolf Creek
South Fork
BM 2660
BM 2655
BM 2405
13
14
23
24
25
26
35
36

1949


Stockdale Ranch
State Division of Forestry
Gold Flat
Town Talk
Glenbrook
Grass Valley Memorial Hospital
Nevada County Golf Course
Spring Hill
Trailer Park
Spring Hill Mine
Idaho-Maryland Mine
Hills Flat
Gas
Tailings Pond
GRASS VALLEY
Elm Ridge Cem
City Hall
Hennessey Sch
Memorial Park
High Sch
Pennsylvania Mine
Granite Hill
Tailings Ponds
Empire Mine
Ophir Hill
Union Hill
Old Brunswick Mine
New Brunswick Mine
BM 2660
BM 2600
BM 2655
BM 2405
Wolf Creek
South Fork
Little Wolf
Alta Hill Res
Slide Ravine
Ridge
Hughes Road
Grass Valley
Brunswick Road
Idaho-Maryland
Union Hill
Flume
Ditch
Stone
Road

1973

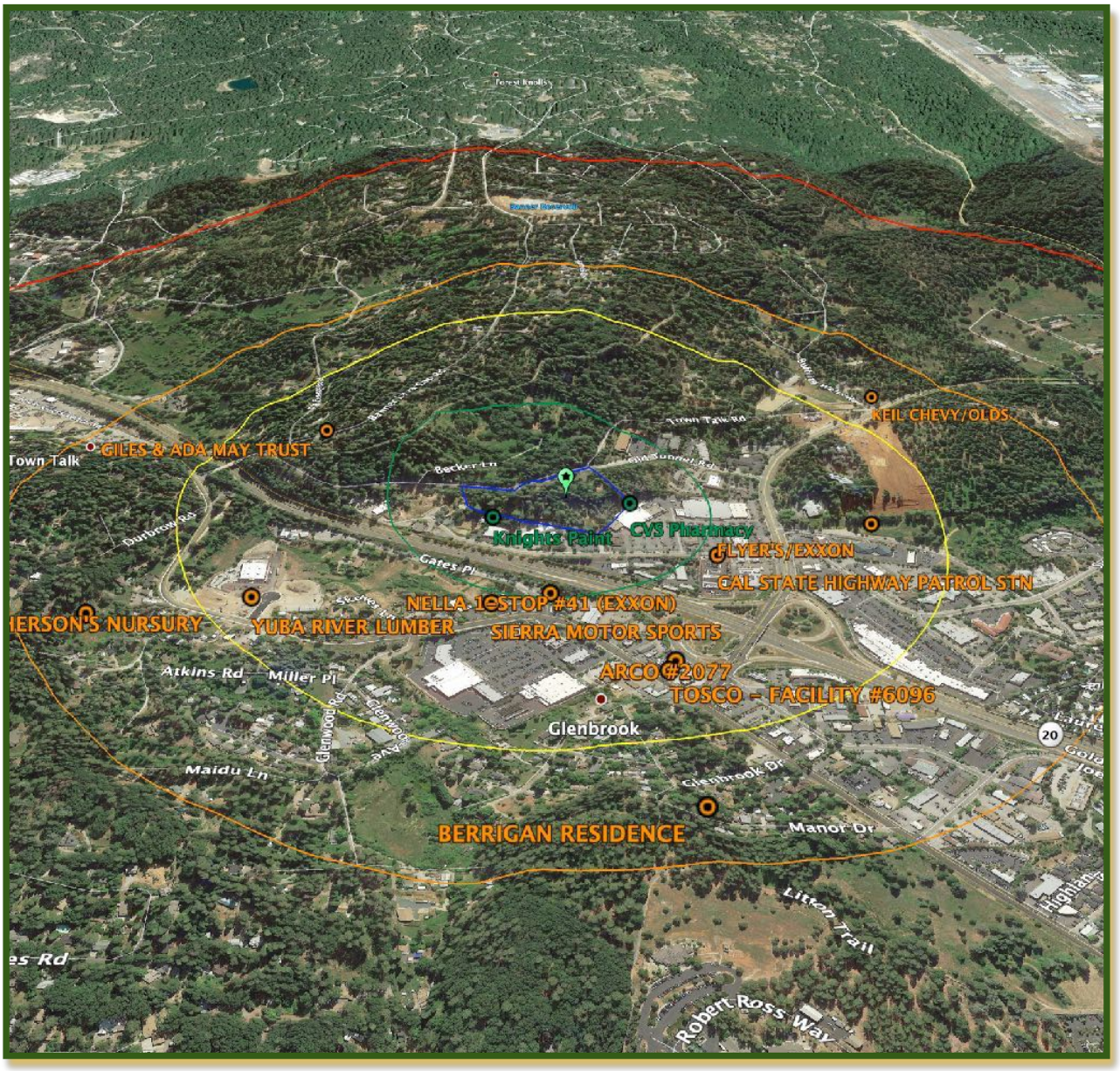

Glenbrook
Gold Flat
Town Talk
Nevada Union High Sch
Golf Course
Spring Hill
Sierra Nevada Mem Hosp
Hills Flat
Racetrack
Idaho-Maryland Mine
Gravel Pit
GRASS VALLEY
Union Hill
EMPIRE MINE STATE HISTORIC PARK
Empire Mine
Pennsylvania Mine
Ophir Hill
Cedar
Ruins
Tailings
Foot Trail
Wolf Trail
Little Wolf
South Fork
BENNETT
BRUNSWICK
MARYLAND
IDAHO
NEVADA
GRASS VALLEY
BRUNSWICK ROAD
Substation
Elm Ridge Cem
Veterans Mem Park
Hennessey Sch
Empire High Sch
BM 2430
BM 2411
BM 2600
4WD
Ditch
Line
Ruins

1998

E. Government Records Search

Regulatory Records Review

Brunswick Commons
936 Old Tunnel Road
Grass Valley, California 95945



March 28, 2019

RNC Environmental, LLC • 151 Nursery Street, Ashland, OR 97520 • (888)485-3330 • rnc-enviro.com

HAZARDOUS WASTE CLEANUP SOURCES[1]

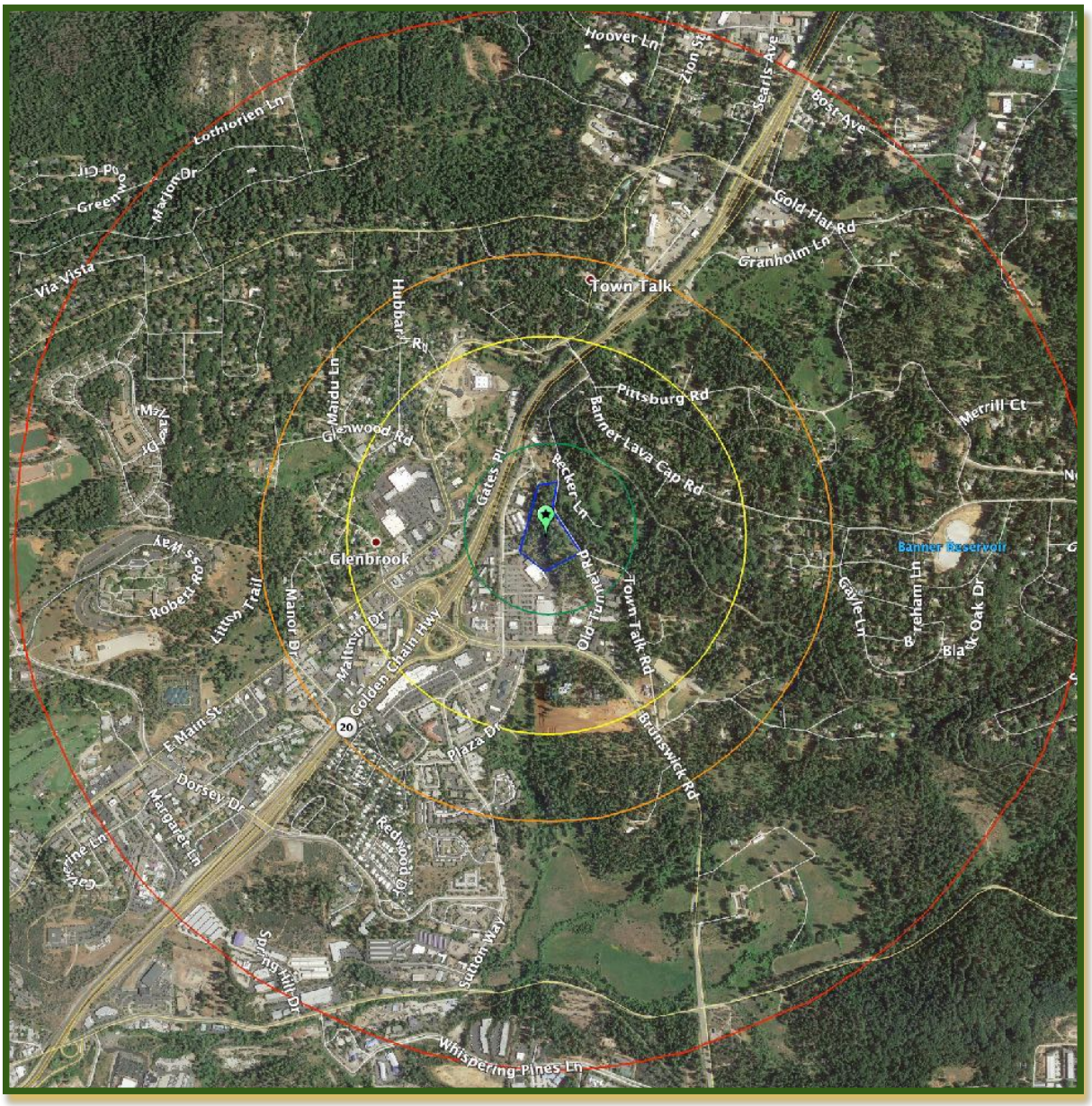
Sites	Source	Search	Found
"Superfund" National Priority List (N P L)	U S Environmental Protection Agency: • Enviromapper • Cleanups In My Community	1 Mi.	**0**
Non-N P L Federal Cleanup Sites	U S Environmental Protection Agency: • Enviromapper • Cleanups In My Community	0.5 Mi.	**0**
R C R A Corrective Action (Corracts)	U S Environmental Protection Agency: • Enviromapper • Enforcement And Compliance History Online (E C H O)	1 Mi.	**0**
State-Response Cleanup Sites	California Department Of Toxic Substances Control: • Envirostor	1 Mi.	**0**
Regional/Local Oversight	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**0**
Voluntary Cleanup	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**0**
Previously Regulated Sites			
Delisted N P L	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**0**
No Further Action	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**0**
Brownfields	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**0**

[1] EnviroMapper: https://www.epa.gov/emefdata/em4ef.home
Cleanups in My Community: https://www.epa.gov/cleanups/cleanups-my-community
Enforcement and Compliance History Online: https://echo.epa.gov
EnviroStor: http://www.envirostor.dtsc.ca.gov/public/
GeoTracker: http://geotracker.waterboards.ca.gov

Hazardous Waste Cleanup Site Findings

Site	Address	Source	Status
None			

MAP 1: HAZARDOUS WASTE CLEANUP SITES



Subject Property
0.1 mile
0.33 mile
0.5 mile
1.0 mile

LEAKING UNDERGROUND FUEL TANKS AND WASTE MANAGEMENT ACTIVITIES[2]

Sites	Source	Search	Found
Leaking Underground Fuel Tanks (L U F T)	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**11**
R C R A Treatment, Storage And Disposal Facilities (T S D)	U S Environmental Protection Agency: • Enforcement And Compliance History Online (E C H O)	0.5 Mi.	**0**
Solid Waste Sites (Landfills)	California Department Of Resources Recycling And Recovery: • Solid Waste Information System (S W I S)	0.5 Mi.	

Leaking Underground Fuel Tanks and Waste Management Findings

SITE NAME	SITE_TYPE	STATUS	ADDRESS
ARCO #2077	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1913 NEVADA CITY HWY
BERRIGAN RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10319 MANOR DR
CAL STATE HIGHWAY PATROL STN	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11900 SUTTON WAY
FLYER'S/EXXON	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12008 PLAZA DRIVE
GILES & ADA MAY TRUST	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10069 BANNER LAVA CAP RD
KEIL CHEVY/OLDS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10400 BRUNSWICK RD
MC PHERSON'S NURSURY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11293 HUBBARD RD
NELLA 1-STOP #41 (EXXON)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12001 NEVADA CITY HWY

[2] SWIS: http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx

SITE NAME	SITE_TYPE	STATUS	ADDRESS
SIERRA MOTOR SPORTS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12121 NEVADA CITY HWY
TOSCO - FACILITY #6096	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	11912 NEVADA CITY HWY
YUBA RIVER LUMBER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12391 NEVADA CITY HWY

MAP 2: LEAKING UNDERGROUND FUEL TANKS AND WASTE MANAGEMENT ACTIVITIES



Subject Property
0.1 mile
0.33 mile
0.5 mile

FUEL STORAGE, HAZARDOUS WASTE AND SPILLS[3]

Sites	Source	Search	Found
Registered Underground Storage Tanks	California State Water Resources Control Board: • Geotracker	Site And Adjacent	**0**
Historical Underground Storage Tanks	California State Water Resources Control Board: • Geotracker	Site And Adjacent	**0**
Hazardous Waste Generators (R C R A)	U S Environmental Protection Agency: • Enviromapper	Site And Adjacent	**2**
Waste Generator Manfiests	CA Department Of Toxic Substances Control: • Hazardous Waste Tracking System (H W T S)	Site	**0**
Oil And Gas Wells	California Division Of Oil, Gas And Geothermal Resources: • Well Finder	Site	**0**
Spills	U S Coast Guard: • National Response Center (Formerly The Emergency Response Notification System)	Site	**0**

Fuel Storage, Waste and Spills Findings

Site	Address	Source	Status
CVS PHARMACY # 9155	1005 SUTTON WAY	RCRA	LQG
KNIGHTS PAINT	1219 SUTTON WAY	RCRA	Transported

[3] HWTS: http://hwts.dtsc.ca.gov/report_list.cfm
Well Finder: http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx
National Response Center (formerly the Emergency Response Notification System): http://www.nrc.uscg.mil (data dowloaded to local file for database search)

LIENS AND USE RESTRICTIONS

Sites	Source	Search	Found
Liens And Use Restrictions	U S Environmental Protection Agency: • Enviromapper	Site	**0**
	California State Water Resources Control Board: • Geotracker	Site	**0**

Liens and Use Restrictions

Site	Address	Source	Status
None			

MAP3: SITE AND ADJACENT PROPERTIES

FUEL STORAGE AND WASTE MANAGEMENT
LIENS AND USE RESTRICTIONS
ACCIDENTAL SPILLS AND RELEASES



CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
ARCO #2077 (Global ID: T0605700005) 1913 NEVADA CITY HWY GRASS VALLEY, CA 95945	Completed - Case Closed	8/14/2018	3/16/1987	32	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290007* ***CASEWORKER:*** *BENJAMIN LEHMANN* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY - *CASE #: RO0000002* ***CASEWORKER:*** *DAVID HUFF* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

The case was opened following an unauthorized release from an underground storage tank system at the subject site. Corrective action is underway as directed by the CVRWQCB. Corrective action may consist of preliminary site investigation, planning and implementation of remedial action, verification monitoring, or a combination thereof. A summary of the site history is available by clicking on either the "Cleanup Status History", "Regulatory Activities" or the "Site Maps/Documents" tab. For a complete site history the case file at the CVRWQCB should be consulted.

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Other	3/16/1987		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	Nevada Irrigation District	8/14/2018	8/8/2018	8/22/2017		8/25/2017

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO WELL
WELL 01	2904010-001	Active Raw	G	0	908 feet

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
3540014000		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY
Nevada

PUBLIC WATER SYSTEM(S)
- **CITY OF GRASS VALLEY** - 125 EAST MAIN STREET, GRASS VALLEY, CA 95945

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
02077WEFF	3/18/2010	OTHER	ND	ND	ND	ND	ND	75 UG/L
02077WGAC	3/1/2005	OTHER	ND	ND	ND	ND	ND	ND
02077WGAC-	3/18/2010	OTHER	ND	ND	ND	ND	ND	87 UG/L
02077WGAC1	7/19/2005	OTHER	ND	ND	ND	ND	ND	ND
02077WGAC2	12/26/2006	OTHER	ND	ND	ND	ND	ND	ND
02077WGAC3	12/26/2006	OTHER	ND	ND	ND	ND	ND	ND
02077WINF	3/18/2010	OTHER	150 UG/L	12 UG/L	9.8 UG/L	11 UG/L	400 UG/L	110 UG/L
2077EFF	5/3/2005	OTHER	ND	ND	ND	ND	ND	ND
2077GAC	1/5/2005	OTHER	ND	ND	ND	ND	ND	ND
2077GAC1	1/24/2007	OTHER	ND	ND	ND	ND	ND	ND
2077GAC2	1/24/2007	OTHER	ND	ND	ND	ND	ND	ND
2077GAC3	1/24/2007	OTHER	ND	ND	ND	ND	ND	ND
2077INF	5/3/2005	OTHER	660 UG/L	72 UG/L	120 UG/L	200 UG/L	870 UG/L	ND
2077WEFF	3/2/2007	OTHER	ND	ND	ND	ND	ND	ND
2077WGAC1	3/2/2007	OTHER	ND	ND	ND	ND	2 UG/L	36 UG/L
2077WGAC2	3/2/2007	OTHER	ND	ND	ND	ND	ND	ND
2077WGAC3	3/2/2007	OTHER	ND	ND	ND	ND	ND	ND
2077WINF	3/2/2007	OTHER	99 UG/L	17 UG/L	13 UG/L	19 UG/L	340 UG/L	120 UG/L
2077WINFF	2/13/2007	OTHER	55 UG/L	4.9 UG/L	2.4 UG/L	4.3 UG/L	200 UG/L	100 UG/L
EFF	11/7/2002	OTHER	ND	ND	ND	ND	ND	ND
EFFL	12/4/2002	OTHER	ND	ND	ND	ND	ND	ND
EW-1	6/16/2017	OTHER	ND	ND	ND	ND	0.9 UG/L	ND
EW-1-16	9/17/2010	OTHER	16 UG/L	2 UG/L	ND	1.7 UG/L	77 UG/L	ND
EW-1-9.5	9/17/2010	OTHER	ND	ND	ND	ND	22 UG/L	ND
GAC 1	10/16/2002	OTHER	ND	ND	ND	ND	ND	ND
GAC 2	10/16/2002	OTHER	ND	ND	ND	ND	ND	ND
GAC 3	10/16/2002	OTHER	ND	ND	ND	ND	ND	ND
GAC-1	12/4/2002	OTHER	ND	ND	ND	ND	1.6 UG/L	46 UG/L
GAC-2	12/4/2002	OTHER	ND	ND	ND	ND	ND	ND
GAC-3	12/4/2002	OTHER	ND	ND	ND	ND	ND	ND
GV-1	6/16/2017	OTHER	250 UG/L	5.2 UG/L	1.6 UG/L	20 UG/L	5.8 UG/L	ND
GV-1-11	9/17/2010	OTHER	1200 UG/L	ND	75 UG/L	ND	310 UG/L	ND
GV-1-16	9/17/2010	OTHER	1300 UG/L	20 UG/L	81 UG/L	16 UG/L	380 UG/L	ND
GV-10	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-10-11	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-10-6	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-11	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-12	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-12-12	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-12-7.5	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND

GV-13	6/19/2003	OTHER	ND	ND	ND	ND	ND	ND
GV-14	6/19/2003	OTHER	ND	ND	ND	ND	ND	ND
GV-15	6/16/2017	OTHER	ND	ND	ND	ND	ND	ND
GV-15-12.5	9/18/2010	OTHER	1.7 UG/L	1.3 UG/L	14 UG/L	1.8 UG/L	ND	ND
GV-16	6/16/2017	OTHER	ND	ND	ND	ND	2.3 UG/L	ND
GV-16-14	9/18/2010	OTHER	ND	ND	ND	ND	2.2 UG/L	ND
GV-16-8.5	9/18/2010	OTHER	ND	ND	ND	ND	2.6 UG/L	ND
GV-2	6/16/2017	OTHER	ND	ND	ND	ND	ND	ND
GV-2-9.5	9/17/2010	OTHER	1.8 UG/L	1.2 UG/L	1.8 UG/L	0.58 UG/L	ND	ND
GV-3	6/16/2017	OTHER	540 UG/L	59 UG/L	470 UG/L	310 UG/L	110 UG/L	ND
GV-4	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-4-11.5	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-5	2/26/2013	OTHER	ND	ND	ND	ND	12 UG/L	ND
GV-5-12	9/17/2010	OTHER	ND	ND	ND	ND	65 UG/L	ND
GV-5-9	9/17/2010	OTHER	ND	ND	ND	ND	46 UG/L	ND
GV-6	6/16/2017	OTHER	39 UG/L	ND	18 UG/L	ND	ND	ND
GV-6-11	9/17/2010	OTHER	140 UG/L	6.5 UG/L	56 UG/L	22 UG/L	42 UG/L	ND
GV-7	8/28/2008	OTHER	<0.5 UG/L	<0.5 UG/L	<0.5 UG/L	<0.5 UG/L	<0.5 UG/L	<10 UG/L
GV-8	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-8-19	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-8-9.5	9/18/2010	OTHER	ND	ND	ND	ND	ND	ND
GV-9	2/26/2013	OTHER	ND	ND	ND	ND	ND	ND
GV-9-17	9/17/2010	OTHER	ND	ND	ND	ND	ND	ND
GW-2	6/17/2014	OTHER	ND	ND	ND	ND	ND	ND
GW-3	6/16/2017	OTHER	ND	ND	ND	ND	ND	ND
GW-4	6/17/2014	OTHER	ND	ND	ND	ND	ND	ND
INF	11/7/2002	OTHER	390 UG/L	53 UG/L	20 UG/L	140 UG/L	3000 UG/L	ND
QCTB	11/2/2006		ND	ND	ND	ND	ND	ND
TB-2077-08	8/15/2013	OTHER	ND	ND	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)	
EW-1	6/16/2017	5.55	N		
GV-1	6/16/2017	7.07	N		
GV-10	6/16/2017	3.1	N		
GV-11	6/16/2017	4.47	N		
GV-12	6/16/2017	5.3	N		
GV-15	6/16/2017	5.9	N		
GV-16	6/16/2017	5.28	N		
GV-2	6/16/2017	4.5	N		
GV-3	6/16/2017	6.5	N		
GV-4	6/16/2017				
GV-5	6/16/2017	4.62	Y	4.62	
GV-6	6/16/2017	5.3	N		
GV-7	6/16/2017				
GV-8	6/16/2017	5.6	N		
GV-9	6/16/2017	10.25	N		
GW-1	11/3/2016				
GW-2	3/24/2015				
GW-3	6/16/2017	5.03	N		
GW-4	3/24/2015				

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
BERRIGAN RESIDENCE (Global ID: T0605700108) 10319 MANOR DR GRASS VALLEY, CA 95945	Completed - Case Closed	12/23/1999	3/7/1997	22	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290140* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Diesel			Tank	3/7/1997		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			12/23/1999				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO WELL
WELL 01	2904010-001	Active Raw	G	0	1204 feet

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN

GW BASIN NAME

WATERSHED NAME

Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

None Found

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
CAL STATE HIGHWAY PATROL STN (Global ID: T0605700125) 11900 SUTTON WAY GRASS VALLEY, CA 95945	Completed - Case Closed	10/4/2013	1/19/1999	20	NEVADA COUNTY *(LEAD)* - *CASE #: RO0000015* ***CASEWORKER:*** *DAVID HUFF* - ***SUPERVISOR:*** *NONE SPECIFIED* CENTRAL VALLEY RWQCB (REGION 5S) - *CASE #: 290158* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
UNKNOWN	7/26/2005				

RISK INFORMATION

VIEW LTCP CHECKLIST | VIEW PATH TO CLOSURE PLAN | VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Other	1/19/1999		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	Nevada Irrigation District	10/4/2013	7/23/2014	1/24/2013		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO WELL
WELL 01	2904010-001	Active Raw	G	0	1377 feet

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
No APN Found		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-2012-IW	10/12/2012		ND	ND	ND	ND	ND	ND
DUPLMW-4	12/6/2001	OTHER	2.4 UG/L	ND	ND	ND	960 UG/L	ND
DUPLMW-6	12/10/2001	OTHER	ND	ND	ND	ND	ND	ND
GB1-W	9/26/2007	ND	ND	ND	ND	ND	42 UG/L	ND
GB2-W	9/26/2007	ND	ND	ND	ND	ND	64 UG/L	ND
GB3-W	9/26/2007	ND	ND	ND	ND	ND	42 UG/L	ND
GB4-W	9/27/2007	ND	ND	ND	ND	ND	4.4 UG/L	ND
GB5-W	9/27/2007	ND	ND	ND	ND	ND	220 UG/L	ND
GB6-W	9/27/2007	ND	ND	ND	ND	ND	1.6 UG/L	ND
GB7-W	9/27/2007	ND	ND	ND	ND	ND	15 UG/L	ND
GB8-W	9/27/2007	130 UG/L	ND	ND	ND	ND	ND	ND
GW-1	12/10/2008	ND	ND	ND	ND	ND	27 UG/L	ND
GW-2	12/9/2008	ND	ND	ND	ND	ND	250 UG/L	ND
GW-3	12/9/2008	ND	ND	ND	ND	ND	ND	ND
GW-4	12/9/2008	ND	ND	ND	ND	ND	ND	ND
MW-1	12/7/2012		ND	ND	ND	ND	ND	ND
MW-10	12/7/2012		ND	ND	ND	ND	ND	ND
MW-3	12/7/2012		ND	ND	ND	ND	2.4 UG/L	ND
MW-4	12/7/2012		ND	ND	ND	ND	15 UG/L	ND
MW-5	12/7/2012		ND	ND	ND	ND	3.3 UG/L	ND
MW-6	12/7/2012		ND	ND	ND	ND	ND	ND
MW-7	12/7/2012		ND	ND	ND	ND	2.8 UG/L	ND
MW-8	12/7/2012		ND	ND	ND	ND	ND	ND
MW-9	12/7/2012		ND	ND	ND	ND	31 UG/L	ND
PITWATER	5/15/2002	550 UG/L	29 UG/L	120 UG/L	7.4 UG/L	46 UG/L	3600 UG/L	ND
QCTB	12/10/2001	OTHER	ND	ND	ND	ND		

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-2012-1-1	10/12/2012		ND	ND	ND	ND	ND	ND
B-2012-2-1	10/12/2012		ND	ND	ND	ND	ND	ND
B5-3	11/30/2001		ND	ND	ND	ND	ND	ND
B5-5	11/30/2001		ND	ND	ND	ND	ND	ND
B6-10	11/30/2001		ND	ND	ND	ND	ND	ND
B6-3	11/30/2001		ND	ND	ND	ND	ND	ND
B6-5	11/30/2001		ND	ND	ND	ND	ND	ND
B7-10	11/30/2001		ND	ND	ND	ND	35 UG/KG	ND
B7-3	11/30/2001		ND	ND	ND	ND	ND	ND
B7-5	11/30/2001		ND	ND	ND	ND	ND	ND
B8-10	11/30/2001		ND	ND	ND	ND	56 UG/KG	ND
B8-3	11/30/2001		ND	ND	ND	ND	33 UG/KG	ND

B8-5	11/30/2001		ND	ND	ND	ND	43 UG/KG	ND
DUPLB6-5	11/30/2001		ND	ND	ND	ND	ND	ND
GB1-3A1	9/26/2007	ND	ND	ND	ND	ND	ND	ND
GB2-3A	9/26/2007	ND	ND	ND	ND	ND	ND	ND
GB3-3A	9/26/2007	ND	ND	ND	ND	ND	ND	ND
GB4-2A	9/26/2007	ND	ND	ND	ND	ND	ND	ND
GB5-3A	9/27/2007	ND	ND	ND	ND	ND	ND	ND
GB6-3A1	9/27/2007	ND	ND	ND	ND	ND	ND	ND
GB7-2B2	9/27/2007	ND	ND	ND	ND	ND	ND	ND
GB8-4A	9/27/2007	ND	ND	ND	ND	ND	ND	ND
GW-1	12/9/2008	ND	ND	ND	ND	ND	ND	ND
GW-2	12/9/2008	ND	ND	ND	ND	ND	0.02 MG/KG	ND
GW-3	12/9/2008	ND	ND	ND	ND	ND	ND	ND
GW-4	12/9/2008	ND	ND	ND	ND	ND	ND	ND
MW-5-10	11/29/2001		ND	ND	ND	ND	35 UG/KG	ND
MW-5-15	11/29/2001		ND	ND	ND	ND	24 UG/KG	ND
MW-5-20	11/29/2001		ND	ND	ND	ND	ND	ND
MW-5-5	11/29/2001		ND	ND	ND	ND	ND	ND
MW-6-10	11/29/2001		ND	ND	ND	ND	ND	ND
MW-6-15	11/29/2001		ND	ND	ND	ND	ND	ND
MW-6-20	11/29/2001		ND	ND	ND	ND	ND	ND
MW-6-5	11/29/2001		ND	ND	ND	ND	ND	ND
MW-7-10	11/29/2001		ND	ND	ND	ND	8.7 UG/KG	ND
MW-7-15	11/29/2001		ND	ND	ND	ND	ND	ND
MW-7-20	11/29/2001		ND	ND	ND	ND	ND	ND
MW-7-5	11/29/2001		ND	ND	ND	ND	ND	ND
STOCKPILE	5/15/2002	ND	ND	ND	ND	ND	13 UG/KG	17 UG/KG
SV-1	12/10/2008	ND	ND	ND	ND	ND	ND	ND
SV-2	12/10/2008	ND	ND	ND	ND	ND	ND	ND
SV-4	12/10/2008	ND	ND	ND	ND	ND	ND	ND
SV-5	12/10/2008	ND	ND	ND	ND	ND	ND	ND
SV-6	12/10/2008	ND	ND	ND	ND	ND	0.014 MG/KG	ND
SV-7	12/10/2008	ND	ND	ND	ND	ND	ND	ND
SV-8	12/12/2008	ND	ND	ND	ND	ND	0.007 MG/KG	ND
SV-9	12/12/2008	ND	ND	ND	ND	ND	ND	ND
T PIT CENT	5/15/2002	ND	ND	ND	ND	ND	250 UG/KG	ND
T PIT EAST	5/15/2002	ND	ND	ND	ND	ND	ND	ND
T PIT WEST	5/15/2002	ND	ND	ND	ND	ND	120 UG/KG	ND

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	12/7/2012	0	N	
MW-10	12/7/2012	3.1	N	
MW-3	12/7/2012	2.2	N	
MW-4	12/7/2012	0	N	
MW-5	12/7/2012		N	
MW-6	12/7/2012	2.99	N	
MW-7	12/7/2012	2.49	N	
MW-8	12/7/2012	3.92	N	
MW-9	12/7/2012	3.33	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
FLYER'S/EXXON (Global ID: T0605783906) 12008 PLAZA DRIVE GRASS VALLEY, CA 95945	Completed - Case Closed	3/7/2006	5/30/2002	17	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290194* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *DAVID HUFF* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION — VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline		GW - Groundwater Recharge	Other	5/30/2002		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			3/7/2006	3/3/2006	10/21/2005		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
3548025000		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER — VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW-1	6/3/2005	ND	ND	ND	ND	ND	5.1 UG/L	ND
MW-2	6/3/2005	ND	ND	ND	ND	ND	6 UG/L	ND
MW-3	6/3/2005	ND	ND	ND	ND	ND	11 UG/L	ND
MW-4	6/3/2005	ND	ND	ND	ND	ND	ND	ND
MW-5	6/3/2005	ND	ND	ND	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL — VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA — VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
GILES & ADA MAY TRUST (Global ID: T0605700140) 10069 BANNER LAVA CAP RD NEVADA CITY, CA 95959	Completed - Case Closed	9/29/2000	1/4/2000	19	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290173* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Diesel			Other	1/4/2000		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			9/29/2000				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
3539606000		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
KEIL CHEVY/OLDS (Global ID: T0605700069) 10400 BRUNSWICK RD GRASS VALLEY, CA 95945	Completed - Case Closed	12/2/1997	5/5/1994	25	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD) - CASE #: 290095* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Piping	5/5/1994		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			1/1/1965				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
No APN Found		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY	PUBLIC WATER SYSTEM(S)
Nevada	

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
MC PHERSON'S NURSURY (Global ID: T0605700073) 11293 HUBBARD RD GRASS VALLEY, CA 95945	Completed - Case Closed	4/30/2003	7/15/1994	25	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290099* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Diesel			Tank	7/15/1994		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			4/30/2003	6/30/2005	2/22/2003		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
3522130000		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
WB-3	1/10/2002		ND	ND	ND	ND	ND	ND
WB-6	1/10/2002		ND	ND	ND	ND	5.9 UG/L	ND
WB-7	1/10/2002		ND	ND	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-8-11	5/22/2002		ND	ND	ND	ND		

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
NELLA 1-STOP #41 (EXXON) (Global ID: T0605700118) 12001 NEVADA CITY HWY GRASS VALLEY, CA 95945	Completed - Case Closed	7/22/2014	7/22/1998	21	NEVADA COUNTY *(LEAD)* - *CASE #: RO0000029* ***CASEWORKER:*** *GRANT EISEN* - ***SUPERVISOR:*** *NONE SPECIFIED* CENTRAL VALLEY RWQCB (REGION 5S) - *CASE #: 290150* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Other	7/22/1998		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	GVPW	7/22/2014	7/2/2014	7/2/2014		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
No APN Found

GW BASIN NAME

WATERSHED NAME
Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY
Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
C-1	1/20/2012	ND	ND	ND	ND	ND	ND	ND
C-2	1/20/2012	ND	ND	ND	ND	ND	ND	ND
C-2A	4/13/2010	ND	ND	ND	ND	ND	ND	ND
C-3	1/20/2012	ND	ND	ND	ND	ND	ND	ND
C-4	1/7/2009	ND	ND	ND	ND	ND	ND	ND
C-5	1/7/2009	ND	ND	ND	ND	ND	ND	9.8 UG/L
C-6	1/7/2009	ND	ND	ND	ND	ND	ND	5.1 UG/L
CIC	1/20/2012	ND	ND	ND	ND	ND	ND	ND
DD	1/20/2012	170 UG/L	ND	ND	ND	ND	ND	ND
MW-1	4/26/2011	87 UG/L	ND	ND	ND	ND	7.3 UG/L	58 UG/L
MW-10	9/8/2011	ND	ND	ND	ND	ND	ND	ND
MW-10-5	10/30/2003		ND	0.82 UG/L	ND	OTHER	2.9 UG/L	ND
MW-2	1/7/2009	ND	ND	ND	ND	ND	0.54 UG/L	ND
MW-3	12/21/2011	2000 UG/L	160 UG/L	8.2 UG/L	14 UG/L	44 UG/L	120 UG/L	25000 UG/L
MW-4	12/21/2011	ND	ND	ND	ND	ND	9.6 UG/L	140 UG/L
MW-5	1/7/2009	ND	ND	ND	ND	ND	ND	ND
MW-6	9/8/2011	ND	ND	ND	ND	ND	4.4 UG/L	100 UG/L
MW-7	9/8/2011	88 UG/L	ND	ND	ND	ND	8.6 UG/L	33 UG/L
MW-8	9/8/2011	ND	ND	ND	ND	ND	ND	ND
MW-9	1/7/2009	ND	ND	ND	ND	ND	ND	ND
QCTB	11/30/2011	ND	ND	ND	ND	ND	ND	ND
S	1/20/2012	ND	ND	ND	ND	ND	ND	ND
S-1	11/11/2010	ND	ND	ND	ND	ND	130 UG/L	2400 UG/L
S-2	11/11/2010	ND	ND	ND	ND	ND	14 UG/L	180 UG/L
S1	6/9/2009	ND	ND	ND	ND	ND	310 UG/L	2700 UG/L
S2	6/9/2009	ND	ND	ND	ND	ND	1.4 UG/L	920 UG/L
TRIP BLANK	9/8/2011		ND	ND	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	10/19/2010	4.54	N	
MW-10	10/19/2010	8.12	N	
MW-2	10/19/2010	5.63	N	
MW-3	10/19/2010	5.88	N	
MW-4	10/19/2010	5.95	N	
MW-5	10/19/2010	3.02	N	
MW-6	10/19/2010	5.94	N	
MW-7	10/19/2010	7.02	N	
MW-8	10/19/2010	4.82	N	
MW-9	10/19/2010	6.02	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
SIERRA MOTOR SPORTS (Global ID: T0605700080) 12121 NEVADA CITY HWY GRASS VALLEY, CA 95945	Completed - Case Closed	7/9/1996	10/18/1994	24	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD) - CASE #: 290106* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Tank	10/18/1994		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			1/1/1965				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
No APN Found		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY	PUBLIC WATER SYSTEM(S)
Nevada	

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
TOSCO - FACILITY #6096 (Global ID: T0605700086) 11912 NEVADA CITY HWY GRASS VALLEY, CA 95945	Completed - Case Closed	2/11/2010	3/14/1995	24	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290114* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
IN SITU BIOLOGICAL TREATMENT	10/1/2006	3/1/2007	Water		
MONITORED NATURAL ATTENUATION	2/2/1997				

RISK INFORMATION

VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline		GW - Groundwater Recharge	Tank	3/14/1995		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			2/11/2010	5/6/2010	9/24/2009		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO WELL
WELL 01	2904010-001	Active Raw	G	0	920 feet

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
No APN Found		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY
Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
QA	9/11/2003		ND	ND	ND	ND	ND	
QA-TB	3/22/2002	OTHER	ND	ND	ND	ND	ND	
TB-LB	12/20/2001	OTHER	ND	ND	ND	ND	ND	
U-1	8/20/2009	ND	ND	ND	ND	ND	ND	ND
U-2	8/20/2009	ND	ND	ND	ND	ND	9.3 UG/L	ND
U-3	8/20/2009	51 UG/L	ND	ND	ND	ND	9.8 UG/L	34 UG/L
U-4	8/20/2009	ND	ND	ND	ND	ND	ND	ND
U-5	8/20/2009	ND	ND	ND	ND	ND	ND	ND
U-6	8/20/2009	ND	ND	ND	ND	ND	1.5 UG/L	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
O-1	8/17/2005		ND	0.0081 MG/KG	0.0097 MG/KG	0.35 MG/KG	180 MG/KG	
O-2	8/17/2005		ND	ND	ND	ND	0.37 MG/KG	
O-3	8/17/2005		ND	ND	ND	ND	0.11 MG/KG	

MOST RECENT GEO_WELL DATA

VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
U-1	8/20/2009	6.97	N	
U-2	8/20/2009	7.92	N	
U-3	8/20/2009	3.02	N	
U-4	8/20/2009	9.98	N	
U-5	8/20/2009	7.4	N	
U-6	8/20/2009	7.15	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
YUBA RIVER LUMBER (Global ID: T0605700067) 12391 NEVADA CITY HWY GRASS VALLEY, CA 95945	Completed - Case Closed	11/4/1997	12/23/1993	25	CENTRAL VALLEY RWQCB (REGION 5S) *(LEAD)* - *CASE #: 290093* ***CASEWORKER:*** *VERA J. FISCHER* - ***SUPERVISOR:*** *CHRISTOPHER FLOWER* NEVADA COUNTY ***CASEWORKER:*** *TRACY GIDEL* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Gasoline			Other	12/23/1993		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			1/1/1965				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
3522180000		Bear River - Upper Bear - Wolf Creek (516.32)

COUNTY

Nevada

PUBLIC WATER SYSTEM(S)

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI SUBMITTALS

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

ECHO
Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

KNIGHTS PAINT
1219 SUTTON WAY, GRASS VALLEY, CA 95945

FRS (Facility Registry Service) ID: 110065958636
EPA Region: 09
Latitude: 39.23874
Longitude: -121.03317
Locational Data Source: FRS
Industry:
Indian Country: N

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs with NC (Noncompliance) (of 12)	Qtrs with Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
RCRA	--	--	**No Violation Identified**	0	0	--	--	--	--	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active (H) Transporter

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

(CAL000379865)
Safe Drinking Water Act
(SDWA): No Information

Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110065958636					N	39.23874	-121.03317
RCR	RCRA	CAL000379865	Transporter	Active (H)			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110065958636	KNIGHTS PAINT	1219 SUTTON WAY, GRASS VALLEY, CA 95945
RCR	RCRA	CAL000379865	KNIGHTS PAINT INCORPORATED	1219 SUTTON WAY, GRASS VALLEY, CA 95945

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCR	CAL000379865	44412	Paint and Wallpaper Stores
RCR	CAL000379865	44419	Other Building Material Dealers

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
Auburn Rancheria	United Auburn Indian Community of the Auburn Rancheria of California	100000314	20.54

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding (if applicable)
No data records returned						

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	CAL000379865	No	03/30/2019	0	03/29/2019

Download Data

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: CAL000379865)		04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17	07/01-09/30/17	10/01-12/31/17	01/01-03/31/18	04/01-06/30/18	07/01-09/30/18	10/01-12/31/18	01/01-03/31/19
	Facility-Level Status	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	System	Law/Section	Source ID	Action Type	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty	State/Local Penalty	SEP Cost	Comp Action Cost
No data records returned														

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned									

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
No data records returned							

Air Quality

Nonattainment Area?	Pollutant(s)	Applicable Nonattainment Standard(s)
Yes	Ozone	8-Hour Ozone (1997), 8-Hour Ozone (2008), 8-Hour Ozone (2015)
No	Lead	
No	Particulate Matter	
No	Carbon Monoxide	
No	Nitrogen Dioxide	
No	Sulfur Dioxide	

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	100%	Households in Area:	10,988
Center Latitude:	39.23874	Water Area:	0%	Housing Units in Area:	12,006
Center Longitude:	-121.03317	Population Density:	867/sq.mi.	Households on Public Assistance:	490
Total Persons:	24,527	Percent Minority:	14%	Persons Below Poverty Level:	8,231

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	22,316 (91%)	Child 5 years and younger:	1,162 (5%)
African-American:	92 (0%)	Minors 17 years and younger:	4,771 (19%)

Hispanic-Origin:	1,977 (8%)	Adults 18 years and older:	19,756 (81%)
Asian/Pacific Islander:	379 (2%)	Seniors 65 years and older:	5,309 (22%)
American Indian:	301 (1%)		
Other/Multiracial:	1,440 (6%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	484 (2.78%)	Less than $15,000:	1,522 (14.73%)
9th through 12th Grade:	1,278 (7.33%)	$15,000 - $25,000:	1,198 (11.59%)
High School Diploma:	3,835 (22%)	$25,000 - $50,000:	2,882 (27.89%)
Some College/2-yr:	6,550 (37.57%)	$50,000 - $75,000:	1,831 (17.72%)
B.S./B.A. or More:	5,286 (30.32%)	Greater than $75,000:	2,900 (28.07%)

ECHO
Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

CVS PHARMACY # 9155
1005 SUTTON WAY, GRASS VALLEY, CA 95945

FRS (Facility Registry Service) ID:
110046524800
EPA Region: 09
Latitude: 39.23654
Longitude: -121.03398
Locational Data Source: FRS
Industry:
Indian Country: N

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs with NC (Noncompliance) (of 12)	Qtrs with Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
RCRA	--	--	**No Violation Identified**	0	0	--	--	--	--	--

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): Active (H) LQG (CAR000228486)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Known Data Problems

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110046524800					N	39.23654	-121.03398
RCR	RCRA	CAR000228486	LQG	Active (H)			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110046524800	CVS PHARMACY # 9155	1005 SUTTON WAY, GRASS VALLEY, CA 95945
RCR	RCRA	CAR000228486	CVS PHARMACY # 9155	1005 SUTTON WAY, GRASS VALLEY, CA 95945-0000

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCR	CAR000228486	446110	Pharmacies and Drug Stores

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
Auburn Rancheria	United Auburn Indian Community of the Auburn Rancheria of California	100000314	20.41

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding (if applicable)
No data records returned						

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	CAR000228486	No	03/30/2019	0	03/29/2019

Download Data

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
	RCRA (Source ID: CAR000228486)	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17	07/01-09/30/17	10/01-12/31/17	01/01-03/31/18	04/01-06/30/18	07/01-09/30/18	10/01-12/31/18	01/01-03/31/19
	Facility-Level Status	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**	**No Violation Identified**

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	System	Law/Section	Source ID	Action Type	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty	State/Local Penalty	SEP Cost	Comp Action Cost
No data records returned														

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned									

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
No data records returned							

Air Quality

Nonattainment Area?	Pollutant(s)	Applicable Nonattainment Standard(s)
Yes	Ozone	8-Hour Ozone (1997), 8-Hour Ozone (2008), 8-Hour Ozone (2015)
No	Lead	

No	Particulate Matter	
No	Carbon Monoxide	
No	Nitrogen Dioxide	
No	Sulfur Dioxide	

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
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Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	100%	Households in Area:	11,179
Center Latitude:	39.23654	Water Area:	0%	Housing Units in Area:	12,224
Center Longitude:	-121.03398	Population Density:	881/sq.mi.	Households on Public Assistance:	501
Total Persons:	24,921	Percent Minority:	14%	Persons Below Poverty Level:	8,397

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	22,673 (91%)	Child 5 years and younger:	1,180 (5%)
African-American:	92 (0%)	Minors 17 years and younger:	4,841 (19%)
Hispanic-Origin:	2,007 (8%)	Adults 18 years and older:	20,080 (81%)
Asian/Pacific Islander:	384 (2%)	Seniors 65 years and older:	5,433 (22%)

American Indian:	312 (1%)		
Other/Multiracial:	1,460 (6%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	491 (2.77%)	Less than $15,000:	1,571 (14.94%)
9th through 12th Grade:	1,305 (7.36%)	$15,000 - $25,000:	1,215 (11.55%)
High School Diploma:	3,931 (22.19%)	$25,000 - $50,000:	2,929 (27.85%)
Some College/2-yr:	6,668 (37.63%)	$50,000 - $75,000:	1,870 (17.78%)
B.S./B.A. or More:	5,324 (30.05%)	Greater than $75,000:	2,932 (27.88%)

F. Title Records

First American Title

First American Title Company

10124 Commercial Avenue
Penn Valley, CA 95946

Escrow Officer:	Robin Zoch
Phone:	(530)432-1531
Fax No.:	(866)589-3442
E-Mail:	rzoch@firstam.com
E-Mail Loan Documents to:	PennValleyEdocs@firstam.com
Buyer:	Monaghan
Property:	936 Old Tunnel Rd. Grass Valley, CA 95945

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. *The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties*. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of December 05, 2018 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

LEO R. GRANUCCI, TRUSTEE LEO R. GRANUCCI FAMILY REVOCABLE 1997 TRUST DATED MARCH 16, 1997

The estate or interest in the land hereinafter described or referred to covered by this Report is:

FEE

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2018-2019.

First Installment:	$1,610.79 , PAID
Penalty:	$0.00
Second Installment:	$1,610.79, OPEN
Penalty:	$0.00
Tax Rate Area:	001-056
A. P. No.:	035-400-054-000

2. The land lies within the boundaries of proposed community facilities District No. 2014-1 (CLEAN ENERGY), as disclosed by a map filed December 26, 2017 in BOOK 2, PAGE 10 of maps of assessment and community facilities districts.

3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

4. An easement for ELECTRIC TRANSMISSION LINE WITH POLES, WIRES, GUYS, CROSSARMS, BRACES, INGRESS, EGRESS TO MAINTAIN SAME, TOGETHER WITH THE RIGHT TO TRIM TREES WHEN NECESSARY and incidental purposes in the document recorded June 27, 1932 as BOOK 15, PAGE 31 of Official Records.

5. An easement for A SINGLE LINE OF POLES and incidental purposes in the document recorded November 13, 1946 as BOOK 110, PAGE 336 of Official Records.

6. An easement for SUTTON WAY PIPELINE AND THE RIGHT TO ENTER TO MAINTAIN SAME and incidental purposes in the document recorded July 29, 1974 as BOOK 701, PAGE 30 of Official Records.

7. An easement shown or dedicated on the Map as referred to in the legal description

   For: PUBLIC UTILITIES, DRAINAGE and incidental purposes.

8. The following matters shown or disclosed by the filed or recorded map referred to in the legal description: VARIOUS NOTES AND RECITALS

9. An offer of dedication for INGRESS, EGRESS, ROAD CONSTRUCTION, ROAD MAINTENANCE, TOGETHER WITH ANY AND ALL APPURTENANCES THERETO, INCLUDING THE RIGHT TO TRIM, AND/OR REMOVE TREES AND VEGETATION, AND THE RIGHT TO EXTEND CULVERTS AND SLOPES, PUBLIC UTILITIES AND DRAINAGE and incidental purposes, recorded September 16, 1981 as INSTRUMENT NO. 1981-24903 of Official Records.
   To: COUNTY OF NEVADA

10. The terms and provisions contained in the document entitled "REIMBURSEMENT AGREEMENT RELATING TO BRUNSWICK ROAD/SUTTON WAY IMPROVEMENTS" recorded February 09, 2009 as INSTRUMENT NO. 2009-002548 of Official Records.

11. The fact that the land lies within the boundaries of the GRASS VALLEY Redevelopment Project Area, as disclosed by the document recorded June 02, 2011 as INSTRUMENT NO. 2011-013095 of Official Records.

12. Rights of the public in and to that portion of the land lying within any Road, Street, Alley or Highway.

13. Water rights, claims or title to water, whether or not shown by the public records.

14. Rights of parties in possession.

Prior to the issuance of any policy of title insurance, the Company will require:

15. With respect to the trust referred to in the vesting:
    a. A certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company.
    b. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.
    c. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require.

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. The property covered by this report is vacant land.

2. According to the public records, there has been no conveyance of the land within a period of twenty four months prior to the date of this report, except as follows:

   A document recorded OCTOBER 15, 2018 as INSTRUMENT NO. 2018-0020160 OF OFFICIAL RECORDS
   From: JOHN MCMANUS, AN UNMARRIED MAN
   To: LEO R. GRANUCCI, TRUSTEE LEO R. GRANUCCI FAMILY REVOCABLE 1997 TRUST DATED MARCH 16, 1997

3. We find no open deeds of trust. Escrow please confirm before closing.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

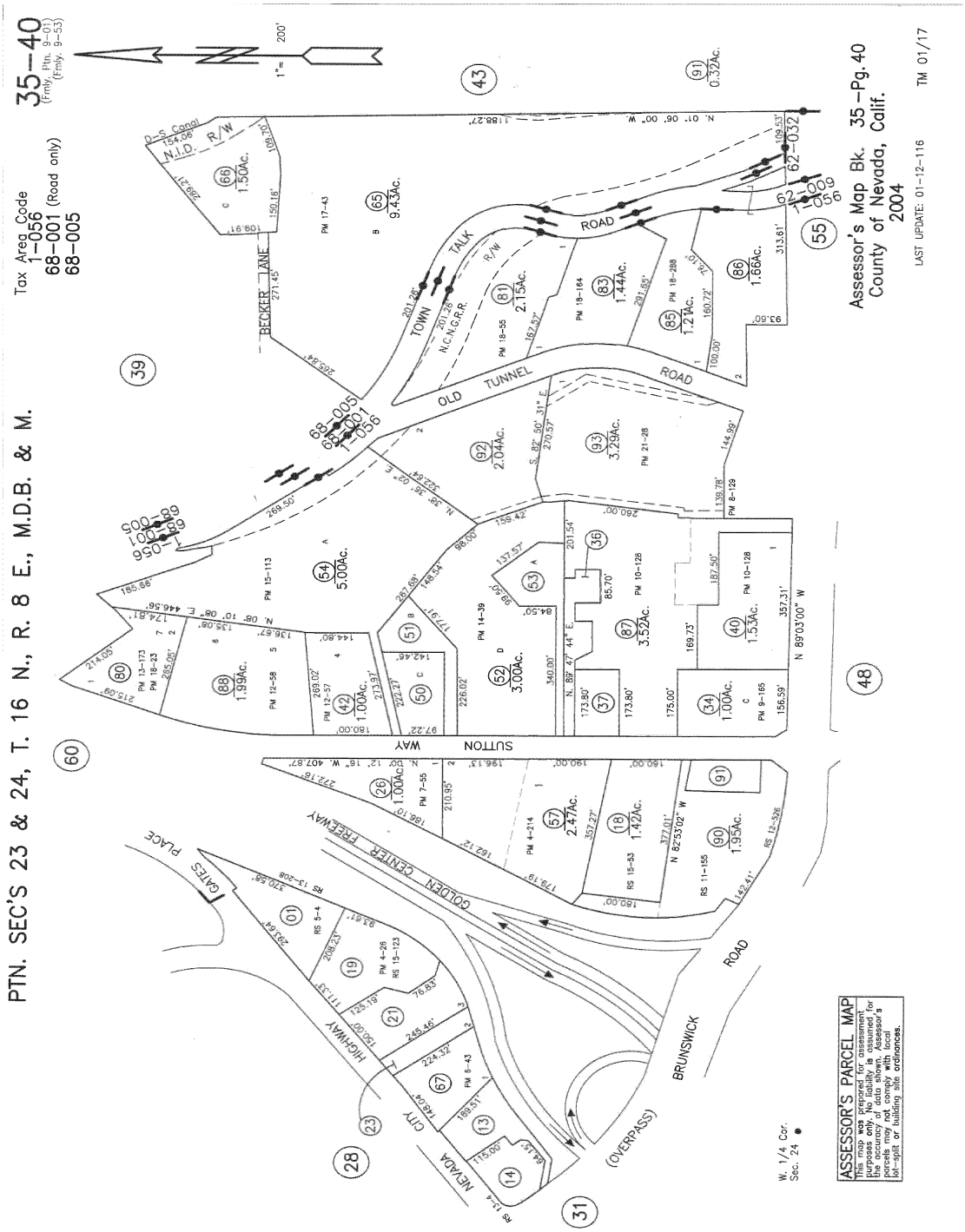
LEGAL DESCRIPTION

Real property in the City of Grass Valley, County of Nevada, State of California, described as follows:

PARCEL A, AS SHOWN ON PARCEL MAP NO. 78-154, FILED SEPTEMBER 16, 1981 IN BOOK 15, AT PAGE 113, NEVADA COUNTY RECORDS.

EXCEPTING THEREFROM ALL THAT PORTION THEREOF 100 FEET BELOW THE SURFACE, AS CONVEYED BY DEED, EXECUTED BY GEORGE A. LEGG, ET UX TO D.E. MCLAUGHLIN, RECORDED JANUARY 11, 1940, IN BOOK 60, AT PAGE 22, OFFICIAL RECORDS.

APN: 035-400-54-000


35-40
(Frmly. Ptn. 9-01)
(Frmly. 9-53)
PTN. SEC'S 23 & 24, T. 16 N., R. 8 E., M.D.B. & M.
Tax Area Code
1-056
68-001 (Road only)
68-005
1" = 200'
Assessor's Map Bk. 35-Pg. 40
County of Nevada, Calif.
2004
LAST UPDATE: 01-12-116
TM 01/17
ROAD
TUNNEL
OLD
TOWN TALK
BECKER LANE
SUTTON WAY
GOLDEN CENTER FREEWAY
BRUNSWICK ROAD
(OVERPASS)
HIGHWAY
GATES PLACE
CITY
NEVADA
D-S Canal
N.I.D. R/W
N.C.N.G.R.R.
W. 1/4 Cor.
Sec. 24
ASSESSOR'S PARCEL MAP
This map was prepared for assessment purposes only. No liability is assumed for the accuracy of data shown. Assessor's parcels may not comply with local lot-split or building site ordinances.

RECORDING REQUESTED BY:
First American Title Company

WHEN RECORDED MAIL DOCUMENT TO:

County of Nevada
950 Maidu Avenue, Suite 130
Nevada City , CA 95959

Nevada County Recorder
Gregory J. Diaz
Document#: 20190001375
Tuesday January 22 2019, at 02:43:20 PM

Paid: $0.00
Recorded By:KP
FIRST AMERICAN TITLE CO

4
NF

Space Above This Line for Recorder's Use Only

A.P.N.: 035-400-54-000
936 Old Tunnel Rd., Grass Valley, CA 95945

File No.: 2903-5838457

Grant Deed
(Please fill in document title(s) on this line)

( ) Exempt from fee under GC 27388.1 due to being recorded in connection with a concurrent transfer that is subject to the imposition of documentary transfer tax, or

( ) Exempt from fee under GC 27388.1 due to the maximum fees being paid on documents in this transaction, or

( ) Exempt from fee under GC 27388.1 due to being recorded in connection with a transfer of real property that is a residential dwelling to an owner-occupier, or

( ) Exempt from fee under GC 27388.1 (a) (1); Not related to real property, or,

(X) Exempt from fee under GC 27388.1 for the following reasons: Transfer Deed not subject to tax by Govt. Code 27383

NOTE: The following exemptions **may not be acceptable for use in all counties:**

( ) Exempt from fee under GC 27388.1 due to being recorded in connection with a transaction that was subject to documentary transfer tax which was paid on document recorded _____ as Document No. _____ of Official Records, or

( ) Exempt from fee under GC 27388.1 due to the maximum fees having been paid on document(s) recorded _____ as Document No. _____ of Official Records, or

( ) Exempt from fee under GC 27388.1 due to it being recorded in connection with a transfer of real property that is a residential dwelling to an owner-occupier. The recorded document transferring the dwelling to the owner-occupier was recorded _____ as Document No. _____ of Official Records.

THIS PAGE ADDED TO PROVIDE EXEMPTION INFORMATION FOR THE BUILDING HOMES AND JOBS ACT FEE
(SB-2; AFFORDABLE HOUSING FEE)
(Additional recording fee applies)

This document is a transfer that is subject to the imposition of documentary transfer tax.

RECORDING REQUESTED BY:
First American Title Company

MAIL TAX STATEMENT
AND WHEN RECORDED MAIL DOCUMENT TO:
County of Nevada
950 Maidu Avenue, Suite 130
Nevada City , CA 95959

Space Above This Line for Recorder's Use Only

A.P.N.: 035-400-54-000

File No.: 2903-5838457 (RZ)

GRANT DEED

The Undersigned Grantor(s) Declare(s): DOCUMENTARY TRANSFER TAX **$none per R&T code 11922**; CITY TRANSFER TAX $;
SURVEY MONUMENT FEE $
[ ] computed on the consideration or full value of property conveyed, OR
[ ] computed on the consideration or full value less value of liens and/or encumbrances remaining at time of sale,
[ ] unincorporated area; [X] City of **Grass Valley**, and
EXEMPT FROM BUILDING HOMES AND JOBS ACTS FEE PER GOVERNMENT CODE 27388.1(a)(2)

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Leo R. Granucci, Trustee Leo R. Granucci Family Revocable 1997 Trust dated March 16, 1997**

hereby GRANTS to **County of Nevada, a Political Subdivision of the State of California**

the following described property in the City of **Grass Valley**, County of **Nevada**, State of **California:**

PARCEL A, AS SHOWN ON PARCEL MAP NO. 78-154, FILED SEPTEMBER 16, 1981 IN BOOK 15, AT PAGE 113, NEVADA COUNTY RECORDS.

EXCEPTING THEREFROM ALL THAT PORTION THEREOF 100 FEET BELOW THE SURFACE, AS CONVEYED BY DEED, EXECUTED BY GEORGE A. LEGG, ET UX TO D.E. MCLAUGHLIN, RECORDED JANUARY 11, 1940, IN BOOK 60, AT PAGE 22, OFFICIAL RECORDS.

Mail Tax Statements To: **SAME AS ABOVE**

Grant Deed - continued

Date: **01/18/2019**

A.P.N.: 035-400-54-000

File No.: 2903-5838457 (RZ)

Dated: January 18, 2019

Leo R. Granucci, Trustee Leo R. Granucci Family Revocable 1997 Trust dated March 16, 1997

Leo R. Granucci, TRUSTEE

Leo R. Granucci, Trustee

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CA)SS

COUNTY OF Nevada)

On 1-18-19 before me, Keeley Hopper , Notary Public, personally appeared Leo R. Granucci

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

This area for official notarial seal.

Notary Signature

KEELEY HOPPER
COMM. # 2181800
NOTARY PUBLIC - CALIFORNIA
NEVADA COUNTY
COMM. EXPIRES JAN. 29, 2021

CERTIFICATE OF ACCEPTANCE
(Government Code, Section 27281)

THIS IS TO CERTIFY that the County of Nevada, Grantee in the attached grant deed APN 35-400-54-000, from **Leo R. Granucci, Trustee, Leo R. Granucci Family Revocable 1997 Trust to County of Nevada, a political subdivision of the State of California**, acting through its designated official, by authority granted by **Resolution No. 19-024** and by action taken by the Board of Supervisors, hereby accepts for public purposes the real property, or interest therein, conveyed by the subject deed and the grantee consents to the recordation thereof by its duly authorized officer.

IN WITNESS WHEREOF, I have hereunto set my hand and had affixed the County's official seal, this 22 day of January 2019.

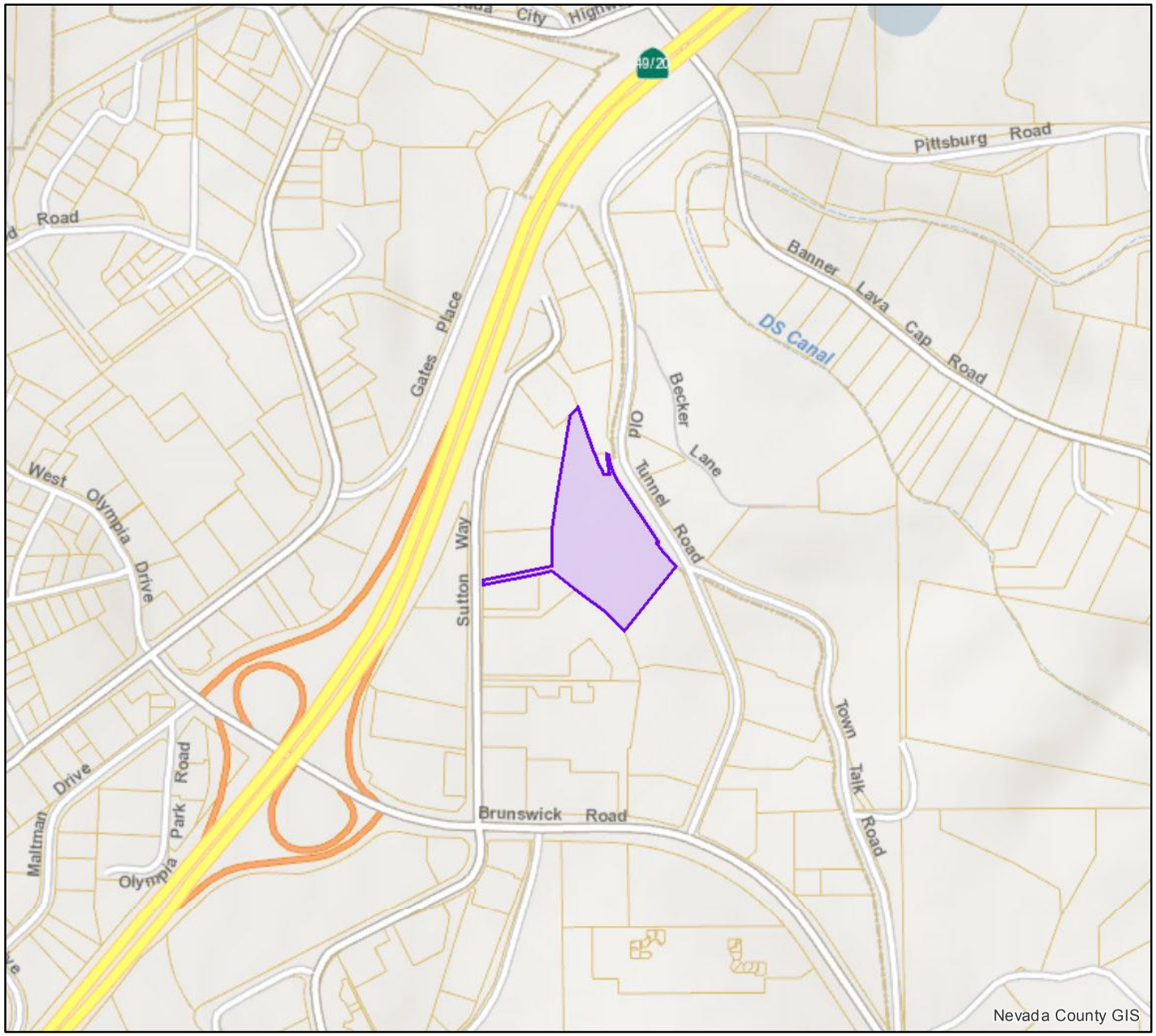
ATTEST:

Clerk of the Board

County of Nevada

By: _____
Richard Anderson
Chair, Board of Supervisors

Nevada County Parcel Report



Parcel APN:	035-400-054-000
936 OLD TUNNEL ROAD	
Land Value:	$299,000
Improvement Value:	$0
Acreage:	5.00
Zoning:	OP GVCTY
General Plan:	GRV
Fire District:	Grass Valley
Elementary Sch. Dist:	Grass Valley
Water District:	
Nevada Irrigation Dist:	NID Water - Zone 1.0
Public Utility:	
Park District:	
Service Area:	AREA NO. 32 -
Snow Load:	51
Wind Exposure:	C
Climate Zone:	11
Elevation:	2739

Overview



January 23, 2019

© Nevada County GIS 2019

Scale: 1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

G. Questionnaires

RNC ENVIRONMENTAL, LLC
151 Nursery Street, Ashland, OR 97520
(888)485-3330 • rnc-enviro.com

Phase I Environmental Site Assessment (ASTM E1527-13) Questionnaire

Project Name: Brunswick Commons

Property Address: 936 Old Tunnel Road
Grass Valley, CA

To whom it may concern:

RNC Environmental has been retained to complete a Phase I Environmental Site Assessment of the above-specified property. Your assistance in sharing your knowledge of present and past uses of the property, and of any known or suspected environmental conditions relating to it, is much appreciated. Please respond to the questions below "to the best of your knowledge"; no additional investigation on your part is required. Thank you!

Questionnaire completed by:

Date: April 11, 2019

Name: Mike Dent

Title: Director Housing & Community Services

Please provide a telephone number or email address, in case we have any additional questions: mike.dent@co.nevada.ca.us

This person's association with the subject property:

[X] Current Owner [ ] Previous Owner [ ]Property Manager [ ] Occupant [ ] Other : _____

1. What is the current use of the property?

[ ] Commercial [ ] Industrial [ ] Single-family Residential [ ] Multi-family [ ] Agriculture

[X] Vacant Land [ ] Other: _____

2. How long has the property been used for this purpose? Unknown, property purchased 1/18/19

3. Are you aware of any other past uses of the property? No

4. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property? [ ] Yes [X] No

5. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property? [ ] Yes [X] No

6. Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? [ ] Yes [X] No

7. Are you aware of any other present or past any environmental problems at the property? [ ] Yes [X] No

If yes, please describe_____

8. Are there currently, or to the best of your knowledge have there been previously, any gasoline, diesel, fuel oil or other chemical storage tanks (above or underground) located on the property? [ ] Yes [X] No

9. Are there currently, or to the best of your knowledge have there been previously, are any pesticides, paints, or other chemicals stored or used on the property in drums, sacks or other containers greater than 5 gallons each or 50 gallons in the aggregate? [ ] Yes [X] No

10. Are there currently, or to the best of your knowledge have there been previously a type of business located on the property which uses hazardous chemicals, such as a gas station or dry cleaner? [ ] Yes [X] No

11. Are you aware of any previous environmental reports (Phase I, Phase II, Geotechnical, etc.) for the property? Please provide copies, if available. [X] Yes [ ] No

12. Are there, or to the best of your knowledge have there been previously, any buildings/structures on the property? If so, please complete the building survey on the next page. [ ] Yes [X] No

13. Please attach any additional information, clarification, and/or comments on a separate sheet, or by email.

Please email the completed form to neil@rnc-enviro.com, or fax to (888) 485-3330. Thank you!

Building Survey -- Please complete one copy of this form for each building that currently exists, or formerly existed, on the property.

Building number/ID: N/A

Building use and type of construction: _____

_____

_____

Approximate year of construction: _____

Is this building still standing? [ ] Yes [ ] No If not, approximate year of demolition: _____

Type of level below grade? [ ] Full Basement [ ] Crawl Space [ ] Slab on Grade [ ] Parking Garage

Are there any sump pumps, floor drains, or trenches? [ ] Yes [ ] No [ ] Unknown

Heating system type? (CHECK ALL THAT APPLY)

[ ] Unheated

[ ] Natural Gas [ ] Electric [ ] Propane [ ] Fuel Oil [ ] Kerosene

[ ] Wood [ ] Coal [ ] Solar [ ] Other _____

RNC ENVIRONMENTAL, LLC
151 Nursery Street, Ashland, OR 97520
(888)485-3330 •www.rnc-enviro.com

Phase I Environmental Site Assessment (ASTM E1527-13) Questionnaire

In order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Project Name: *Brunswick Commons* Address: *936 Old Tunnel Road Grass Valley, CA*

Questionnaire completed by:

Name: *Cameron Johnson* Date: *4-16-19*

Title: *Manager of Buyer*

	Yes	No
(1.) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?	☐	☒
(2.) Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?	☐	☒
(3.) Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	☐	☒
(4.) (a.) Is the purchase price being paid for this property significantly less than the fair market value of the property?	☐	☒
(b.) If you conclude that there is a difference, is there any concern that the lower purchase price may be because contamination is known or believed to be present at the property?	☐	☒
(5.) Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, do you know the past uses of the property? Do you know of specific chemicals that are present or once were present at the property? Do you know of spills or other chemical releases that have taken place at the property? Do you know of any environmental cleanups that have taken place at the property?	☐	☒
(6.) Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?	☐	☒

USER QUESTIONNAIRE

IMPORTANT: *In order to qualify for the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), any additional user of this report should complete a copy of this questionnaire in order to document their own knowledge of the property. This blank questionnaire is provided for your use. See Section 2.5 of this report for additional information.*

	Yes	No
(1.) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?		
(2.) Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/ or have been filed or recorded in a registry under federal, tribal, state or local law?		
(3.) Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?		
(4.) (a.) Is the purchase price being paid for this property significantly less than the fair market value of the property? (b.) If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?		
(5.) Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, do you know the past uses of the property? Do you know of specific chemicals that are present or once were present at the property? Do you know of spills or other chemical releases that have taken place at the property? Do you know of any environmental cleanups that have taken place at the property?		
(6.) Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?		

For each "Yes" answer, please attach a description or supporting documentation as appropriate, for your files.

Completed by (please print): _____

Signed _____ Date _____

H. Previous Reports

PHASE II ENVIRONMENTAL SITE ASSESSMENT

936 OLD TUNNEL ROAD

NEVADA COUNTY, CALIFORNIA

OCTOBER 9, 2018

PREPARED ON BEHALF OF:

LEO R. GRANUCCI
12550 APPLE ORCHARD LANE
NEVADA CITY, CALIFORNIA 95959



NV5

792 SEARLS AVENUE
NEVADA CITY, CA 95959

PROJECT NO. 5088A.00

Project No. 5088A.00
October 9, 2018

Leo R. Granucci
12550 Apple Orchard Lane
Nevada City, CA 95959

Reference: **936 Old Tunnel Road**
APN 035-400-054-000
Grass Valley, California

Subject: **Phase II Environmental Site Assessment**

Dear Mr. Granucci:

NV5 prepared this report to summarize site investigation procedures and to present the results of a Phase II Environmental Site Assessment (ESA) for APN 035-400-054-000, located at 936 Old Tunnel Road in Grass Valley, California. We understand that you plan to purchase the property.

The Phase II ESA included subsurface investigation, soil sampling and laboratory analysis. The assessment was performed in general accordance with the scope of work presented in our *Proposal for Phase II Soil Sampling and Analysis* dated August 17, 2018.

The purpose of the Phase II ESA was to characterize environmental conditions identified by the *Phase I Environmental Site Assessment, 936 Old Tunnel Road* (Phase I ESA; NV5, May 10, 2018). The environmental conditions identified in the Phase I ESA were associated with undocumented fill materials and the former alignment of the historical Nevada County Narrow Gauge Railroad. As documented in this report, the Phase II ESA did not identify significant impact to soil at the locations assessed.

NV5 appreciates the opportunity to provide environmental services for your project. Please contact the undersigned with any questions regarding our investigation.

Sincerely,

NV5

REGISTERED PROFESSIONAL ENGINEER
JASON W. MUIR
No. 60167
Exp. 06 / 20
CIVIL
STATE OF CALIFORNIA

Jason W. Muir, C.E. 60167
Associate Engineer

copies: 3 to Mr. Granucci
PDF to Mr. Granucci, AV8RLEO@comcast.net
PDF to Jon Blinder, blinderj@cbcommercialgr.com

F:\1 Projects\5088 936 Old Tunnel Road\5088A.00 - Phase II ESA\Report\01 Text\5088A.00 Phase II ESA, 936 Old Tunnel Road.docx

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Table 1 Total Metals in Soil Samples
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APPENDICES

Appendix A Laboratory Report and Chain-of-Custody Documentation

ACRONYMS AND ABBREVIATIONS

%REC	percent recovery
ATL	Advanced Technology Laboratories, Inc.
CalEPA	California Environmental Protection Agency
CAM	California Assessment Manual
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CWC	California Water Code
DI	deionized water
DQI	data quality indicators
DTSC	California Department of Toxic Substances Control
DTSC-SL	DTSC Screening Level
ELAP	Environmental Laboratory Accreditation Program
ESL	environmental screening levels
MCL	Maximum Contaminant Level
MDL	method detection limit
mg/kg	milligrams per kilogram
MQO	measurement quality objective
MS	matrix spike
MSD	matrix spike duplicate
NID	Nevada Irrigation District
Non 15	Non Chapter 15 Program
NTR	National Toxics Rule
OEHHA	Office of Environmental Health Hazard Assessment
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PQL	practical quantitation limit
RL	laboratory reporting limit
RPD	relative percent difference
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
SL	screening level
SVOC	semi-volatile organic compounds
SWRCB	State Water Resources Control Board
Title 22	Title 22 of the California Code of Regulations
TPH	total petroleum hydrocarbons
TTLC	Total Threshold Limit Concentration
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WDR	Waste Discharge Requirement

1 INTRODUCTION

NV5 prepared this report to summarize site investigation procedures and to present the results of a Phase II Environmental Site Assessment (ESA) for APN 035-400-054-000, located at 936 Old Tunnel Road in Grass Valley, California.

The Phase II ESA included subsurface investigation, soil sampling and laboratory analysis. The assessment was performed in general accordance with the scope of work presented in our *Proposal for Phase II Soil Sampling and Analysis* dated August 17, 2018.

1.1 PURPOSE

The purpose of the Phase II ESA was to characterize environmental conditions identified by the *Phase I Environmental Site Assessment, 936 Old Tunnel Road* (Phase I ESA; NV5, May 10, 2018). The Phase I ESA identified the following environmental conditions:

- The Nevada County Narrow Gauge Railroad (NCNGRR) crossed the eastern portion of the property. The railroad was used during the mining era to transport materials and passengers.
- Fill was observed at two locations on the property. The origin of the fill is unknown. Evidence of historical mining activity was observed at locations up slope from the subject property.

1.2 SITE DESCRIPTION

The subject property is located at 936 Old Tunnel Road in Grass Valley, California, and is accessed from the west by Sutton Way and from the East by Old Tunnel Road. Referencing the *Grass Valley, California 7.5 Minute Topographic Quadrangle* (United States Geological Survey [USGS]; photorevised 1973) the property is located within the eastern half of the northwest quarter of Section 24, Township 16 North, Range 8 East.

A location map is presented as Figure 1. Figure 2 is an aerial photograph depicting the approximate boundaries of the subject property. The property boundaries depicted on the figures were not determined by survey methods and should be considered approximate.

1.3 RATIONALE FOR SAMPLING STRATEGY

The NCNGRR historically crossed the eastern portion of the property. Historical railroad operation is sometimes associated with soil contamination from petroleum products (e.g., diesel, oil, creosote). In addition, mine rock that was sometimes used as ballast between the railroad ties has the potential to contain elevated metals concentrations. We excavated exploratory trenches at discrete locations along the former railroad alignment, observed subsurface soil conditions, collected soil samples and analyzed the samples for petroleum products and metals. Selected samples were analyzed for semi-volatile organic compounds (SVOCs).

Surface topography at the property indicated that two locations had the potential to contain imported fill material. We excavated exploratory trenches at these locations, observed subsurface soil conditions, collected discrete soil samples and analyzed the samples for petroleum products and metals.

1.4 REGULATORY SCREENING LEVELS

The United States Environmental Protection Agency (USEPA) and the California EPA (CalEPA) Department of Toxic Substances Control (DTSC) have established screening levels related to protection of human health in the case of routine, long term exposure by direct pathways (i.e., ingestion, inhalation and dermal contact). These include but are not limited to USEPA Region IX Regional Screening Levels (RSLs) and DTSC Screening Levels (DTSC-SLs). For inorganics (metals), background concentrations are also commonly used as a basis for comparison.

RSLs and DTSC-SLs include inorganic constituent concentrations that are based on the protection of public health. In California, DTSC-SLs are commonly used in lieu of RSLs when DTSC uses toxicity criteria that are different than the toxicity criteria used by the USEPA.

The RSLs and DTSC-SLs are considered conservative. Under most circumstances, the presence of a chemical in media at concentrations less than the corresponding RSL or DTSC-SL can be assumed not to pose a significant, long-term (chronic) threat to human health. The presence of a chemical or inorganic constituent at a concentration in excess of a screening level does not necessarily indicate that adverse impacts to human health are occurring or will occur; however, further evaluation of potential human health concerns are generally appropriate if screening values are exceeded.

1.5 LIMITATIONS AND EXCEPTIONS

NV5 performed this work in accordance with present, regional, generally accepted standards of care. This report does not represent a legal opinion. No warranty, expressed or implied, including any implied warranty of merchantability or fitness for the purpose is made or intended in connection with the work. The information provided in this report is not meant to be comprehensive, to identify all potential concerns, or to eliminate the risk associated with environmental conditions. The investigation addresses only specific conditions identified in a Phase I ESA.

The findings of this report are valid as of the present date. However, changes in the conditions of the property can occur with the passage of time. The changes may be due to natural processes or to the works of man, on the project site or adjacent properties. Changes in regulations, interpretations, and/or enforcement policies may occur at any time. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. A qualified environmental professional should evaluate whether the generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

Concentrations detected in the samples collected during the site investigation may not be representative of conditions between the locations sampled. Other forms of contamination may be present within the site that the investigation did not detect. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Therefore, the findings presented in this report may need to be revised based on the results of future sampling and analysis.

The Phase II ESA scope of services did not include characterization of groundwater or surface water conditions. The scope did not include testing for naturally occurring asbestos, radon, lead paint, endangered species, geologic hazards, archeological sites, or ecologically sensitive areas (e.g., vernal pools and wetlands).

We prepared and issued this Phase II ESA report for the exclusive use of our client. The information, conclusions and recommendations presented apply only to the subject property. We are not responsible for any other party's interpretations of the reported information.

2 INVESTIGATION METHODOLOGY

NV5 performed the subsurface investigation and sample collection on September 21, 2018. The investigation methodology is summarized below

2.1 EXPLORATORY TRENCHING

NV5 used a Bobcat mini-excavator with an 18-inch-wide bucket to excavate five exploratory trenches at the locations depicted approximately on Figure 2. Trenches were typically excavated to depths up to three feet below the ground surface. Trenches were backfilled but not compacted; therefore, settlement of trench backfill should be expected.

2.2 SOIL SAMPLING

Soil samples were collected as grab samples (independent, discrete samples) from four locations (OT-T1 through OT-T4) using new, individually-wrapped plastic scoops. The samples were transferred to laboratory-supplied, four-ounce glass jars with Teflon lids. The glass gars were placed in pre-chilled, thermally-insulated container and were transported by overnight mail to a California-certified analytical laboratory under chain-of-custody documentation. New nitrile gloves were used for each sample location.

2.3 DECONTAMINATION

The laboratory testing program included analysis of inorganics and organics. New, single-use equipment and containers were used at each sampling location; therefore, equipment decontamination before and between sample locations was not performed.

2.4 LABORATORY ANALYSIS

Laboratory analysis was performed by Advanced Technology Laboratories (ATL; Environmental Laboratory Accreditation Program [ELAP] certification number 1838) of Signal Hill, California. The laboratory testing program included analysis of discrete soil samples for inorganics and organics as described below.

2.4.1 Inorganics Analysis

The four samples were analyzed for total CAM 17 (Title 22) metals. The CAM 17 metals suite of analysis includes antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc. All CAM 17 metals were analyzed using EPA Method 6010B, except for mercury, which was analyzed using EPA Method 7471A.

Table 2.4.1 – Laboratory Testing Program, Inorganics

Analysis	Method
Total CAM 17 (Title 22) Metals	EPA 6010B/7471A

Notes:
CAM = California Administrative Manual
EPA = United States Environmental Protection Agency

2.4.2 Organics Analysis

Organics analysis consisted of total petroleum hydrocarbons (TPH) in the gas, diesel, and motor oil ranges and semi-volatile organic compounds (SVOCs).

Table 2.4.2 – Laboratory Testing Program, Organics

Analysis	Method
Semi-volatile organic compounds (SVOC)	EPA 8270C
TPH Gas, Diesel, Motor Oil	EPA 8015B

Notes:
EPA = United States Environmental Protection Agency

3 DATA QUALITY OBJECTIVES

3.1 MEASUREMENT QUALITY OBJECTIVES

Measurement Quality Objectives (MQOs) are established for field and laboratory measurements to define criteria for calibration and quality control. MQOs are used to assess the viability and usability of data, considering the following Data Quality Indicators (DQIs): precision, accuracy, representativeness, completeness, comparability, and sensitivity.

3.1.1 Laboratory Measurement Quality Objectives

Soil samples were submitted to ATL for analysis of inorganic and organic constituents. Laboratory MQOs are defined by ATL in the analytical laboratory report presented in Appendix A.

3.2 DATA REVIEW AND VALIDATION

Field personnel were responsible for following NV5's standard operating procedures for sediment sampling and field documentation to facilitate the collection of defensible and justifiable data. Responsibilities for data review and validation are outlined below:

- Field data review and validation was performed by Jason W. Muir, PE, GE, Project Manager.
- Laboratory data review and validation were performed by a chemist or laboratory analyst as summarized in the laboratory report (Appendix A). Data failing to meet the laboratory acceptance criteria were flagged with a qualifier identifying the associated problem in the laboratory report.
- Secondary validation, including review of the laboratory quality control report, was performed by the Project Manager. The Project Manager was responsible for overall verification and final approval of all data.

Procedures and criteria for review of laboratory data are summarized in the following sections.

3.2.1 Precision

NV5 assessed the precision of laboratory analysis by comparing the analytical results with matrix spike/matrix spike duplicate (MS/MSD) results for organic analysis, and laboratory duplicate results for inorganic analysis. For laboratory precision, NV5's general MQOs are:

- Relative percent difference (RPD) between duplicate blank spikes less than or equal to 20%.
- RPD between laboratory duplicate samples less than or equal to 30% for analyte concentrations greater than or equal to five times the method detection limit (MDL), and the absolute concentration difference less than or equal to the MDL for analyte concentrations less than five times the MDL.

- RPD between MSDs less than or equal to 40%.

ATL reported no RPD exceedances.

3.2.2 Accuracy

NV5 assessed the accuracy of laboratory results by reviewing method blank, reagent and preparation blank, MS/MSD, field blank, and bottle blank analytical results. The percent recovery (%REC or %R as shown in the following equation) of MS samples was calculated using the following equation:

$$\%R_i = \left(\frac{Y_i}{X_i}\right) \times 100$$

where:

$\%R_i$ = percent recovery for compound i
Y_i = measured analyte concentration in sample i (measured - original sample concentration)
X_i = known analyte concentration in sample i

For matrix spikes, the %REC calculation typically takes into account correcting the matrix spike concentration for the naturally occurring amounts (as measured in the unspiked sample). The calculation may be represented by the following equation:

$$\%R = \frac{(A - B)}{K} \times 100$$

where:

%R = percent recovery
A = measured value or concentration in the matrix spike
B = measured value or concentration in the unspiked sample
K = known or accepted/true value or concentration in the matrix spike without native amounts present

For laboratory accuracy, the MQOs are:

- Detections less than the RL for field blanks.
- Detections less than ½ the RL for laboratory blanks.
- %REC between 80 and 120%.

ATL duplicate recoveries outside of the acceptance criteria for matrix spike and matrix spike duplicate samples are summarized below. These flags did not signify a negative impact on data usability.

- Matrix spike recovery was outside of the acceptance limits for copper (matrix spike B8I0697-MS1 and matrix spike duplicate B8I0697-MSD1). The analytical batch was validated by the laboratory control sample.

3.2.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent the characteristics of a population, variations in parameters at a sampling point, or an environmental condition that they are intended to represent. NV5 and the contract laboratories addressed the representativeness of data by consistent application of established field and laboratory procedures. However, it is possible that soil characteristics vary from location to location and between the locations sampled.

Sample holding times were verified and chain-of-custody forms were checked for completeness. Temperature of samples was measured upon receipt by the laboratory, when applicable. Laboratory blank samples were evaluated for the presence of contaminants. No significant discrepancies were identified.

3.2.4 Comparability

The comparability objective determines whether analytical conditions are sufficiently uniform for each analytical run to ensure that all reported data will be consistent. Comparability is addressed by using similar analytical methods from one investigation to the next. No significant discrepancies were identified.

3.2.5 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under normal conditions. NV5 considers the data set for this investigation to be complete.

3.2.6 Sensitivity

The laboratory MDL is the minimum concentration of an analyte that can be reliably distinguished from background noise for a specific analytical method. The reporting limit (RL), or practical quantitation limit (PQL), represents the lowest concentration of an analyte that can be accurately and reproducibly quantified in a sample matrix.

NV5 verified the sensitivity of laboratory analysis by comparing the RLs reported by the laboratory to the associated screening levels. The screening levels described in Section 1.4 are typically several times higher than the MDL to allow for reproducibility. Exceptions are discussed below.

- The RL for arsenic exceeds the screening level for arsenic in residential soil (0.11 milligrams per kilogram [mg/kg]) and commercial soil (0.36 mg/kg). The MDL for arsenic exceeds the screening level for arsenic in residential soil (0.11 mg/kg). Arsenic was detected in sediment at concentrations above these screening levels as described in the following section.

NV5 does not expect the RL exceedance to significantly impact the quality of the investigation data.

4 INVESTIGATION RESULTS

Subsurface conditions and laboratory results for soil samples OT-T1 through OT-T4 are summarized below. Exploratory trench locations are depicted on Figure 2. The laboratory report and chain-of-custody document are presented in Appendix A.

4.1 SUBSURFACE CONDITIONS

Subsurface conditions encountered in the exploratory trenches are summarized below.

Table 4.1 – Subsurface Conditions

Trench No.	Depth (feet)	Description
T-1	0-2.5	Clayey silt (ML); dark reddish brown (2.5YR 3/4), slightly moist, medium (native)
T-2	0-0.5	Clayey silt (ML); reddish brown (2.5YR 5/4), dry, loose, common roots (fill)
	0.5-3.0	Clayey silt (ML); reddish brown (2.5YR 5/4), dry, medium, minor angular clasts (native)
T-3	0-1.0	Clayey silt with gravel (ML); brown (7.5YR 5/4), dry, medium (fill)
	1.0-1.5	Silty medium sand (SP); strong brown (7.5YR 5/6), dry, medium dense (fill)
	1.5-2.5	Clayey silt (ML); dark reddish brown (2.5YR 3/4), slightly moist, medium (native)
T-4	0-0.4	Angular gravel (fill)
	0.4-1.5	Clayey silt (ML); dark reddish brown (2.5YR 3/4), slightly moist, medium (native)
T-5	0-0.5	Rounded gravel to 2 inches in diameter (fill)
	0.5-1.0	Clayey silt (ML); reddish brown (2.5YR 5/4), dry, medium, minor angular clasts (native)

No mine waste was encountered in the exploratory trenches. No evidence of contamination (e.g. soil staining or odors) was observed.

4.2 LABORATORY RESULTS

4.2.1 Inorganics Analysis

Results of total metals analysis are presented in Table 1. Total metals concentrations detected in the sediment samples are compared to the screening levels described in Section 1.4. The detected total metals concentrations are below the corresponding DTSC-SLs and RSLs for commercial and residential soil, with the exception of arsenic, as described below.

Total arsenic was detected in the four samples at concentrations ranging from 4.2 to 8.6 milligrams per kilogram (mg/kg, also expressed as parts per million, or ppm). These concentrations exceed the DTSC-SLs for residential soil (0.11 mg/kg) and commercial soil (0.36 mg/kg) but are within the range of background soil arsenic concentrations for the region (typically up to 17 mg/kg). This commonly accepted range of background soil arsenic concentrations is based on the statistical analysis of over 200 data points obtained from DTSC-regulated sites in the region as part of DTSC's Voluntary Cleanup Program. Additional information regarding regional background concentrations can be provided upon request.

The total metals concentrations detected in the sediment samples are below the corresponding Total Threshold Limit Concentration (TTLC) values for designation of hazardous waste in California.

4.2.2 Organics Analysis

Results of petroleum hydrocarbons analysis are presented in Table 2. Petroleum hydrocarbons were detected in the C10-C40 range at total concentrations of 42 to 47 mg/kg. These values are below the Environmental Screening Levels (ESLs) established for petroleum hydrocarbons in the gasoline, diesel and oil ranges by the San Francisco Bay Regional Water Quality Control Board (2016).

Samples OT-T3 and OT-T4 were analyzed for SVOCs. No SVOCs were detected above the corresponding laboratory reporting limits listed in the laboratory report presented in Appendix A.

5 FINDINGS AND CONCLUSIONS

NV5's opinion is that the investigation was performed in general accordance with our proposal dated August 17, 2018.

We did not encounter evidence of mine waste or contamination (e.g., staining or odors) in the exploratory trenches. The chemical characterization of the four soil samples did not detect total concentrations of organic or inorganic constituents that exceeded the corresponding human health screening levels, except for arsenic, and the total arsenic concentrations were not notably elevated with respect to regional background conditions.

Based on our field observations and our review of the laboratory test results, NV5 concludes that the Phase II ESA did not identify significant impact to soil at the locations assessed.

6 REFERENCES

DTSC, 2018. Human Health Risk Assessment Note No. 3. DTSC recommended methodology for use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities.

NV5, 2018. Phase I Environmental Site Assessment, 936 Old Tunnel Road. May 10

San Francisco Bay RWQCB, 2016. User's Guide: Derivation And Application of Environmental Screening Levels.

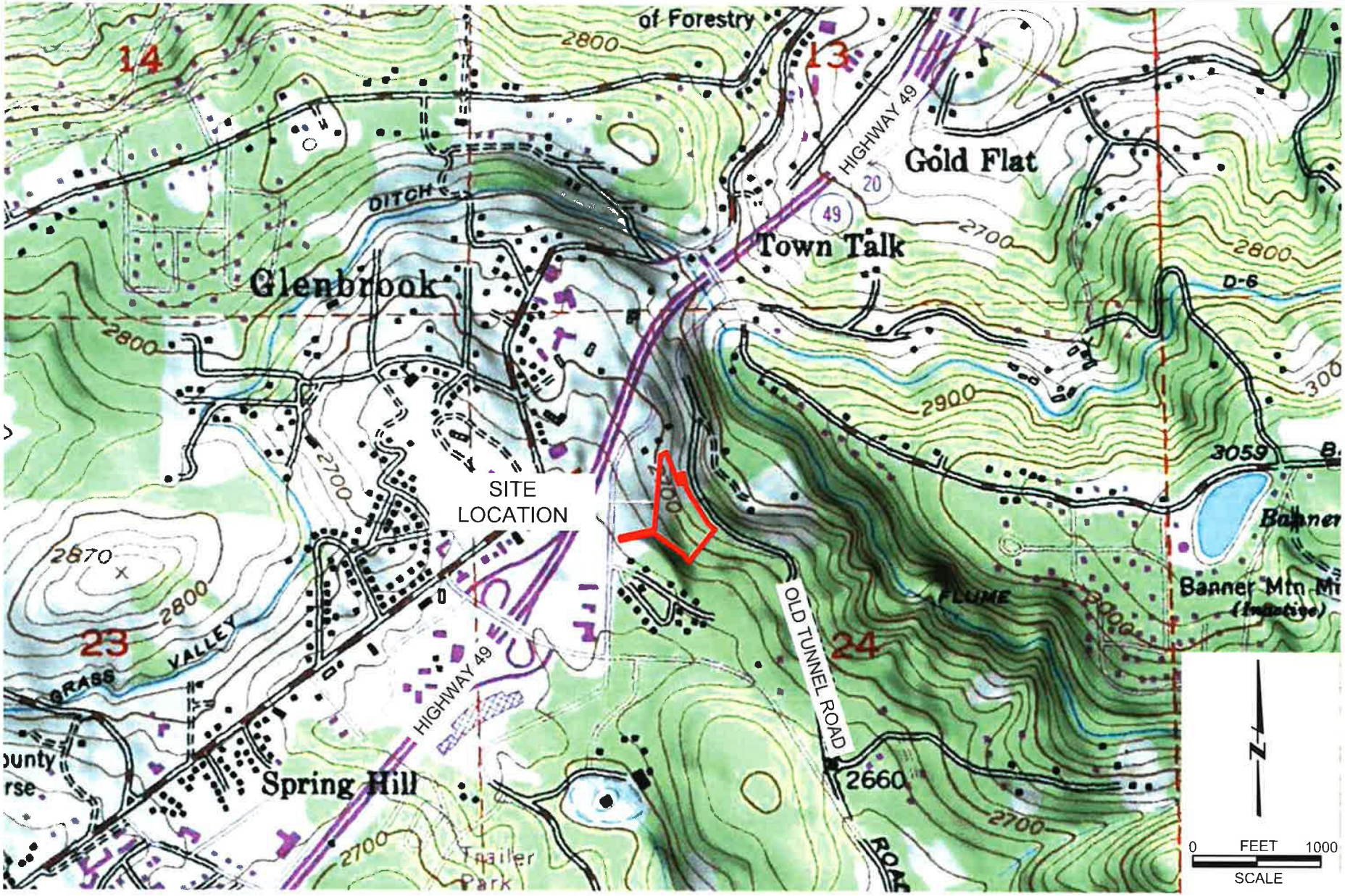
USGS, 1973. Grass Valley Quadrangle, 7.5 minute series.

USEPA, 2015. Regional Screening Levels. January. Accessed at: www.epa.gov/region9/superfund/prg/

FIGURES

Figure 1 Location Map

Figure 2 Site Map



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC MAP, GRASS VALLEY, CALIFORNIA QUADRANGLE, PHOTOREVISED 1973

N|V|5

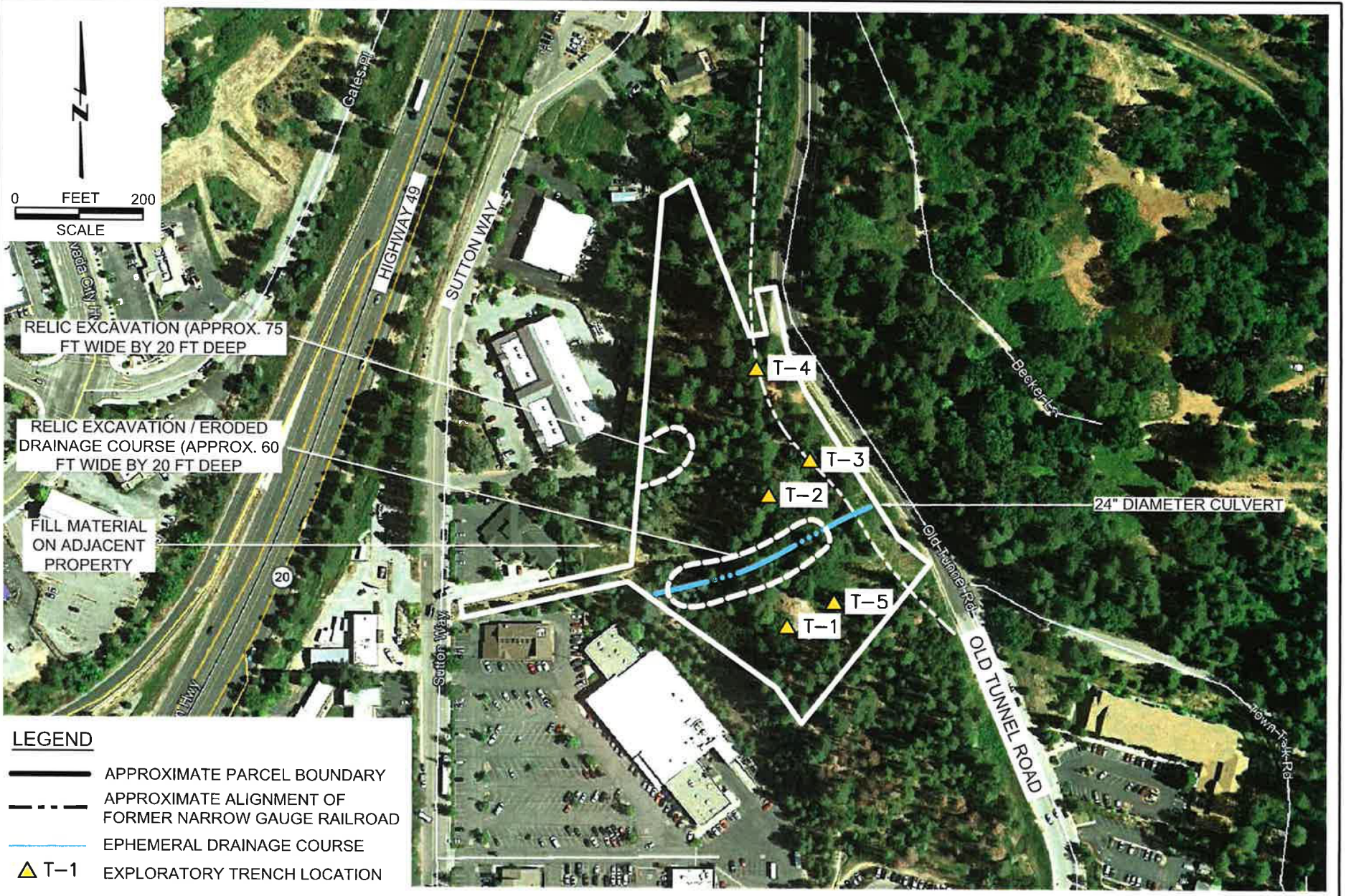
LOCATION MAP

936 OLD TUNNEL ROAD

GRASS VALLEY, CALIFORNIA

DRAWN BY:	BOTSFORD
CHECKED BY:	MUIR
H&K PROJECT:	5088A.00
DATE:	OCTOBER 2018

FIGURE 1



BASE MAP FROM GOOGLE EARTH, IMAGE DATE 2017

NV5

SITE MAP

936 OLD TUNNEL ROAD

GRASS VALLEY, CALIFORNIA

DRAWN BY:	BOTSFORD
CHECKED BY:	MUIR
H&K PROJECT:	5088A.00
DATE:	OCTOBER 2018

FIGURE 2

TABLES

Table 1 Total Metals in Soil Samples

Table 2 Total Petroleum Hydrocarbons in Soil Samples

Table 1 - Total Metals in Sediment Samples
936 Old Tunnel Road
Grass Valley, California

Parameter	CAS No.	EPA Method	Unit	MDL	RL	Results				Benchmark Values			
						OT-T1	OT-T2	OT-T3	OT-T4	Residential Soil	Commercial Soil	Basis for Benchmark Value	TTLC
Date Sampled						*09/21/18*	*09/21/18*	*09/21/18*	*09/21/18*				
Exploratory Trench Number						*T-1*	*T-2*	*T-3*	*T-4*				
Depth Interval (feet)						*0-1.0*	*0-0.5*	*0-1.0*	*0.4-1.1*				
Antimony	7440-36-0	6010B	mg/kg	0.51	2.0	<0.51	<0.51	<0.51	<0.51	*31*	*470*	*RSL*	*500*
Arsenic	7440-38-2	6010B	mg/kg	0.12	1.0	4.9	4.2	8.6	6.4	*0.11*	*0.36*	*DTSC-SL*	*500*
Barium	7440-39-3	6010B	mg/kg	0.12	1.0	110	73	99	88	*15,000*	*2.2E+05*	*RSL*	*10,000*
Beryllium	7440-41-7	6010B	mg/kg	0.03	1.0	0.03	<0.03	<0.14	<0.03	*15*	*210*	*DTSC-SL*	*10,000*
Cadmium	7440-43-9	6010B	mg/kg	0.14	1.0	0.39 J	0.39 J	1.1	0.34 J	*5.2*	*7.3*	*DTSC-SL*	*100*
Chromium	7440-47-3	6010B	mg/kg	0.26	1.0	46	21	39	18	*36,000*	*1.7E+05*	*DTSC-SL*	*2,500*
Cobalt	7440-48-4	6010B	mg/kg	0.07	1.0	13	2.3	20	6.1	*23*	*350*	*RSL*	*2,500*
Copper	7440-50-8	6010B	mg/kg	0.19	2.0	21	15	68	17	*3,100*	*47,000*	*RSL*	*18,000*
Lead	7439-92-1	6010B	mg/kg	0.18	1.0	11	8.5	27	8.1	*80*	*320*	*DTSC-SL*	*1,000*
Mercury	7439-97-6	7471A	mg/kg	0.006	0.10	0.04 J	0.06 J	0.19	0.11	*1.0*	*4.5*	*DTSC-SL*	*20*
Molybdenum	7439-98-7	6010B	mg/kg	0.12	1.0	0.22	<0.12	1.2	0.13	*390*	*5,800*	*RSL*	*3,500*
Nickel	7440-02-0	6010B	mg/kg	0.18	1.0	19	8.4	42	12	*490*	*3,100*	*DTSC-SL*	*2,000*
Selenium	7782-49-2	6010B	mg/kg	0.40	1.0	<0.40	<0.40	<0.40	<0.40	*390*	*5,800*	*RSL*	*100*
Silver	7440-22-4	6010B	mg/kg	0.12	1.0	<0.12	<0.12	<0.12	<0.12	*390*	*1,500*	*RSL*	*500*
Thallium	7440-28-0	6010B	mg/kg	0.38	1.0	<0.38	0.52 J	<1.9	<0.38	*0.78*	*12*	*RSL*	*700*
Vanadium	7440-62-2	6010B	mg/kg	0.06	1.0	94	84	53	56	*390*	*1,000*	*DTSC-SL*	*2,400*
Zinc	7440-66-6	6010B	mg/kg	0.15	1.0	35	25	93	21	*23,000*	*3.5E+05*	*RSL*	*5,000*

Notes:
1 Total chromium (CAS No. 7440-47-3) results compared to RSLs for Chromium III (CAS No. 16065-83-1)
CAS = Chemical Abstracts Service registry number
DTSC-SL = California Department of Toxic Substances Control (DTSC) Screening Level (SL) (DTSC 2018)
MDL = method detection limit
mg/kg = milligrams per kilogram
RL = laboratory reporting limit
RSL = USEPA Region 9 Regional Screening Level
TTLC = total threshold limit concentration
J = Concentration is estimated, and is between the RL and MDL

Table 2 - Total Petroleum Hydrocarbons in Soil Samples
936 Old Tunnel Road
Grass Valley, California

Sample ID	Sample Date	Trench No.	Sample Depth (ft)	Results				
				C8-C10	***C10-C18***	***C18-C28***	***C28-C36***	***C36-C40***
EPA Method				*8015B (Modified)*				
Reporting Limit				10	10	10	10	10
Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
OT-T1	*09/21/18*	*T-1*	*0-1.0*	<10	<10	<10	<10	<10
OT-T2	*09/21/18*	*T-2*	*0-0.5*	<10	<10	**29**	**18**	<10
OT-T3	*09/21/18*	*T-3*	*0-1.0*	<10	<10	<10	<10	<10
OT-T4	*09/21/18*	*T-4*	*0.4-1.1*	<10	**14**	**28**	<10	<10

Notes:
EPA = United States Environmental Protection Agency
mg/kg = milligrams per kilogram

APPENDIX A

Analytical Laboratory Report and Chain-of-Custody Documentation

ADVANCED TECHNOLOGY LABORATORIES

October 02, 2018

Jason Muir
NV5
792 Searls Avenue
Nevada City, CA 95959
Tel: (530) 478-1305
Fax:(530) 478-1019

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1803586
Client Reference : 936 Old Tunnel Road, 5088A.00

Enclosed are the results for sample(s) received on September 25, 2018 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

NV5	Project Number :	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To :	Jason Muir
Nevada City , CA 95959	Reported :	10/02/2018

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OT-T1	1803586-01	Soil	9/21/18 15:00	9/25/18 8:50
OT-T2	1803586-02	Soil	9/21/18 15:30	9/25/18 8:50
OT-T3	1803586-03	Soil	9/21/18 16:30	9/25/18 8:50
OT-T4	1803586-04	Soil	9/21/18 16:00	9/25/18 8:50

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T1

Lab ID: 1803586-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.51	1	B8I0697	09/26/2018	09/26/18 16:18	
Arsenic	**4.9**	1.0	0.12	1	B8I0697	09/26/2018	09/26/18 16:18	
Barium	**110**	1.0	0.12	1	B8I0697	09/26/2018	09/26/18 16:18	
Beryllium	**0.03**	1.0	0.03	1	B8I0697	09/26/2018	09/26/18 16:18	J
Cadmium	**0.39**	1.0	0.14	1	B8I0697	09/26/2018	09/26/18 16:18	J
Chromium	**46**	1.0	0.26	1	B8I0697	09/26/2018	09/26/18 16:18	
Cobalt	**13**	1.0	0.07	1	B8I0697	09/26/2018	09/26/18 16:18	
Copper	**21**	2.0	0.19	1	B8I0697	09/26/2018	09/26/18 16:18	
Lead	**11**	1.0	0.18	1	B8I0697	09/26/2018	09/26/18 16:18	
Molybdenum	**0.22**	1.0	0.12	1	B8I0697	09/26/2018	09/26/18 16:18	J
Nickel	**19**	1.0	0.18	1	B8I0697	09/26/2018	09/26/18 16:18	
Selenium	ND	1.0	0.40	1	B8I0697	09/26/2018	09/26/18 16:18	
Silver	ND	1.0	0.12	1	B8I0697	09/26/2018	09/26/18 16:18	
Thallium	ND	1.0	0.38	1	B8I0697	09/26/2018	09/26/18 16:18	
Vanadium	**94**	1.0	0.06	1	B8I0697	09/26/2018	09/26/18 16:18	
Zinc	**35**	1.0	0.15	1	B8I0697	09/26/2018	09/26/18 16:18	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.04**	0.10	0.006	1	B8I0698	09/26/2018	09/26/18 15:32	J

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8-C10	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
C10-C18	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
C18-C28	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
C28-C36	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
C36-C40	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
C8-C40 Total	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:08	
Surrogate: p-Terphenyl	*147 %*	*58 - 172*			B8I0772	09/27/2018	*09/29/18 09:08*	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T2

Lab ID: 1803586-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.51	1	B810697	09/26/2018	09/26/18 16:19	
Arsenic	**4.2**	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:19	
Barium	**73**	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:19	
Beryllium	ND	1.0	0.03	1	B810697	09/26/2018	09/26/18 16:19	
Cadmium	**0.39**	1.0	0.14	1	B810697	09/26/2018	09/26/18 16:19	J
Chromium	**21**	1.0	0.26	1	B810697	09/26/2018	09/26/18 16:19	
Cobalt	**3.6**	1.0	0.07	1	B810697	09/26/2018	09/26/18 16:19	
Copper	**15**	2.0	0.19	1	B810697	09/26/2018	09/26/18 16:19	
Lead	**8.5**	1.0	0.18	1	B810697	09/26/2018	09/26/18 16:19	
Molybdenum	ND	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:19	
Nickel	**8.4**	1.0	0.18	1	B810697	09/26/2018	09/26/18 16:19	
Selenium	ND	1.0	0.40	1	B810697	09/26/2018	09/26/18 16:19	
Silver	ND	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:19	
Thallium	**0.52**	1.0	0.38	1	B810697	09/26/2018	09/26/18 16:19	J
Vanadium	**84**	1.0	0.06	1	B810697	09/26/2018	09/26/18 16:19	
Zinc	**25**	1.0	0.15	1	B810697	09/26/2018	09/26/18 16:19	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.06**	0.10	0.006	1	B810698	09/26/2018	09/26/18 15:38	J

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8-C10	ND	10	10	1	B810772	09/27/2018	09/29/18 09:25	
C10-C18	ND	10	10	1	B810772	09/27/2018	09/29/18 09:25	
C18-C28	**29**	10	10	1	B810772	09/27/2018	09/29/18 09:25	
C28-C36	**18**	10	10	1	B810772	09/27/2018	09/29/18 09:25	
C36-C40	ND	10	10	1	B810772	09/27/2018	09/29/18 09:25	
C8-C40 Total	**47**	10	10	1	B810772	09/27/2018	09/29/18 09:25	
Surrogate: p-Terphenyl	*147 %*	*58 - 172*			B810772	09/27/2018	*09/29/18 09:25*	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T3

Lab ID: 1803586-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	10	2.5	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Arsenic	**8.6**	5.0	0.60	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Barium	**99**	5.0	0.59	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Beryllium	ND	5.0	0.14	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Cadmium	**1.1**	5.0	0.69	5	B8I0697	09/26/2018	09/27/18 09:53	D5, J
Chromium	**39**	5.0	1.3	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Cobalt	**20**	5.0	0.33	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Copper	**68**	10	0.94	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Lead	**27**	5.0	0.91	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Molybdenum	**1.2**	5.0	0.62	5	B8I0697	09/26/2018	09/27/18 09:53	D5, J
Nickel	**42**	5.0	0.90	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Selenium	ND	5.0	2.0	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Silver	ND	5.0	0.59	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Thallium	ND	5.0	1.9	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Vanadium	**53**	5.0	0.30	5	B8I0697	09/26/2018	09/27/18 09:53	D5
Zinc	**93**	5.0	0.75	5	B8I0697	09/26/2018	09/27/18 09:53	D5

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.19**	0.10	0.006	1	B8I0698	09/26/2018	09/26/18 15:40	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8-C10	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
C10-C18	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
C18-C28	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
C28-C36	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
C36-C40	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
C8-C40 Total	ND	10	10	1	B8I0772	09/27/2018	09/29/18 09:42	
Surrogate: p-Terphenyl	*134 %*	*58 - 172*			B8I0772	09/27/2018	*09/29/18 09:42*	

Certificate of Analysis

NV5	Project Number:	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To:	Jason Muir
Nevada City , CA 95959	Reported:	10/02/2018

Client Sample ID OT-T3

Lab ID: 1803586-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	71	1	B810704	09/26/2018	09/26/18 14:17	
1,2-Dichlorobenzene	ND	330	60	1	B810704	09/26/2018	09/26/18 14:17	
1,3-Dichlorobenzene	ND	330	65	1	B810704	09/26/2018	09/26/18 14:17	
1,4-Dichlorobenzene	ND	330	60	1	B810704	09/26/2018	09/26/18 14:17	
2,4,5-Trichlorophenol	ND	330	61	1	B810704	09/26/2018	09/26/18 14:17	
2,4,6-Trichlorophenol	ND	330	220	1	B810704	09/26/2018	09/26/18 14:17	
2,4-Dichlorophenol	ND	1600	120	1	B810704	09/26/2018	09/26/18 14:17	
2,4-Dimethylphenol	ND	330	120	1	B810704	09/26/2018	09/26/18 14:17	
2,4-Dinitrophenol	ND	1600	86	1	B810704	09/26/2018	09/26/18 14:17	
2,4-Dinitrotoluene	ND	330	46	1	B810704	09/26/2018	09/26/18 14:17	
2,6-Dinitrotoluene	ND	330	49	1	B810704	09/26/2018	09/26/18 14:17	
2-Chloronaphthalene	ND	330	59	1	B810704	09/26/2018	09/26/18 14:17	
2-Chlorophenol	ND	330	120	1	B810704	09/26/2018	09/26/18 14:17	
2-Methylnaphthalene	ND	330	67	1	B810704	09/26/2018	09/26/18 14:17	
2-Methylphenol	ND	330	67	1	B810704	09/26/2018	09/26/18 14:17	
2-Nitroaniline	ND	1600	200	1	B810704	09/26/2018	09/26/18 14:17	
2-Nitrophenol	ND	330	110	1	B810704	09/26/2018	09/26/18 14:17	
3,3'-Dichlorobenzidine	ND	660	280	1	B810704	09/26/2018	09/26/18 14:17	
3-Nitroaniline	ND	1600	44	1	B810704	09/26/2018	09/26/18 14:17	
4,6-Dinitro-2-methyphenol	ND	1600	300	1	B810704	09/26/2018	09/26/18 14:17	
4-Bromophenyl-phenylether	ND	330	50	1	B810704	09/26/2018	09/26/18 14:17	
4-Chloro-3-methylphenol	ND	660	110	1	B810704	09/26/2018	09/26/18 14:17	
4-Chloroaniline	ND	660	53	1	B810704	09/26/2018	09/26/18 14:17	
4-Chlorophenyl-phenylether	ND	330	48	1	B810704	09/26/2018	09/26/18 14:17	
4-Methylphenol	ND	330	66	1	B810704	09/26/2018	09/26/18 14:17	
4-Nitroaniline	ND	1600	290	1	B810704	09/26/2018	09/26/18 14:17	
4-Nitrophenol	ND	330	150	1	B810704	09/26/2018	09/26/18 14:17	
Acenaphthene	ND	330	48	1	B810704	09/26/2018	09/26/18 14:17	
Acenaphthylene	ND	330	51	1	B810704	09/26/2018	09/26/18 14:17	
Anthracene	ND	330	49	1	B810704	09/26/2018	09/26/18 14:17	
Benzidine (M)	ND	1600	1400	1	B810704	09/26/2018	09/26/18 14:17	
Benzo(a)anthracene	ND	330	39	1	B810704	09/26/2018	09/26/18 14:17	
Benzo(a)pyrene	ND	330	45	1	B810704	09/26/2018	09/26/18 14:17	
Benzo(b)fluoranthene	ND	330	55	1	B810704	09/26/2018	09/26/18 14:17	
Benzo(g,h,i)perylene	ND	330	38	1	B810704	09/26/2018	09/26/18 14:17	
Benzo(k)fluoranthene	ND	330	52	1	B810704	09/26/2018	09/26/18 14:17	
Benzoic acid	ND	1600	890	1	B810704	09/26/2018	09/26/18 14:17	

Certificate of Analysis

NV5	Project Number :	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To :	Jason Muir
Nevada City , CA 95959	Reported :	10/02/2018

Client Sample ID OT-T3

Lab ID: 1803586-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	67	1	B810704	09/26/2018	09/26/18 14:17	
bis(2-chloroethoxy)methane	ND	330	59	1	B810704	09/26/2018	09/26/18 14:17	
bis(2-Chloroethyl)ether	ND	330	57	1	B810704	09/26/2018	09/26/18 14:17	
bis(2-chloroisopropyl)ether	ND	330	65	1	B810704	09/26/2018	09/26/18 14:17	
bis(2-ethylhexyl)phthalate	ND	330	83	1	B810704	09/26/2018	09/26/18 14:17	
Butylbenzylphthalate	ND	330	250	1	B810704	09/26/2018	09/26/18 14:17	
Chrysene	ND	330	43	1	B810704	09/26/2018	09/26/18 14:17	
Di-n-butylphthalate	ND	330	230	1	B810704	09/26/2018	09/26/18 14:17	
Di-n-octylphthalate	ND	330	48	1	B810704	09/26/2018	09/26/18 14:17	
Dibenz(a,h)anthracene	ND	330	43	1	B810704	09/26/2018	09/26/18 14:17	
Dibenzofuran	ND	330	55	1	B810704	09/26/2018	09/26/18 14:17	
Diethyl phthalate	ND	330	47	1	B810704	09/26/2018	09/26/18 14:17	
Dimethyl phthalate	ND	330	46	1	B810704	09/26/2018	09/26/18 14:17	
Fluoranthene	ND	330	47	1	B810704	09/26/2018	09/26/18 14:17	
Fluorene	ND	330	49	1	B810704	09/26/2018	09/26/18 14:17	
Hexachlorobenzene	ND	330	41	1	B810704	09/26/2018	09/26/18 14:17	
Hexachlorobutadiene	ND	660	61	1	B810704	09/26/2018	09/26/18 14:17	
Hexachlorocyclopentadiene	ND	660	64	1	B810704	09/26/2018	09/26/18 14:17	
Hexachloroethane	ND	330	71	1	B810704	09/26/2018	09/26/18 14:17	
Indeno(1,2,3-cd)pyrene	ND	330	44	1	B810704	09/26/2018	09/26/18 14:17	
Isophorone	ND	330	57	1	B810704	09/26/2018	09/26/18 14:17	
N-Nitroso-di-n propylamine	ND	330	65	1	B810704	09/26/2018	09/26/18 14:17	
N-Nitrosodiphenylamine	ND	330	48	1	B810704	09/26/2018	09/26/18 14:17	
Naphthalene	ND	330	60	1	B810704	09/26/2018	09/26/18 14:17	
Nitrobenzene	ND	330	67	1	B810704	09/26/2018	09/26/18 14:17	
Pentachlorophenol	ND	1600	190	1	B810704	09/26/2018	09/26/18 14:17	
Phenanthrene	ND	330	46	1	B810704	09/26/2018	09/26/18 14:17	
Phenol	ND	330	130	1	B810704	09/26/2018	09/26/18 14:17	
Pyrene	ND	330	53	1	B810704	09/26/2018	09/26/18 14:17	
Pyridine	ND	1600	270	1	B810704	09/26/2018	09/26/18 14:17	
Surrogate: 1,2-Dichlorobenzene-d4	*48.1 %*	*23 - 94*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: 2,4,6-Tribromophenol	*74.3 %*	*26 - 128*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: 2-Chlorophenol-d4	*52.0 %*	*27 - 94*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: 2-Fluorobiphenyl	*54.9 %*	*35 - 104*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: 2-Fluorophenol	*48.3 %*	*23 - 87*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: 4-Terphenyl-d14	*69.7 %*	*38 - 142*			B810704	09/26/2018	*09/26/18 14:17*	
Surrogate: Nitrobenzene-d5	*49.4 %*	*27 - 107*			B810704	09/26/2018	*09/26/18 14:17*	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T3

Lab ID: 1803586-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d6	*53.0 %*	*28 - 87*		B8I0704	09/26/2018	*09/26/18 14:17*	

Certificate of Analysis

NV5	Project Number :	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To :	Jason Muir
Nevada City , CA 95959	Reported :	10/02/2018

Client Sample ID OT-T4

Lab ID: 1803586-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.51	1	B810697	09/26/2018	09/26/18 16:21	
Arsenic	**6.4**	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:21	
Barium	**88**	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:21	
Beryllium	ND	1.0	0.03	1	B810697	09/26/2018	09/26/18 16:21	
Cadmium	**0.34**	1.0	0.14	1	B810697	09/26/2018	09/26/18 16:21	J
Chromium	**18**	1.0	0.26	1	B810697	09/26/2018	09/26/18 16:21	
Cobalt	**6.1**	1.0	0.07	1	B810697	09/26/2018	09/26/18 16:21	
Copper	**17**	2.0	0.19	1	B810697	09/26/2018	09/26/18 16:21	
Lead	**8.1**	1.0	0.18	1	B810697	09/26/2018	09/26/18 16:21	
Molybdenum	**0.13**	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:21	J
Nickel	**12**	1.0	0.18	1	B810697	09/26/2018	09/26/18 16:21	
Selenium	ND	1.0	0.40	1	B810697	09/26/2018	09/26/18 16:21	
Silver	ND	1.0	0.12	1	B810697	09/26/2018	09/26/18 16:21	
Thallium	ND	1.0	0.38	1	B810697	09/26/2018	09/26/18 16:21	
Vanadium	**56**	1.0	0.06	1	B810697	09/26/2018	09/26/18 16:21	
Zinc	**21**	1.0	0.15	1	B810697	09/26/2018	09/26/18 16:21	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.11**	0.10	0.006	1	B810698	09/26/2018	09/26/18 15:42	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8-C10	ND	10	10	1	B810772	09/27/2018	09/29/18 09:59	
C10-C18	**14**	10	10	1	B810772	09/27/2018	09/29/18 09:59	
C18-C28	**28**	10	10	1	B810772	09/27/2018	09/29/18 09:59	
C28-C36	ND	10	10	1	B810772	09/27/2018	09/29/18 09:59	
C36-C40	ND	10	10	1	B810772	09/27/2018	09/29/18 09:59	
C8-C40 Total	**42**	10	10	1	B810772	09/27/2018	09/29/18 09:59	
Surrogate: p-Terphenyl	*151 %*	*58 - 172*			B810772	09/27/2018	*09/29/18 09:59*	

Certificate of Analysis

NV5	Project Number :	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To :	Jason Muir
Nevada City , CA 95959	Reported :	10/02/2018

Client Sample ID OT-T4

Lab ID: 1803586-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	71	1	B8I0704	09/26/2018	09/26/18 13:51	
1,2-Dichlorobenzene	ND	330	60	1	B8I0704	09/26/2018	09/26/18 13:51	
1,3-Dichlorobenzene	ND	330	65	1	B8I0704	09/26/2018	09/26/18 13:51	
1,4-Dichlorobenzene	ND	330	60	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4,5-Trichlorophenol	ND	330	61	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4,6-Trichlorophenol	ND	330	220	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4-Dichlorophenol	ND	1600	120	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4-Dimethylphenol	ND	330	120	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4-Dinitrophenol	ND	1600	86	1	B8I0704	09/26/2018	09/26/18 13:51	
2,4-Dinitrotoluene	ND	330	46	1	B8I0704	09/26/2018	09/26/18 13:51	
2,6-Dinitrotoluene	ND	330	49	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Chloronaphthalene	ND	330	59	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Chlorophenol	ND	330	120	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Methylnaphthalene	ND	330	67	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Methylphenol	ND	330	67	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Nitroaniline	ND	1600	200	1	B8I0704	09/26/2018	09/26/18 13:51	
2-Nitrophenol	ND	330	110	1	B8I0704	09/26/2018	09/26/18 13:51	
3,3'-Dichlorobenzidine	ND	660	280	1	B8I0704	09/26/2018	09/26/18 13:51	
3-Nitroaniline	ND	1600	44	1	B8I0704	09/26/2018	09/26/18 13:51	
4,6-Dinitro-2-methyphenol	ND	1600	300	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Bromophenyl-phenylether	ND	330	50	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Chloro-3-methylphenol	ND	660	110	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Chloroaniline	ND	660	53	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Chlorophenyl-phenylether	ND	330	48	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Methylphenol	ND	330	66	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Nitroaniline	ND	1600	290	1	B8I0704	09/26/2018	09/26/18 13:51	
4-Nitrophenol	ND	330	150	1	B8I0704	09/26/2018	09/26/18 13:51	
Acenaphthene	ND	330	48	1	B8I0704	09/26/2018	09/26/18 13:51	
Acenaphthylene	ND	330	51	1	B8I0704	09/26/2018	09/26/18 13:51	
Anthracene	ND	330	49	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzidine (M)	ND	1600	1400	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzo(a)anthracene	ND	330	39	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzo(a)pyrene	ND	330	45	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzo(b)fluoranthene	ND	330	55	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzo(g,h,i)perylene	ND	330	38	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzo(k)fluoranthene	ND	330	52	1	B8I0704	09/26/2018	09/26/18 13:51	
Benzoic acid	ND	1600	890	1	B8I0704	09/26/2018	09/26/18 13:51	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T4

Lab ID: 1803586-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzyl alcohol	ND	660	67	1	B8I0704	09/26/2018	09/26/18 13:51	
bis(2-chloroethoxy)methane	ND	330	59	1	B8I0704	09/26/2018	09/26/18 13:51	
bis(2-Chloroethyl)ether	ND	330	57	1	B8I0704	09/26/2018	09/26/18 13:51	
bis(2-chloroisopropyl)ether	ND	330	65	1	B8I0704	09/26/2018	09/26/18 13:51	
bis(2-ethylhexyl)phthalate	ND	330	83	1	B8I0704	09/26/2018	09/26/18 13:51	
Butylbenzylphthalate	ND	330	250	1	B8I0704	09/26/2018	09/26/18 13:51	
Chrysene	ND	330	43	1	B8I0704	09/26/2018	09/26/18 13:51	
Di-n-butylphthalate	ND	330	230	1	B8I0704	09/26/2018	09/26/18 13:51	
Di-n-octylphthalate	ND	330	48	1	B8I0704	09/26/2018	09/26/18 13:51	
Dibenz(a,h)anthracene	ND	330	43	1	B8I0704	09/26/2018	09/26/18 13:51	
Dibenzofuran	ND	330	55	1	B8I0704	09/26/2018	09/26/18 13:51	
Diethyl phthalate	ND	330	47	1	B8I0704	09/26/2018	09/26/18 13:51	
Dimethyl phthalate	ND	330	46	1	B8I0704	09/26/2018	09/26/18 13:51	
Fluoranthene	ND	330	47	1	B8I0704	09/26/2018	09/26/18 13:51	
Fluorene	ND	330	49	1	B8I0704	09/26/2018	09/26/18 13:51	
Hexachlorobenzene	ND	330	41	1	B8I0704	09/26/2018	09/26/18 13:51	
Hexachlorobutadiene	ND	660	61	1	B8I0704	09/26/2018	09/26/18 13:51	
Hexachlorocyclopentadiene	ND	660	64	1	B8I0704	09/26/2018	09/26/18 13:51	
Hexachloroethane	ND	330	71	1	B8I0704	09/26/2018	09/26/18 13:51	
Indeno(1,2,3-cd)pyrene	ND	330	44	1	B8I0704	09/26/2018	09/26/18 13:51	
Isophorone	ND	330	57	1	B8I0704	09/26/2018	09/26/18 13:51	
N-Nitroso-di-n propylamine	ND	330	65	1	B8I0704	09/26/2018	09/26/18 13:51	
N-Nitrosodiphenylamine	ND	330	48	1	B8I0704	09/26/2018	09/26/18 13:51	
Naphthalene	ND	330	60	1	B8I0704	09/26/2018	09/26/18 13:51	
Nitrobenzene	ND	330	67	1	B8I0704	09/26/2018	09/26/18 13:51	
Pentachlorophenol	ND	1600	190	1	B8I0704	09/26/2018	09/26/18 13:51	
Phenanthrene	ND	330	46	1	B8I0704	09/26/2018	09/26/18 13:51	
Phenol	ND	330	130	1	B8I0704	09/26/2018	09/26/18 13:51	
Pyrene	ND	330	53	1	B8I0704	09/26/2018	09/26/18 13:51	
Pyridine	ND	1600	270	1	B8I0704	09/26/2018	09/26/18 13:51	
Surrogate: 1,2-Dichlorobenzene-d4	*45.2 %*	*23 - 94*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: 2,4,6-Tribromophenol	*60.3 %*	*26 - 128*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: 2-Chlorophenol-d4	*51.7 %*	*27 - 94*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: 2-Fluorobiphenyl	*53.5 %*	*35 - 104*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: 2-Fluorophenol	*45.8 %*	*23 - 87*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: 4-Terphenyl-d14	*59.4 %*	*38 - 142*			B8I0704	09/26/2018	*09/26/18 13:51*	
Surrogate: Nitrobenzene-d5	*47.6 %*	*27 - 107*			B8I0704	09/26/2018	*09/26/18 13:51*	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Client Sample ID OT-T4

Lab ID: 1803586-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: SP**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Phenol-d6	*51.8 %*	*28 - 87*		B810704	09/26/2018	*09/26/18 13:51*	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0697 - EPA 3050B_S										
Blank (B8I0697-BLK1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	0.129865	1.0	0.06							J
Zinc	0.161559	1.0	0.15							J
LCS (B8I0697-BS1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
Antimony	44.6430	2.0	0.51	50.0000		89.3	80 - 120			
Arsenic	42.1020	1.0	0.12	50.0000		84.2	80 - 120			
Barium	46.5328	1.0	0.12	50.0000		93.1	80 - 120			
Beryllium	42.7061	1.0	0.03	50.0000		85.4	80 - 120			
Cadmium	42.9470	1.0	0.14	50.0000		85.9	80 - 120			
Chromium	46.5472	1.0	0.26	50.0000		93.1	80 - 120			
Cobalt	46.4970	1.0	0.07	50.0000		93.0	80 - 120			
Copper	48.6552	2.0	0.19	50.0000		97.3	80 - 120			
Lead	44.3659	1.0	0.18	50.0000		88.7	80 - 120			
Molybdenum	45.0902	1.0	0.12	50.0000		90.2	80 - 120			
Nickel	45.7612	1.0	0.18	50.0000		91.5	80 - 120			
Selenium	41.9968	1.0	0.40	50.0000		84.0	80 - 120			
Silver	43.9265	1.0	0.12	50.0000		87.9	80 - 120			
Thallium	44.6128	1.0	0.38	50.0000		89.2	80 - 120			
Vanadium	46.6291	1.0	0.06	50.0000		93.3	80 - 120			
Zinc	42.3779	1.0	0.15	50.0000		84.8	80 - 120			
Matrix Spike (B8I0697-MS1)			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Antimony	71.3359	2.0	0.51	124.378	ND	57.4	25 - 99			
Arsenic	92.2486	1.0	0.12	124.378	1.97008	72.6	49 - 97			
Barium	140.516	1.0	0.12	124.378	42.7803	78.6	29 - 199			
Beryllium	93.7433	1.0	0.03	124.378	ND	75.4	51 - 96			

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0697 - EPA 3050B_S (continued)										
Matrix Spike (B8I0697-MS1) - Continued			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Cadmium	85.7227	1.0	0.14	124.378	0.247166	68.7	48 - 93			
Chromium	103.834	1.0	0.26	124.378	9.33681	76.0	43 - 110			
Cobalt	96.2056	1.0	0.07	124.378	5.17027	73.2	51 - 99			
Copper	113.704	2.0	0.19	124.378	7.15239	85.7	50 - 11			M1
Lead	88.2257	1.0	0.18	124.378	2.19282	69.2	30 - 113			
Molybdenum	99.8661	1.0	0.12	124.378	0.892449	79.6	48 - 102			
Nickel	97.0315	1.0	0.18	124.378	6.34000	72.9	36 - 110			
Selenium	89.3169	1.0	0.40	124.378	ND	71.8	48 - 97			
Silver	96.7679	1.0	0.12	124.378	ND	77.8	53 - 98			
Thallium	88.6442	1.0	0.38	124.378	1.00292	70.5	38 - 95			
Vanadium	116.353	1.0	0.06	124.378	19.0432	78.2	50 - 105			
Zinc	110.189	1.0	0.15	124.378	27.5632	66.4	27 - 111			
Matrix Spike Dup (B8I0697-MSD1)			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Antimony	68.9951	2.0	0.51	124.378	ND	55.5	25 - 99	3.34	20	
Arsenic	93.8669	1.0	0.12	124.378	1.97008	73.9	49 - 97	1.74	20	
Barium	141.439	1.0	0.12	124.378	42.7803	79.3	29 - 199	0.655	20	
Beryllium	94.2370	1.0	0.03	124.378	ND	75.8	51 - 96	0.525	20	
Cadmium	86.0862	1.0	0.14	124.378	0.247166	69.0	48 - 93	0.423	20	
Chromium	104.758	1.0	0.26	124.378	9.33681	76.7	43 - 110	0.887	20	
Cobalt	96.7806	1.0	0.07	124.378	5.17027	73.7	51 - 99	0.596	20	
Copper	115.098	2.0	0.19	124.378	7.15239	86.8	50 - 11	1.22	20	M1
Lead	88.4947	1.0	0.18	124.378	2.19282	69.4	30 - 113	0.304	20	
Molybdenum	101.144	1.0	0.12	124.378	0.892449	80.6	48 - 102	1.27	20	
Nickel	97.8236	1.0	0.18	124.378	6.34000	73.6	36 - 110	0.813	20	
Selenium	90.3224	1.0	0.40	124.378	ND	72.6	48 - 97	1.12	20	
Silver	98.0941	1.0	0.12	124.378	ND	78.9	53 - 98	1.36	20	
Thallium	88.3665	1.0	0.38	124.378	1.00292	70.2	38 - 95	0.314	20	
Vanadium	117.327	1.0	0.06	124.378	19.0432	79.0	50 - 105	0.834	20	
Zinc	110.382	1.0	0.15	124.378	27.5632	66.6	27 - 111	0.175	20	

Certificate of Analysis

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0698 - EPA 7471_S										
Blank (B8I0698-BLK1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
Mercury	ND	0.10	0.006							
LCS (B8I0698-BS1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
Mercury	0.804603	0.10	0.006	0.833333		96.6	80 - 120			
Matrix Spike (B8I0698-MS1)			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Mercury	0.846415	0.10	0.006	0.833333	ND	102	70 - 130			
Matrix Spike Dup (B8I0698-MSD1)			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Mercury	0.819584	0.10	0.006	0.819672	ND	100	70 - 130	3.22	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0698 - EPA 7471_S									
Post Spike (B8I0698-PS1)			**Source: 1803584-01**		Prepared: 9/26/2018 Analyzed: 9/26/2018				
Mercury	0.005368		5.00000E-3	0.000056	106	85 - 115			

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Hydrocarbon Chain Distribution by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0772 - GCSEMI_DRO_S										
Blank (B8I0772-BLK1)						Prepared: 9/27/2018 Analyzed: 9/29/2018				
C8-C10	ND	10	10							
C10-C18	ND	10	10							
C18-C28	ND	10	10							
C28-C36	ND	10	10							
C36-C40	ND	10	10							
C8-C40 Total	ND	10	10							
Surrogate: p-Terphenyl	*108.4*			*80.0000*		*135*	*58 - 172*			
LCS (B8I0772-BS1)						Prepared: 9/27/2018 Analyzed: 9/29/2018				
DRO	1510.15	10	10	1000.00		151	71 - 165			
Surrogate: p-Terphenyl	*111.2*			*80.0000*		*139*	*58 - 172*			
Matrix Spike (B8I0772-MS1)			**Source: 1803584-04**			Prepared: 9/27/2018 Analyzed: 9/29/2018				
DRO	1504.55	10	10	1000.00	ND	150	61 - 171			
Surrogate: p-Terphenyl	*107.4*			*80.0000*		*134*	*58 - 172*			
Matrix Spike Dup (B8I0772-MSD1)			**Source: 1803584-04**			Prepared: 9/27/2018 Analyzed: 9/29/2018				
DRO	1420.51	10	10	1000.00	ND	142	61 - 171	5.75	20	
Surrogate: p-Terphenyl	*107.0*			*80.0000*		*134*	*58 - 172*			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S										
Blank (B8I0704-BLK1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
1,2,4-Trichlorobenzene	ND	330	71							
1,2-Dichlorobenzene	ND	330	60							
1,3-Dichlorobenzene	ND	330	65							
1,4-Dichlorobenzene	ND	330	60							
2,4,5-Trichlorophenol	ND	330	61							
2,4,6-Trichlorophenol	ND	330	220							
2,4-Dichlorophenol	ND	1600	120							
2,4-Dimethylphenol	ND	330	120							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	46							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	59							
2-Chlorophenol	ND	330	120							
2-Methylnaphthalene	ND	330	67							
2-Methylphenol	ND	330	67							
2-Nitroaniline	ND	1600	200							
2-Nitrophenol	ND	330	110							
3,3'-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	44							
4,6-Dinitro-2-methyphenol	ND	1600	300							
4-Bromophenyl-phenylether	ND	330	50							
4-Chloro-3-methylphenol	ND	660	110							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	48							
4-Methylphenol	ND	330	66							
4-Nitroaniline	ND	1600	290							
4-Nitrophenol	ND	330	150							
Acenaphthene	ND	330	48							
Acenaphthylene	ND	330	51							
Anthracene	ND	330	49							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	39							
Benzo(a)pyrene	ND	330	45							
Benzo(b)fluoranthene	ND	330	55							
Benzo(g,h,i)perylene	ND	330	38							
Benzo(k)fluoranthene	ND	330	52							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	67							
bis(2-chloroethoxy)methane	ND	330	59							
bis(2-Chloroethyl)ether	ND	330	57							
bis(2-chloroisopropyl)ether	ND	330	65							

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S (continued)										
Blank (B8I0704-BLK1) - Continued					Prepared: 9/26/2018 Analyzed: 9/26/2018					
bis(2-ethylhexyl)phthalate	ND	330	83							
Butylbenzylphthalate	ND	330	250							
Chrysene	ND	330	43							
Di-n-butylphthalate	ND	330	230							
Di-n-octylphthalate	ND	330	48							
Dibenz(a,h)anthracene	ND	330	43							
Dibenzofuran	ND	330	55							
Diethyl phthalate	ND	330	47							
Dimethyl phthalate	ND	330	46							
Fluoranthene	ND	330	47							
Fluorene	ND	330	49							
Hexachlorobenzene	ND	330	41							
Hexachlorobutadiene	ND	660	61							
Hexachlorocyclopentadiene	ND	660	64							
Hexachloroethane	ND	330	71							
Indeno(1,2,3-cd)pyrene	ND	330	44							
Isophorone	ND	330	57							
N-Nitroso-di-n propylamine	ND	330	65							
N-Nitrosodiphenylamine	ND	330	48							
Naphthalene	ND	330	60							
Nitrobenzene	ND	330	67							
Pentachlorophenol	ND	1600	190							
Phenanthrene	ND	330	46							
Phenol	ND	330	130							
Pyrene	ND	330	53							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d	*1688*			*3333.33*		*50.6*	*23 - 94*			
Surrogate: 2,4,6-Tribromophenol	*2549*			*3325.00*		*76.7*	*26 - 128*			
Surrogate: 2-Chlorophenol-d4	*1854*			*3325.00*		*55.8*	*27 - 94*			
Surrogate: 2-Fluorobiphenyl	*1963*			*3333.33*		*58.9*	*35 - 104*			
Surrogate: 2-Fluorophenol	*1714*			*3325.00*		*51.5*	*23 - 87*			
Surrogate: 4-Terphenyl-d14	*2996*			*3333.33*		*89.9*	*38 - 142*			
Surrogate: Nitrobenzene-d5	*1721*			*3333.33*		*51.6*	*27 - 107*			
Surrogate: Phenol-d6	*1895*			*3325.00*		*57.0*	*28 - 87*			
LCS (B8I0704-BS1)					Prepared: 9/26/2018 Analyzed: 9/26/2018					
1,2,4-Trichlorobenzene	2613.33	330	71	3333.33		78.4	44 - 98			
1,2-Dichlorobenzene	2363.67	330	60	3333.33		70.9	39 - 88			
1,3-Dichlorobenzene	2273.00	330	65	3333.33		68.2	38 - 83			
1,4-Dichlorobenzene	2317.00	330	60	3333.33		69.5	39 - 85			
2,4,5-Trichlorophenol	3071.00	330	61	3333.33		92.1	66 - 117			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S (continued)										
LCS (B8I0704-BS1) - Continued					Prepared: 9/26/2018 Analyzed: 9/26/2018					
2,4,6-Trichlorophenol	3023.67	330	220	3333.33		90.7	53 - 129			
2,4-Dichlorophenol	2761.33	1600	120	3333.33		82.8	48 - 117			
2,4-Dimethylphenol	2612.33	330	120	3333.33		78.4	46 - 116			
2,4-Dinitrophenol	3351.67	1600	86	3333.33		101	52 - 150			
2,4-Dinitrotoluene	3190.67	330	46	3333.33		95.7	60 - 115			
2,6-Dinitrotoluene	3215.33	330	49	3333.33		96.5	57 - 119			
2-Chloronaphthalene	2738.33	330	59	3333.33		82.2	53 - 98			
2-Chlorophenol	2411.00	330	120	3333.33		72.3	42 - 97			
2-Methylnaphthalene	2617.33	330	67	3333.33		78.5	47 - 113			
2-Methylphenol	2508.67	330	67	3333.33		75.3	46 - 97			
2-Nitroaniline	2890.00	1600	200	3333.33		86.7	49 - 125			
2-Nitrophenol	2858.67	330	110	3333.33		85.8	47 - 113			
3,3'-Dichlorobenzidine	2969.67	660	280	3333.33		89.1	26 - 144			
3-Nitroaniline	2811.33	1600	44	3333.33		84.3	63 - 111			
4,6-Dinitro-2-methyphenol	3323.33	1600	300	3333.33		99.7	61 - 146			
4-Bromophenyl-phenylether	3077.33	330	50	3333.33		92.3	58 - 117			
4-Chloro-3-methylphenol	2904.00	660	110	3333.33		87.1	55 - 118			
4-Chloroaniline	2675.00	660	53	3333.33		80.3	56 - 112			
4-Chlorophenyl-phenylether	2969.33	330	48	3333.33		89.1	49 - 119			
4-Methylphenol	2601.00	330	66	3333.33		78.0	50 - 99			
4-Nitroaniline	2992.33	1600	290	3333.33		89.8	65 - 112			
4-Nitrophenol	3332.67	330	150	3333.33		100	42 - 153			
Acenaphthene	2756.00	330	48	3333.33		82.7	62 - 108			
Acenaphthylene	2802.33	330	51	3333.33		84.1	65 - 104			
Anthracene	2996.33	330	49	3333.33		89.9	72 - 115			
Benzidine (M)	2607.00	1600	1400	3333.33		78.2	9 - 159			
Benzo(a)anthracene	3033.00	330	39	3333.33		91.0	66 - 113			
Benzo(a)pyrene	3117.00	330	45	3333.33		93.5	58 - 128			
Benzo(b)fluoranthene	2925.00	330	55	3333.33		87.8	50 - 127			
Benzo(g,h,i)perylene	3171.00	330	38	3333.33		95.1	49 - 132			
Benzo(k)fluoranthene	3209.67	330	52	3333.33		96.3	62 - 128			
Benzoic acid	2467.00	1600	890	3333.33		74.0	24 - 117			
Benzyl alcohol	2655.33	660	67	3333.33		79.7	43 - 98			
bis(2-chloroethoxy)methane	2600.00	330	59	3333.33		78.0	42 - 86			
bis(2-Chloroethyl)ether	2423.00	330	57	3333.33		72.7	39 - 78			
bis(2-chloroisopropyl)ether	2595.33	330	65	3333.33		77.9	21 - 86			
bis(2-ethylhexyl)phthalate	3153.00	330	83	3333.33		94.6	50 - 112			
Butylbenzylphthalate	3063.00	330	250	3333.33		91.9	50 - 107			
Chrysene	3001.67	330	43	3333.33		90.1	57 - 120			
Di-n-butylphthalate	3109.33	330	230	3333.33		93.3	58 - 120			
Di-n-octylphthalate	2861.00	330	48	3333.33		85.8	41 - 123			
Dibenz(a,h)anthracene	3167.00	330	43	3333.33		95.0	52 - 140			

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S (continued)										
LCS (B8I0704-BS1) - Continued					Prepared: 9/26/2018 Analyzed: 9/26/2018					
Dibenzofuran	2813.67	330	55	3333.33		84.4	66 - 106			
Diethyl phthalate	3013.33	330	47	3333.33		90.4	56 - 116			
Dimethyl phthalate	2940.67	330	46	3333.33		88.2	64 - 109			
Fluoranthene	2995.67	330	47	3333.33		89.9	69 - 121			
Fluorene	2898.67	330	49	3333.33		87.0	64 - 120			
Hexachlorobenzene	3097.33	330	41	3333.33		92.9	54 - 127			
Hexachlorobutadiene	2626.33	660	61	3333.33		78.8	38 - 109			
Hexachlorocyclopentadiene	2795.67	660	64	3333.33		83.9	38 - 109			
Hexachloroethane	2296.33	330	71	3333.33		68.9	34 - 90			
Indeno(1,2,3-cd)pyrene	3208.00	330	44	3333.33		96.2	53 - 136			
Isophorone	2738.33	330	57	3333.33		82.2	44 - 97			
N-Nitroso-di-n propylamine	2685.00	330	65	3333.33		80.6	42 - 97			
N-Nitrosodiphenylamine	3003.00	330	48	3333.33		90.1	61 - 113			
Naphthalene	2550.00	330	60	3333.33		76.5	49 - 99			
Nitrobenzene	2586.33	330	67	3333.33		77.6	42 - 95			
Pentachlorophenol	3106.00	1600	190	3333.33		93.2	49 - 147			
Phenanthrene	2989.00	330	46	3333.33		89.7	72 - 115			
Phenol	2433.67	330	130	3333.33		73.0	39 - 97			
Pyrene	2934.67	330	53	3333.33		88.0	66 - 128			
Pyridine	1972.00	1600	270	3333.33		59.2	28 - 80			
Surrogate: 1,2-Dichlorobenzene-d	*2172*			*3333.33*		*65.2*	*23 - 94*			
Surrogate: 2,4,6-Tribromophenol	*3246*			*3325.00*		*97.6*	*26 - 128*			
Surrogate: 2-Chlorophenol-d4	*2460*			*3325.00*		*74.0*	*27 - 94*			
Surrogate: 2-Fluorobiphenyl	*2560*			*3333.33*		*76.8*	*35 - 104*			
Surrogate: 2-Fluorophenol	*2251*			*3325.00*		*67.7*	*23 - 87*			
Surrogate: 4-Terphenyl-d14	*2802*			*3333.33*		*84.1*	*38 - 142*			
Surrogate: Nitrobenzene-d5	*2379*			*3333.33*		*71.4*	*27 - 107*			
Surrogate: Phenol-d6	*2479*			*3325.00*		*74.6*	*28 - 87*			
Matrix Spike (B8I0704-MS1)			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
1,2,4-Trichlorobenzene	1703.33	330	71	3333.33	ND	51.1	27 - 101			
1,2-Dichlorobenzene	1637.00	330	60	3333.33	ND	49.1	22 - 91			
1,3-Dichlorobenzene	1587.00	330	65	3333.33	ND	47.6	23 - 88			
1,4-Dichlorobenzene	1595.00	330	60	3333.33	ND	47.8	23 - 89			
2,4,5-Trichlorophenol	2169.67	330	61	3333.33	ND	65.1	35 - 119			
2,4,6-Trichlorophenol	2158.67	330	220	3333.33	ND	64.8	35 - 126			
2,4-Dichlorophenol	1828.00	1600	120	3333.33	ND	54.8	32 - 116			
2,4-Dimethylphenol	1823.00	330	120	3333.33	ND	54.7	27 - 123			
2,4-Dinitrophenol	2247.67	1600	86	3333.33	ND	67.4	0 - 166			
2,4-Dinitrotoluene	2298.00	330	46	3333.33	ND	68.9	29 - 121			
2,6-Dinitrotoluene	2343.33	330	49	3333.33	ND	70.3	15 - 140			

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B810704 - MSSEMI_S (continued)										
Matrix Spike (B810704-MS1) - Continued			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
2-Chloronaphthalene	1866.33	330	59	3333.33	ND	56.0	31 - 101			
2-Chlorophenol	1618.33	330	120	3333.33	ND	48.5	28 - 102			
2-Methylnaphthalene	1765.33	330	67	3333.33	ND	53.0	23 - 116			
2-Methylphenol	1667.67	330	67	3333.33	ND	50.0	25 - 102			
2-Nitroaniline	2061.33	1600	200	3333.33	ND	61.8	36 - 119			
2-Nitrophenol	1805.00	330	110	3333.33	ND	54.2	30 - 116			
3,3'-Dichlorobenzidine	1656.00	660	280	3333.33	ND	49.7	0 - 145			
3-Nitroaniline	1981.00	1600	44	3333.33	ND	59.4	28 - 114			
4,6-Dinitro-2-methyphenol	2238.67	1600	300	3333.33	ND	67.2	2 - 163			
4-Bromophenyl-phenylether	2145.33	330	50	3333.33	ND	64.4	36 - 109			
4-Chloro-3-methylphenol	2057.33	660	110	3333.33	ND	61.7	29 - 122			
4-Chloroaniline	1762.00	660	53	3333.33	ND	52.9	22 - 118			
4-Chlorophenyl-phenylether	2143.00	330	48	3333.33	ND	64.3	33 - 107			
4-Methylphenol	1722.33	330	66	3333.33	ND	51.7	25 - 105			
4-Nitroaniline	2140.33	1600	290	3333.33	ND	64.2	34 - 115			
4-Nitrophenol	2241.67	330	150	3333.33	ND	67.3	10 - 147			
Acenaphthene	1965.33	330	48	3333.33	ND	59.0	33 - 112			
Acenaphthylene	1958.00	330	51	3333.33	ND	58.7	33 - 112			
Anthracene	2106.33	330	49	3333.33	ND	63.2	33 - 124			
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	0 - 161			
Benzo(a)anthracene	2170.00	330	39	3333.33	ND	65.1	45 - 115			
Benzo(a)pyrene	2143.67	330	45	3333.33	ND	64.3	28 - 125			
Benzo(b)fluoranthene	2164.33	330	55	3333.33	ND	64.9	24 - 122			
Benzo(g,h,i)perylene	2087.67	330	38	3333.33	ND	62.6	20 - 131			
Benzo(k)fluoranthene	2053.00	330	52	3333.33	ND	61.6	26 - 130			
Benzoic acid	1142.33	1600	890	3333.33	ND	34.3	19 - 133			J
Benzyl alcohol	1773.33	660	67	3333.33	ND	53.2	20 - 102			
bis(2-chloroethoxy)methane	1689.33	330	59	3333.33	ND	50.7	24 - 90			
bis(2-Chloroethyl)ether	1586.33	330	57	3333.33	ND	47.6	22 - 86			
bis(2-chloroisopropyl)ether	1820.33	330	65	3333.33	ND	54.6	9 - 92			
bis(2-ethylhexyl)phthalate	2361.00	330	83	3333.33	ND	70.8	17 - 128			
Butylbenzylphthalate	2351.00	330	250	3333.33	ND	70.5	16 - 133			
Chrysene	2128.67	330	43	3333.33	ND	63.9	39 - 117			
Di-n-butylphthalate	2330.33	330	230	3333.33	ND	69.9	37 - 115			
Di-n-octylphthalate	2199.33	330	48	3333.33	ND	66.0	5 - 144			
Dibenz(a,h)anthracene	2105.00	330	43	3333.33	ND	63.2	17 - 140			
Dibenzofuran	1983.00	330	55	3333.33	ND	59.5	36 - 114			
Diethyl phthalate	2250.00	330	47	3333.33	ND	67.5	35 - 110			
Dimethyl phthalate	2164.33	330	46	3333.33	ND	64.9	36 - 108			
Fluoranthene	2151.00	330	47	3333.33	ND	64.5	36 - 123			
Fluorene	2087.00	330	49	3333.33	ND	62.6	35 - 118			
Hexachlorobenzene	2213.00	330	41	3333.33	ND	66.4	35 - 114			

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B810704 - MSSEMI_S (continued)										
Matrix Spike (B810704-MS1) - Continued			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
Hexachlorobutadiene	1732.67	660	61	3333.33	ND	52.0	31 - 107			
Hexachlorocyclopentadiene	1810.33	660	64	3333.33	ND	54.3	27 - 103			
Hexachloroethane	1606.00	330	71	3333.33	ND	48.2	22 - 96			
Indeno(1,2,3-cd)pyrene	2109.33	330	44	3333.33	ND	63.3	16 - 139			
Isophorone	1840.67	330	57	3333.33	ND	55.2	24 - 100			
N-Nitroso-di-n propylamine	1787.67	330	65	3333.33	ND	53.6	22 - 104			
N-Nitrosodiphenylamine	2146.33	330	48	3333.33	ND	64.4	9 - 139			
Naphthalene	1664.67	330	60	3333.33	ND	49.9	23 - 110			
Nitrobenzene	1688.67	330	67	3333.33	ND	50.7	22 - 104			
Pentachlorophenol	2200.33	1600	190	3333.33	ND	66.0	13 - 142			
Phenanthrene	2118.33	330	46	3333.33	ND	63.6	35 - 124			
Phenol	1586.67	330	130	3333.33	ND	47.6	20 - 102			
Pyrene	2132.33	330	53	3333.33	ND	64.0	35 - 128			
Pyridine	785.333	1600	270	3333.33	ND	23.6	13 - 87			J
Surrogate: 1,2-Dichlorobenzene-d	*1358*			*3333.33*		*40.7*	*23 - 94*			
Surrogate: 2,4,6-Tribromophenol	*2237*			*3325.00*		*67.3*	*26 - 128*			
Surrogate: 2-Chlorophenol-d4	*1514*			*3325.00*		*45.5*	*27 - 94*			
Surrogate: 2-Fluorobiphenyl	*1588*			*3333.33*		*47.6*	*35 - 104*			
Surrogate: 2-Fluorophenol	*1400*			*3325.00*		*42.1*	*23 - 87*			
Surrogate: 4-Terphenyl-d14	*1844*			*3333.33*		*55.3*	*38 - 142*			
Surrogate: Nitrobenzene-d5	*1427*			*3333.33*		*42.8*	*27 - 107*			
Surrogate: Phenol-d6	*1521*			*3325.00*		*45.7*	*28 - 87*			
Matrix Spike Dup (B810704-MSD1)			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
1,2,4-Trichlorobenzene	1724.33	330	71	3333.33	ND	51.7	27 - 101	1.23	20	
1,2-Dichlorobenzene	1688.33	330	60	3333.33	ND	50.6	22 - 91	3.09	20	
1,3-Dichlorobenzene	1637.67	330	65	3333.33	ND	49.1	23 - 88	3.14	20	
1,4-Dichlorobenzene	1636.67	330	60	3333.33	ND	49.1	23 - 89	2.58	20	
2,4,5-Trichlorophenol	2141.67	330	61	3333.33	ND	64.3	35 - 119	1.30	20	
2,4,6-Trichlorophenol	2111.67	330	220	3333.33	ND	63.4	35 - 126	2.20	20	
2,4-Dichlorophenol	1854.00	1600	120	3333.33	ND	55.6	32 - 116	1.41	20	
2,4-Dimethylphenol	1822.33	330	120	3333.33	ND	54.7	27 - 123	0.0366	20	
2,4-Dinitrophenol	2191.67	1600	86	3333.33	ND	65.8	0 - 166	2.52	20	
2,4-Dinitrotoluene	2267.33	330	46	3333.33	ND	68.0	29 - 121	1.34	20	
2,6-Dinitrotoluene	2327.00	330	49	3333.33	ND	69.8	15 - 140	0.699	20	
2-Chloronaphthalene	1878.33	330	59	3333.33	ND	56.4	31 - 101	0.641	20	
2-Chlorophenol	1656.67	330	120	3333.33	ND	49.7	28 - 102	2.34	20	
2-Methylnaphthalene	1744.00	330	67	3333.33	ND	52.3	23 - 116	1.22	20	
2-Methylphenol	1696.33	330	67	3333.33	ND	50.9	25 - 102	1.70	20	
2-Nitroaniline	2097.67	1600	200	3333.33	ND	62.9	36 - 119	1.75	20	
2-Nitrophenol	1866.67	330	110	3333.33	ND	56.0	30 - 116	3.36	20	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S (continued)										
Matrix Spike Dup (B8I0704-MSD1) - Continued			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
3,3'-Dichlorobenzidine	1626.00	660	280	3333.33	ND	48.8	0 - 145	1.83	20	
3-Nitroaniline	2025.33	1600	44	3333.33	ND	60.8	28 - 114	2.21	20	
4,6-Dinitro-2-methyphenol	2293.67	1600	300	3333.33	ND	68.8	2 - 163	2.43	20	
4-Bromophenyl-phenylether	2170.33	330	50	3333.33	ND	65.1	36 - 109	1.16	20	
4-Chloro-3-methylphenol	2076.00	660	110	3333.33	ND	62.3	29 - 122	0.903	20	
4-Chloroaniline	1785.33	660	53	3333.33	ND	53.6	22 - 118	1.32	20	
4-Chlorophenyl-phenylether	2110.67	330	48	3333.33	ND	63.3	33 - 107	1.52	20	
4-Methylphenol	1761.67	330	66	3333.33	ND	52.9	25 - 105	2.26	20	
4-Nitroaniline	2128.00	1600	290	3333.33	ND	63.8	34 - 115	0.578	20	
4-Nitrophenol	2222.67	330	150	3333.33	ND	66.7	10 - 147	0.851	20	
Acenaphthene	1937.67	330	48	3333.33	ND	58.1	33 - 112	1.42	20	
Acenaphthylene	1912.00	330	51	3333.33	ND	57.4	33 - 112	2.38	20	
Anthracene	2165.00	330	49	3333.33	ND	65.0	33 - 124	2.75	20	
Benzidine (M)	ND	1600	1400	3333.33	ND	NR	0 - 161	NR	20	
Benzo(a)anthracene	2147.33	330	39	3333.33	ND	64.4	45 - 115	1.05	20	
Benzo(a)pyrene	2198.00	330	45	3333.33	ND	65.9	28 - 125	2.50	20	
Benzo(b)fluoranthene	2277.67	330	55	3333.33	ND	68.3	24 - 122	5.10	20	
Benzo(g,h,i)perylene	2136.00	330	38	3333.33	ND	64.1	20 - 131	2.29	20	
Benzo(k)fluoranthene	2079.00	330	52	3333.33	ND	62.4	26 - 130	1.26	20	
Benzoic acid	1279.67	1600	890	3333.33	ND	38.4	19 - 133	11.3	20	J
Benzyl alcohol	1803.67	660	67	3333.33	ND	54.1	20 - 102	1.70	20	
bis(2-chloroethoxy)methane	1722.67	330	59	3333.33	ND	51.7	24 - 90	1.95	20	
bis(2-Chloroethyl)ether	1637.67	330	57	3333.33	ND	49.1	22 - 86	3.18	20	
bis(2-chloroisopropyl)ether	1806.33	330	65	3333.33	ND	54.2	9 - 92	0.772	20	
bis(2-ethylhexyl)phthalate	2337.00	330	83	3333.33	ND	70.1	17 - 128	1.02	20	
Butylbenzylphthalate	2333.33	330	250	3333.33	ND	70.0	16 - 133	0.754	20	
Chrysene	2146.33	330	43	3333.33	ND	64.4	39 - 117	0.826	20	
Di-n-butylphthalate	2357.67	330	230	3333.33	ND	70.7	37 - 115	1.17	20	
Di-n-octylphthalate	2238.33	330	48	3333.33	ND	67.2	5 - 144	1.76	20	
Dibenz(a,h)anthracene	2177.00	330	43	3333.33	ND	65.3	17 - 140	3.36	20	
Dibenzofuran	1991.33	330	55	3333.33	ND	59.7	36 - 114	0.419	20	
Diethyl phthalate	2165.67	330	47	3333.33	ND	65.0	35 - 110	3.82	20	
Dimethyl phthalate	2126.33	330	46	3333.33	ND	63.8	36 - 108	1.77	20	
Fluoranthene	2163.67	330	47	3333.33	ND	64.9	36 - 123	0.587	20	
Fluorene	2095.33	330	49	3333.33	ND	62.9	35 - 118	0.398	20	
Hexachlorobenzene	2254.33	330	41	3333.33	ND	67.6	35 - 114	1.85	20	
Hexachlorobutadiene	1762.33	660	61	3333.33	ND	52.9	31 - 107	1.70	20	
Hexachlorocyclopentadiene	1846.67	660	64	3333.33	ND	55.4	27 - 103	1.99	20	
Hexachloroethane	1650.00	330	71	3333.33	ND	49.5	22 - 96	2.70	20	
Indeno(1,2,3-cd)pyrene	2183.67	330	44	3333.33	ND	65.5	16 - 139	3.46	20	
Isophorone	1862.33	330	57	3333.33	ND	55.9	24 - 100	1.17	20	
N-Nitroso-di-n propylamine	1792.67	330	65	3333.33	ND	53.8	22 - 104	0.279	20	

Certificate of Analysis

NV5	Project Number : 936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To : Jason Muir
Nevada City , CA 95959	Reported : 10/02/2018

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B8I0704 - MSSEMI_S (continued)										
Matrix Spike Dup (B8I0704-MSD1) - Continued			**Source: 1803586-04**		Prepared: 9/26/2018 Analyzed: 9/26/2018					
N-Nitrosodiphenylamine	2190.33	330	48	3333.33	ND	65.7	9 - 139	2.03	20	
Naphthalene	1699.67	330	60	3333.33	ND	51.0	23 - 110	2.08	20	
Nitrobenzene	1757.67	330	67	3333.33	ND	52.7	22 - 104	4.00	20	
Pentachlorophenol	2220.33	1600	190	3333.33	ND	66.6	13 - 142	0.905	20	
Phenanthrene	2126.33	330	46	3333.33	ND	63.8	35 - 124	0.377	20	
Phenol	1628.00	330	130	3333.33	ND	48.8	20 - 102	2.57	20	
Pyrene	2162.67	330	53	3333.33	ND	64.9	35 - 128	1.41	20	
Pyridine	760.333	1600	270	3333.33	ND	22.8	13 - 87	3.23	20	J
Surrogate: 1,2-Dichlorobenzene-d	*1434*			*3333.33*		*43.0*	*23 - 94*			
Surrogate: 2,4,6-Tribromophenol	*2228*			*3325.00*		*67.0*	*26 - 128*			
Surrogate: 2-Chlorophenol-d4	*1577*			*3325.00*		*47.4*	*27 - 94*			
Surrogate: 2-Fluorobiphenyl	*1613*			*3333.33*		*48.4*	*35 - 104*			
Surrogate: 2-Fluorophenol	*1467*			*3325.00*		*44.1*	*23 - 87*			
Surrogate: 4-Terphenyl-d14	*1845*			*3333.33*		*55.3*	*38 - 142*			
Surrogate: Nitrobenzene-d5	*1495*			*3333.33*		*44.8*	*27 - 107*			
Surrogate: Phenol-d6	*1570*			*3325.00*		*47.2*	*28 - 87*			

Certificate of Analysis

NV5	Project Number :	936 Old Tunnel Road, 5088A.00
792 Searls Avenue	Report To :	Jason Muir
Nevada City , CA 95959	Reported :	10/02/2018

Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
D5	Sample diluted due to failing internal standard in the original run.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver:20180321

Method of Transport	Sample Conditions Upon Receipt					
	Condition	Y	N	Condition	Y	N
☐ Client ☐ ATL	1. CHILLED	☑	☐	5. # OF SAMPLES MATCH COC	☑	☐
☒ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☒
☐ GSO	3. CONTAINER INTACT	☑	☐	7. COOLER TEMP. deg C:	3.0°	
☐ Other: _____	4. SEALED	☐	☒		ICE	

CUSTOMER

Company: NV5	Address: 792 Searls Avenue		Tel: 530 478 1305
	City: Nevada City	State: CA	Zip: 95959	Fax:
SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO		
Attn: Jason Muir Email: jason.muir@nv5.com	Attn: Mona-Lisa Mallo Email: mona-lisa.mallo@nv5.com		
Company: NV5	Company: NV5		
Address: same as above	Address: same as above		
City: State: Zip:	City: State: Zip:		

EDD: (•) Excel ( ) EDF ( ) Equis ( ) _____

QA/QC: ☑ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV ☐ _____

PROJECT SAMPLES

Project Name: 936 Old Tunnel Road
Project No.: 5088A.00
Sampler: Muir
Quote #:
PO #:
Special Instructions/Comments:

ITEM	Laboratory ID (For Lab Use Only)	Sample Description: Sample ID / Location	Date	Time	6010 / 7000 (Title 22 Metals)	8270 (Semi-volatiles)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Carbon Chain 8015	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Select Soil Matrix	Select Solid Matrix	Select Water Matrix	Select Wastewater Matrix	Select Non-aqueous Matrix	Enter Custom Matrix	Turnaround Time (TAT)	Container: Quantity	Container: Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister	Container: Material: 1=Glass; 2=Plastic; 3=Metal	Container: Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=NaOH; 5=ZnAc; 6=NaOH+ZnAc; 7=None	Remarks
1	1803586 -01	OT-T1	09/21/18	~~1300~~ 1500	X							X																5	1	5	1	4	
2	-02	OT-T2	09/21/18	~~1330~~ 1530	X							X																5	1	5	1	4	
3	-03	OT-T3	09/21/18	~~1400~~ 1630	X	X						X																5	1	5	1	4	
4	-04	OT-T4	09/21/18	~~1430~~ 1600	X	X						X																5	1	5	1	4	
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples submitted AFTER 3:00 PM are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work --- ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20 sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/SFLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.
12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Jason W. Muir	09/24/18	0900		9/25/18	0
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Jason W. Muir, PE
Printed Name

Signature

I. Noise

DNL Calculator

WARNING: HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Brunswick Commons
Record Date	4/16/09
User's Name	Neil O'Hara

Road # 1 Name:	**SR 20/49**

Road #1

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	500	500	500
Distance to Stop Sign			
Average Speed	65	50	50
Average Daily Trips (ADT)	30550	975	975
Night Fraction of ADT	15	15	15
Road Gradient (%)			5
Vehicle DNL	59.5345	52.2956	60.4522
Calculate Road #1 DNL	63.3695	Reset	

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Add Road Source | Add Rail Source

Airport Noise Level	45
Loud Impulse Sounds?	Yes / No
Combined DNL for all Road and Rail sources	63.3695
Combined DNL including Airport	63.3695
Site DNL with Loud Impulse Sound	

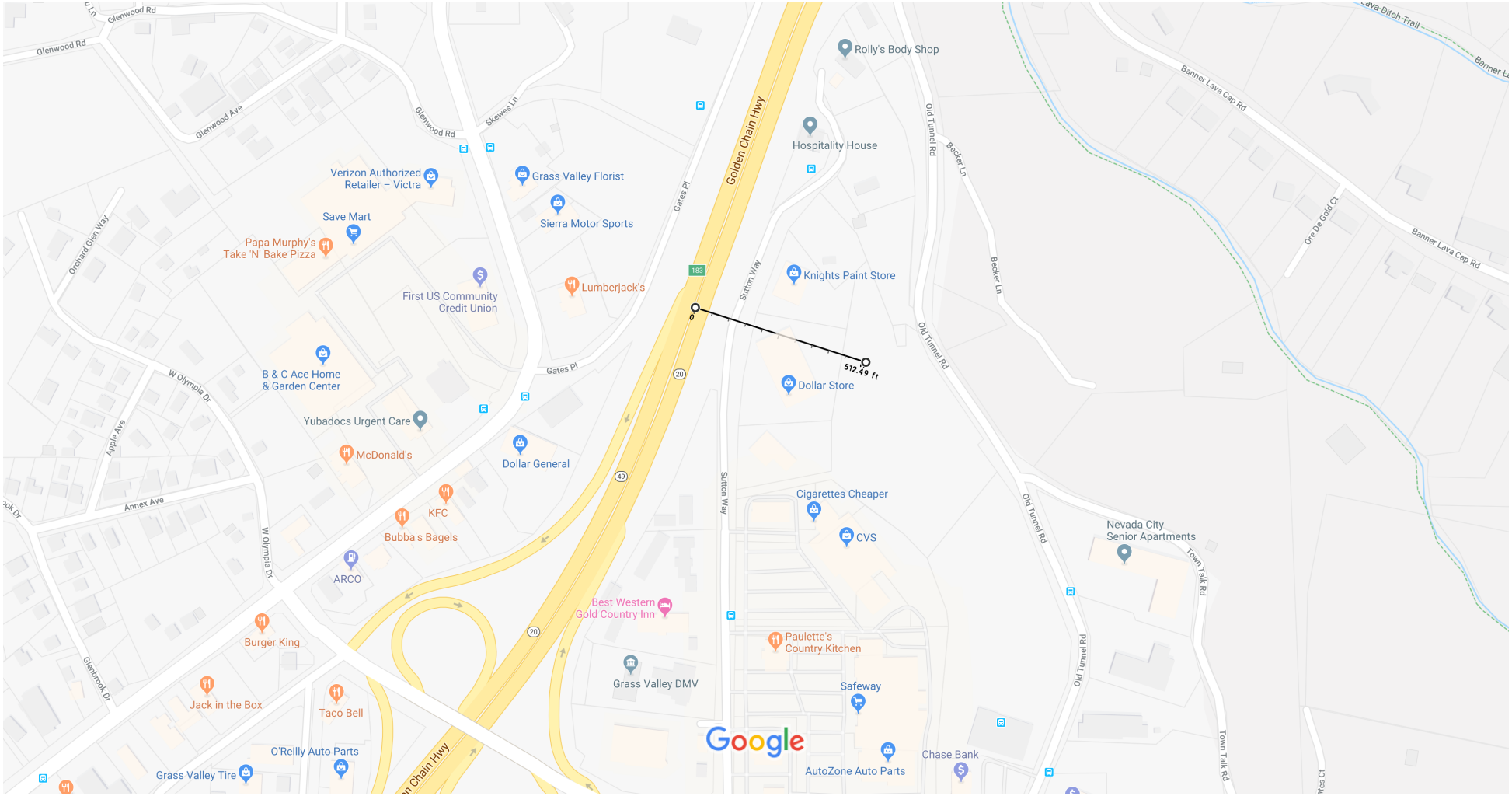
Calculate

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Google Maps Effective Noise Distance

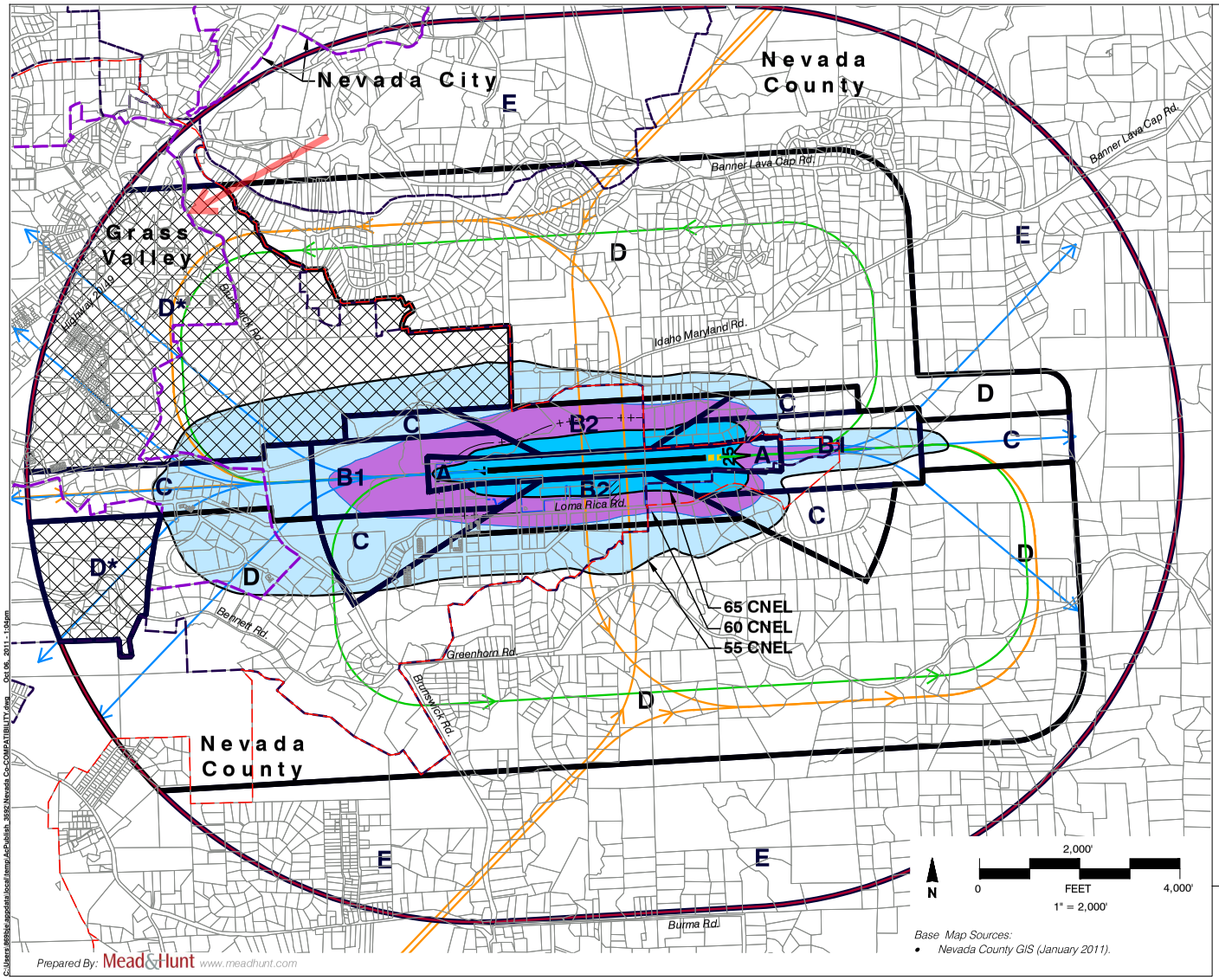


Map data ©2019 Google 200 ft

Measure distance
Total distance: 512.49 ft (156.21 m)

Dist	Route	County		Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
03	020	NEV	R	13.112	GRASS VALLEY, BENNETT STREET	3950	43000	38500	5200	57000	48200
03	020	NEV	R	13.614	GRASS VALLEY, IDAHO/MARYLAND ROAD	5200	57000	48200	4200	44000	41000
03	020	NEV	R	14.266	DORSEY DRIVE OC	4200	44000	41000	3600	39000	36800
03	020	NEV	R	14.797	BRUNSWICK ROAD	3600	39000	36800	3050	35500	32500
03	020	NEV	R	15.41	BANNER RIDGE OC	3050	35500	32500	3050	35500	32500
03	020	NEV	R	15.916	GOLD FLAT ROAD	3050	35500	32500	3000	29500	28700
03	020	NEV	R	16.741	NEVADA CITY, SACRAMENTO STREET	3000	29500	28700	3000	27500	25200
03	020	NEV	R	16.988	NEVADA CITY, BROAD STREET	3000	27500	25200	2550	18800	17100
03	020	NEV	R	17.24	NEVADA CITY, COYOTE STREET	2550	18800	17100	2400	18200	16200
03	020	NEV	R	17.398	NEVADA CITY, EAST JCT. RTE. 49	2400	18200	16200	920	6300	5400
03	020	NEV		23.25	SCOTTS FLAT ROAD	900	6200	5200	730	5700	4300
03	020	NEV		29.6	WHITE CLOUD CAMPGROUND	570	4750	3550	570	4750	3550
03	020	NEV		31.834	WASHINGTON ROAD	570	4750	3550	500	4350	3200
03	020	NEV		41.287	NEVADA/PLACER COUNTY LINE	500	4350	3200	500	4350	3200
03	020	PLA		43.868	PLACER/NEVADA COUNTY LINE	500	4350	3200	500	4350	3200
03	020	NEV		45.661	JCT RTE 80	500	4350	3200			
07	022	LA		0	LONG BEACH, JCT. RTE. 1				5400	65000	62000
07	022	LA		.084	LONG BEACH, BELLFLOWER BOULEVARD	5400	65000	62000	5500	67000	64000
07	022	LA		1.142	LONG BEACH, STUDEBAKER ROAD	6100	74000	70000	8700	105000	100000
07	022	LA		1.467	LOS ANGELES/ORANGE COUNTY LINE	8700	105000	100000			
12	022	ORA		0	LOS ANGELES/ORANGE COUNTY LINE				8700	105000	100000
12	022	ORA	R	.66	JCT. RTE. 405	11200	148000	142500	15600	150000	142500
12	022	ORA	R	2.653	WESTMINSTER, KNOTT AVE/GOLDEN WEST ST	16600	159000	150500	11600	156000	150500
12	022	ORA	R	3.587	GARDEN GROVE, JCT. RTE. 39	12300	164000	158600	15900	190000	183400
12	022	ORA	R	4.812	GARDEN GROVE, MAGNOLIA STREET	15900	190000	183400	15200	203000	196400
12	022	ORA	R	5.817	GARDEN GROVE, BROOKHURST STREET	15200	203000	196400	15600	209000	202100
12	022	ORA	R	6.811	GARDEN GROVE, EUCLID STREET	15600	209000	202100	15900	226000	216500
12	022	ORA	R	7.829	GARDEN GROVE, HARBOR BOULEVARD	15900	226000	216500	15900	232000	223500
12	022	ORA	R	8.822	GARDEN GROVE, GARDEN GROVE BOULEVARD	15900	232000	223500	16200	238000	229600
12	022	ORA	R	9.729	ORANGE, MANCHESTER AVENUE/ CITY DRIVE	16300	239000	231000	17100	245000	235500
12	022	ORA	R	10.478	SANTA ANA, JCT. RTES. 5 AND 57	17100	245000	235500	10900	152000	146700
12	022	ORA	R	10.992	SANTA ANA, MAIN STREET	10900	152000	146700	10900	154000	146700
12	022	ORA	R	11.825	ORANGE, GLASSELL STREET	10800	153000	145200	10500	157000	141800
12	022	ORA	R	12.866	TUSTIN AVENUE	10500	157000	141800	8700	122000	118400
12	022	ORA	R	13.164	JCT. RTE. 55	8700	122000	118400			
07	023	LA		0	JCT. RTE. 1				70	540	510
07	023	LA		4.791	SOUTH JUNCTION MULHOLLAND HIGHWAY	120	930	880	140	1100	1050

RTE	DIST	CNTY	POST MILE	LEG	DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH	TRUCK By 2	TRUCK By 3	AADT Axle 4	TOTAL 5+	% By 2	TRUCK By 3	AADT Axle 4	5+	EAL 2-WAY (1000)	YEAR VER/ EST
20	03	YUB	0	O	SUTTER/YUBA COUNTY LINE	39400	1891	4.80	889	280	64	658	47.00	15	3	35	293	86V
20	03	YUB	0.989	B	MARYSVILLE, SOUTH JCT. RTE. 70	30000	2101	7.00	1073	267	99	662	51.10	13	5	32	305	86E
20	03	YUB	1.472	A	NORTH JCT. RTE. 70	17100	1582	9.25	460	276	184	662	29.07	17	12	42	297	00E
20	03	YUB	R1.98	B	MARYSVILLE, BUCHANAN ST	16500	1641	9.94	477	286	191	687	29.07	17	12	42	308	00E
20	03	YUB	R7.018	A	HALLWOOD BLVD	10700	421	3.93	170	60	19	172	40.49	14	4	41	74	15V
20	03	NEV	R12.24	A	GRASS VALLEY, JCT. RTE. 49	48000	3360	7.00	1680	336	336	1008	50.00	10	10	30	487	86E
20	03	NEV	R12.92	O	JCT. RTE. 174	38500	2502	6.50	1201	250	300	751	48.00	10	12	30	368	85E
20	03	NEV	R14.797	A	BRUNSWICK RD	32500	1950	6.00	975	195	195	585	50.00	10	10	30	283	83E
20	03	NEV	R17.398	B	NEVADA CITY, EAST JCT. RTE. 49	16200	859	5.30	450	131	11	267	52.40	15	1	31	122	86V
20	03	NEV	R17.398	A	NEVADA CITY, EAST JCT. RTE. 49	5400	568	10.52	256	100	56	156	45.10	18	10	27	80	00E
20	03	NEV	31.834	B	WASHINGTON RD	3550	548	15.45	247	97	54	150	45.10	18	10	27	77	00E
20	03	NEV	45.661	B	JCT RTE 80	3200	340	10.63	120	60	40	120	35.29	18	12	35	57	00E
22	07	LA	0	A	LONG BEACH, JCT. RTE. 1	62000	1346	2.17	1036	113	14	183	77.00	8	1	14	112	06V
22	12	ORA	R0.65	B	JCT. RTE. 405	142500	3705	2.60	2853	311	37	504	77.00	8	1	14	308	06E
22	12	ORA	R0.66	A	JCT. RTE. 405	142500	12398	8.70	8418	1637	719	1624	67.90	13	6	13	1111	81E
22	12	ORA	R3.587	B	GARDEN GROVE, JCT. RTE. 39	158600	7770	4.90	5315	1010	443	1002	68.40	13	6	13	690	82E
22	12	ORA	R3.587	A	GARDEN GROVE, JCT. RTE. 39	183400	8986	4.90	6174	1114	494	1204	68.70	12	6	13	807	82E



Base Map Sources:
- Nevada County GIS (January 2011).

Prepared By: Mead & Hunt www.meadhunt.com

C:\Users\869\bl-appdata\local\temp\AcPublish_3892\Nevada Co-COMPATIBILITY.dwg Oct 06, 2011 - 1:04pm

Legend

Boundary Lines
- Airport Property Line
- Proposed Airport Property Acquisition
- City Limits
- Grass Valley Planning Area
- Grass Valley Sphere of Influence
- Nevada City Sphere of Influence
- Existing Runway (4,350')
- Future Runway (4,650')
- Airport Influence Area

Compatibility Zones[1]
- Zone A - Runway Clear Zone
- Zone B1 - Inner Approach Zone
- Zone B2 - Sideline Zone
- Zone C - Inner Turning Zone & Extended Approach Zone
- Zone D - Traffic Pattern Zone
- Zone D* - Urban Overlay Zone
- Zone E - Other Airport Environs

Calculated Noise Contours
- 55 dB CNEL
- 60 dB CNEL
- 65 dB CNEL

} 60,000 Annual Operations (164 Average Annual Day)

Calculated Flight Tracks[3]
- Arrival
- Departure
- Touch-n-Go

Notes

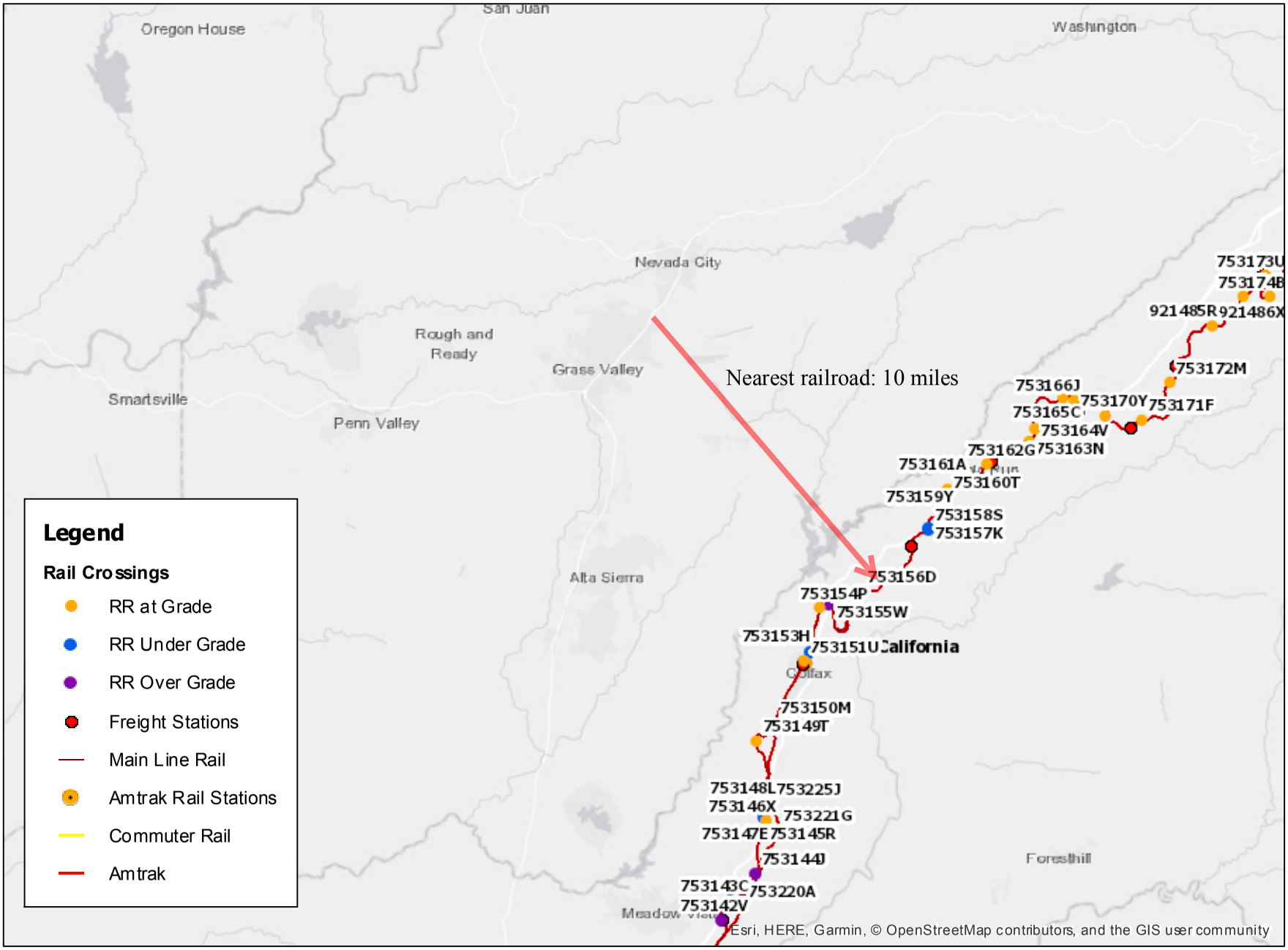
1. See Chapter 2, Table 2B, Compatibility Zone Delineation.
2. Source: Mead & Hunt, Inc., using Integrated Noise Model (INM) 7.0b (April 2011). Contours represent average daily noise exposure for 60,000 annual operations on future runway. Contours modeled using USGS terrain data. Terrain results in shorter contours to west and wider contours near center of airport.
3. Flight tracks represent general arrival and departure routes.
4. Prevailing winds out of the west. Runway 25 is designated calm wind runway.
5. Departures on Runway 7 and arrivals on Runway 25 not recommended at night due to severe runway gradient (rising from west to east). Fire attack aircraft typically land on Runway 7.
6. Aircraft departing Runway 25 advised to climb to 3,800' MSL (648' above airport elevation) before turning (source: Airport management).

Nevada County Airport
Land Use Compatibility Plan
(Adopted September 2011)

Exhibit 3-5

Compatibility Factors Map: Noise and Overflight

Federal Railroad Administration - Web Map



J. Soils

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Nevada County Area, California

Brunswick Commons



January 25, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

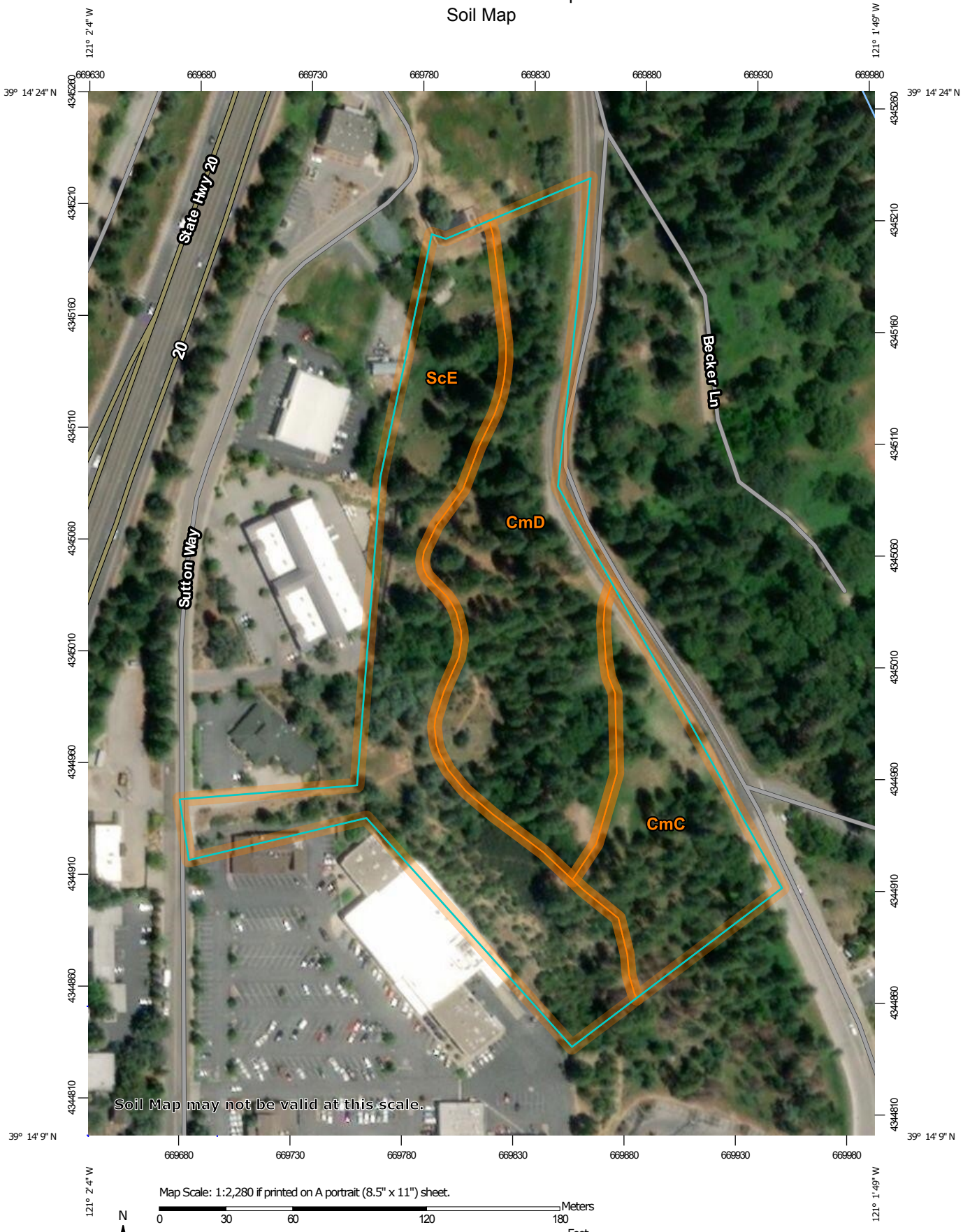
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:2,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Nevada County Area, California
Survey Area Data: Version 11, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 20, 2017—Aug 8, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CmC	Cohasset loam, shoulders, 3 to 20 percent slopes	1.9	18.7%
CmD	Cohasset loam, backslopes, 5 to 30 percent slopes	3.9	38.6%
ScE	Secca-Rock outcrop complex, 2 to 50 percent slopes	4.3	42.7%
Totals for Area of Interest		**10.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Nevada County Area, California

CmC—Cohasset loam, shoulders, 3 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2w8c0
Elevation: 2,430 to 4,250 feet
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 53 to 58 degrees F
Frost-free period: 100 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Cohasset and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cohasset

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from volcanic breccia and/or conglomerate

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
A1 - 3 to 12 inches: loam
A2 - 12 to 21 inches: loam
BAt - 21 to 32 inches: loam
Bt1 - 32 to 42 inches: clay loam
Bt2 - 42 to 60 inches: clay loam
Crt - 60 to 67 inches: cemented bedrock

Properties and qualities

Slope: 3 to 20 percent
Depth to restrictive feature: 40 to 96 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.2 to 0.5 mmhos/cm)
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Mccarthy, cobbly sandy loam
Percent of map unit: 10 percent
Hydric soil rating: No

Aiken, loam
Percent of map unit: 5 percent
Hydric soil rating: No

CmD—Cohasset loam, backslopes, 5 to 30 percent slopes

Map Unit Setting
National map unit symbol: 2w8c3
Elevation: 2,340 to 4,430 feet
Mean annual precipitation: 47 to 67 inches
Mean annual air temperature: 53 to 59 degrees F
Frost-free period: 140 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition
Cohasset and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cohasset

Setting
Landform: Ridges
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum and/or colluvium derived from volcanic rock

Typical profile
Oi - 0 to 3 inches: slightly decomposed plant material
A1 - 3 to 12 inches: loam
A2 - 12 to 21 inches: loam
BAt - 21 to 32 inches: loam
Bt1 - 32 to 42 inches: clay loam
Bt2 - 42 to 60 inches: clay loam
Crt - 60 to 67 inches: cemented bedrock

Properties and qualities
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 96 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.2 to 0.5 mmhos/cm)
Available water storage in profile: High (about 11.1 inches)

Interpretive groups
Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aiken, cobbly loam
Percent of map unit: 3 percent
Landform: Hills
Hydric soil rating: No

Aiken, loam
Percent of map unit: 3 percent
Landform: Hills
Hydric soil rating: No

Cohasset, cobbly loam
Percent of map unit: 3 percent
Landform: Hills
Hydric soil rating: No

Mccarthy, cobbly loam
Percent of map unit: 2 percent
Landform: Hills
Hydric soil rating: No

Sites, loam
Percent of map unit: 2 percent
Landform: Hills
Hydric soil rating: No

Iron mountain, cobbly loam
Percent of map unit: 2 percent
Landform: Hills
Hydric soil rating: No

ScE—Secca-Rock outcrop complex, 2 to 50 percent slopes

Map Unit Setting
National map unit symbol: hfxj
Elevation: 1,700 to 3,000 feet
Mean annual precipitation: 35 to 55 inches

Mean annual air temperature: 57 to 58 degrees F
Frost-free period: 230 to 255 days
Farmland classification: Not prime farmland

Map Unit Composition

Secca and similar soils: 55 percent
Rock outcrop: 25 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Secca

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Basic colluvium derived from igneous and metamorphic rock and/or residuum weathered from igneous and metamorphic rock

Typical profile

A - 0 to 15 inches: gravelly silt loam
Bt1 - 15 to 22 inches: cobbly silty clay loam
Bt2 - 22 to 36 inches: cobbly clay
BCt - 36 to 45 inches: gravelly clay
Cr - 45 to 49 inches: bedrock

Properties and qualities

Slope: 2 to 50 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills, mountains
Parent material: Basic igneous and metamorphic rock

Typical profile

R - 0 to 4 inches: bedrock

Properties and qualities

Slope: 2 to 50 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Rescue, loam

Percent of map unit: 5 percent
Landform: Hills, mountains
Hydric soil rating: No

Sites, very stony loam

Percent of map unit: 5 percent
Landform: Hills, mountains
Hydric soil rating: No

Sites, loam

Percent of map unit: 5 percent
Landform: Hills, mountains
Hydric soil rating: No

Boomer, loam

Percent of map unit: 5 percent
Landform: Hills, mountains
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Small Commercial Buildings

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

"Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Small Commercial Buildings



Map Scale: 1:2,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Nevada County Area, California
Survey Area Data: Version 11, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 20, 2017—Aug 8, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Small Commercial Buildings

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
CmC	Cohasset loam, shoulders, 3 to 20 percent slopes	Very limited	Cohasset (85%)	Slope (1.00)	1.9	18.7%
CmD	Cohasset loam, backslopes, 5 to 30 percent slopes	Very limited	Cohasset (85%)	Slope (1.00)	3.9	38.6%
ScE	Secca-Rock outcrop complex, 2 to 50 percent slopes	Very limited	Secca (55%)	Shrink-swell (1.00) Slope (1.00)	4.3	42.7%
Totals for Area of Interest					**10.0**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	10.0	100.0%
Totals for Area of Interest	**10.0**	**100.0%**

Rating Options—Small Commercial Buildings

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

AOI Inventory

This folder contains a collection of tabular reports that present a variety of soil information. Included are various map unit description reports, special soil interpretation reports, and data summary reports.

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, provide information on the composition of map units and properties of their components.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Nevada County Area, California

Map Unit: CmC—Cohasset loam, shoulders, 3 to 20 percent slopes

Component: Cohasset (85%)

The Cohasset component makes up 85 percent of the map unit. Slopes are 3 to 20 percent. This component is on volcanic ridges on mountains. The parent material consists of residuum weathered from volcanic breccia and/or conglomerate. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 96 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 80 percent. Below this thin organic horizon the organic matter content is about 8 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: McCarthy, cobbly sandy loam (10%)

Generated brief soil descriptions are created for major soil components. The McCarthy soil is a minor component.

Component: Aiken, loam (5%)

Generated brief soil descriptions are created for major soil components. The Aiken soil is a minor component.

Map Unit: CmD—Cohasset loam, backslopes, 5 to 30 percent slopes

Component: Cohasset (85%)

The Cohasset component makes up 85 percent of the map unit. Slopes are 5 to 30 percent. This component is on volcanic ridges on mountains. The parent material consists of residuum and/or colluvium derived from volcanic rock. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 96 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 80 percent. Below this thin organic horizon the organic matter content is about 8 percent. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Aiken, loam (3%)

Generated brief soil descriptions are created for major soil components. The Aiken soil is a minor component.

Component: Cohasset, cobbly loam (3%)

Generated brief soil descriptions are created for major soil components. The Cohasset soil is a minor component.

Component: Aiken, cobbly loam (3%)

Generated brief soil descriptions are created for major soil components. The Aiken soil is a minor component.

Component: McCarthy, cobbly loam (2%)

Generated brief soil descriptions are created for major soil components. The McCarthy soil is a minor component.

Component: Iron Mountain, cobbly loam (2%)

Generated brief soil descriptions are created for major soil components. The Iron Mountain soil is a minor component.

Component: Sites, loam (2%)

Generated brief soil descriptions are created for major soil components. The Sites soil is a minor component.

Map Unit: ScE—Secca-Rock outcrop complex, 2 to 50 percent slopes

Component: Secca (55%)

The Secca component makes up 55 percent of the map unit. Slopes are 2 to 50 percent. This component is on hills, mountains. The parent material consists of basic colluvium derived from igneous and metamorphic rock and/or residuum weathered from igneous and metamorphic rock. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 6e. This soil does not meet hydric criteria.

Component: Rock outcrop (25%)

Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.

Component: Sites, loam (5%)

Generated brief soil descriptions are created for major soil components. The Sites soil is a minor component.

Component: Rescue, loam (5%)

Generated brief soil descriptions are created for major soil components. The Rescue soil is a minor component.

Component: Sites, very stony loam (5%)

Generated brief soil descriptions are created for major soil components. The Sites soil is a minor component.

Component: Boomer, loam (5%)

Generated brief soil descriptions are created for major soil components. The Boomer soil is a minor component.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands–Nevada County Area, California		
Map Symbol	**Map Unit Name**	**Farmland Classification**
CmC	Cohasset loam, shoulders, 3 to 20 percent slopes	Farmland of statewide importance
CmD	Cohasset loam, backslopes, 5 to 30 percent slopes	Not prime farmland
ScE	Secca-Rock outcrop complex, 2 to 50 percent slopes	Not prime farmland

California Revised Storie Index (CA)

The Revised Storie Index is a rating system based on soil properties that govern the potential for soil map unit components to be used for irrigated agriculture in California.

The Revised Storie Index assesses the productivity of a soil from the following four characteristics:

- Factor A: degree of soil profile development

- Factor B: texture of the surface layer

- Factor C: steepness of slope

- Factor X: drainage class, landform, erosion class, flooding and ponding frequency and duration, soil pH, soluble salt content as measured by electrical conductivity, and sodium adsorption ratio

Revised Storie Index numerical ratings have been combined into six classes as follows:

- Grade 1: Excellent (81 to 100)

- Grade 2: Good (61 to 80)

- Grade 3: Fair (41 to 60)

- Grade 4: Poor (21 to 40)

- Grade 5: Very poor (11 to 20)

- Grade 6: Nonagricultural (10 or less)

Reference:

O'Geen, A.T., Southard, S.B., Southard, R.J. 2008. A Revised Storie Index for Use with Digital Soils Information. University of California Division of Agriculture and Natural Resources. Publication 8355. http://anrcatalog.ucanr.edu/pdf/8335.pdf

Report—California Revised Storie Index (CA)

California Revised Storie Index (CA)–Nevada County Area, California			
Map symbol and soil name	**Pct. of map unit**	**California Revised Storie Index (CA)**	
		Rating class	**Value**
CmC—Cohasset loam, shoulders, 3 to 20 percent slopes			
Cohasset	85	Grade 1 - Excellent	82

California Revised Storie Index (CA)–Nevada County Area, California			
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)	
		Rating class	Value
CmD—Cohasset loam, backslopes, 5 to 30 percent slopes			
Cohasset	85	Grade 2 - Good	79
ScE—Secca-Rock outcrop complex, 2 to 50 percent slopes			
Secca	55	Grade 4 - Poor	40
Rock outcrop	25	Not Applicable for Storie Index	

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so

requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–CA619-Nevada County Area, California					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
CmC: Cohasset loam, shoulders, 3 to 20 percent slopes	Cohasset	85	Ridges	No	—
	McCarthy-Cobbly sandy loam	10	—	No	—
	Aiken-Loam	5	—	No	—
CmD: Cohasset loam, backslopes, 5 to 30 percent slopes	Cohasset	85	Ridges	No	—
	Aiken-Cobbly loam	3	Hills	No	—
	Aiken-Loam	3	Hills	No	—
	Cohasset-Cobbly loam	3	Hills	No	—
	McCarthy-Cobbly loam	2	Hills	No	—
	Sites-Loam	2	Hills	No	—
	Iron Mountain-Cobbly loam	2	Hills	No	—
ScE: Secca-Rock outcrop complex, 2 to 50 percent slopes	Secca	55	Hills,mountains	No	—
	Rock outcrop	10-40	Hills,mountains	No	—
	Rescue-Loam	5	Hills,mountains	No	—
	Sites-Very stony loam	5	Hills,mountains	No	—
	Sites-Loam	5	Hills,mountains	No	—
	Boomer-Loam	5	Hills,mountains	No	—

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K. Community Services

CITY OF GRASS VALLEY
PUBLIC WORKS DEPARTMENT

125 East Main Street
Grass Valley, CA 95945
530-274-4351
Fax: 530-272-1807

Re: Homeless Resource Center Project — Construction of Apartments/Day Center/Associated Buildings and Landscape- 10,558 sq. ft. Center

Location: 936 Old Tunnel Road, Grass Valley, CA 95945
APN: 035-400-054

The City of Grass Valley (COGV) can provides sewer service to the above-referenced property. Any modifications to the existing sewer facility will need to comply with the following requirements:

- The owner of the Property must pay all applicable fees, charges, and assessments by COGV; submitting to COGV, and COGV's approval thereof, appropriate plans and specifications for sewer facilities serving the Property consistent with COGV's standards; and complying with applicable rules and regulations, including those of COGV.

Should you have any questions, need additional information, or copies of the COGV Building Codes or Standards please contact COGV Engineering Department at (530) 274-4350.

Sincerely,

Michael Busse
Public Works Director of Operations

Cc: Tom Last, Tim Kiser, Bjorn Jones

NEVADA IRRIGATION DISTRICT
1036 W. Main Street, Grass Valley, CA 95945-5424
(530) 273-6185 ~ Fax: (530) 477-2646 ~ www.nidwater.com

May 17, 2019

Contact:	Mike Dent, Director	Email:	
Phone:	530-265-1410	Fax:	
Address:	Dept. of Child Support..County of Nevada		

From: Nevada Irrigation District, Tonia M. Tabucchi Herrera, Senior Engineer

RE: Estimate Fire Flow for property at 936 Old Tunnel Road, Grass Valley, **APN#N005-400-054**

System:	E. George	Flow:	1900 gpm
Static:	103 psi	Residual:	73 psi
Ground Elevation:	2730 ft (estimated, revise if elevation differs)		
Comments:	Fire flow is limited due to velocities in the pipeline fronting the parcel as well as upstream the PRV.		

Pressure is at the water main. It has not been adjusted for friction loss in the fire service, the hydrant, or the lateral pipe to the fire service or hydrant. The California Health and Safety Code requires that the water system be designed to maintain an operating pressure, under fire flow conditions, of not less than 20 psi at all service connections. Although the pressure may be greater than 20 psi at the site, this is the maximum fire flow that can be delivered to the site while maintaining 20 psi residual at all service connections in the water system.

Fire flow and pressures were estimated by computer simulation. If field verification is desired, you may conduct a field test; however, this test must be scheduled with NID prior to the test. The test must be approved and coordinated with NID operations.

NID disclaims liability arising out of or relating to fire service improvements or operations. NID neither guarantees fire protection, nor is it responsible for fire losses. NID fire services are governed by NID Water Service Regulations. According to section 8.02, this reads as follows:

The District does not guarantee or represent that a specific or certain minimum water pressure or volume of water will be available through a fire service. Fire services will be subject to the variations of water pressure and flow and to the temporary shutdowns required in the operation and maintenance of the system or any interruptions of operations in the system. The District shall be held in no way responsible for and the applicant and/or local fire-fighting entity must agree to hold the District free and harmless from injury or damage caused by the lack of water or pressure available to a fire service.

If you have questions or comments, please call me at 530-273-6185 ext. 215 or email me at herrera@nidwater.com.

NEVADA IRRIGATION DISTRICT

1036 W. Main Street, Grass Valley, CA 95945-5424
(530) 273-6185 ~ Fax: (530) 477-2646 ~ www.nidwater.com

May 16, 2019

Mr. Mike Dent, Director of Housing & Child Support Services
County of Nevada
950 Maidu Avenue
Nevada City, CA 95959

Re: Treated Water Availability – Nevada County APN: 035-400-054
Site Address: 936 Old Tunnel Road, Grass Valley, CA

To Whom It May Concern:

The referenced parcel is located within the boundaries of the Nevada Irrigation District. Per District records, this parcel has a standby account (#35873) and treated water service is available to this parcel from the Loma Rica Treatment Plant upon proper application and payment of the applicable connection fees.

A water demand estimate is required for evaluation of capacity charges to be collected and size of meter to be installed. The District has adequate capacity for the consumptive needs of the parcel.

All treated water services are metered. The responsibility of the District ends at the meter. It is the property owner's responsibility to acquire necessary easements and to install and maintain the private service pipeline(s) and appurtenances there from.

The District does not assume liability or responsibility for the provision or supply of water for fire protection; however, the District's treated water system is available for fire protection. Review of fire flow requirements is not an assumption of liability or responsibility for fire flow design criteria.

If you have any questions, please feel free to contact me at 530-273-6185 ext. 240 or via email at wood@nidwater.com.

Sincerely,

Shannon Wood

Shannon Wood
Business Services Technician

cc: Mr. Robert Wallis, Architect

Brunswick Commons Apartments
Old Tunnel Road
Grass Valley, CA 95945

Conceptual Drainage Narrative

Prepared by:

Robertson Erickson
CIVIL ENGINEERS & SURVEYORS

888 Manzanita Ct., Suite 101, Chico, CA 95926
530-894-3500 Fax 530-894-8955
robertsonerickson.com

May 13, 2019

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Hydrology Summary

Introduction

This project proposes to construct a new apartment building and associated site improvements westerly and adjacent to Old Tunnel Road just north of the intersection of Town Talk Road. The existing size is approximately 5 acres. The proposed apartment building will have a footprint of approximately 18,956 square feet and adjacent impervious areas will total 55,142 sf.

Existing Project Setting

The existing site slopes in the westerly or southwesterly direction at approximately 20%. The site is currently forested with substantial tree and brush growth.

The underlying soil strata is predominately loam, or clay loam. The NRCS classifies the soils as Hydrologic Soil Group C.

Pre-Project Tributary Areas and Runoff

There is currently a roadway cross culvert that conveys upstream drainage from east to west across Old Tunnel Road onto the site. Drainage then flows in the southwesterly direction through a season drainage swale. The project proposes to extend the existing culvert across the site and connecting it to the existing City storm drain system located in Sutton Way.

Since the ultimate discharge location for on-site drainage is a City storm drain located in Sutton Way, pre-project runoff has been analyzed as a single tributary area. See exhibit 1 for the pre-project tributary area and general drainage direction. For pre-project hydrology calculations, see the top portion of Attachment A.

Post-Project Tributary Areas and Runoff Mitigation

In order to mitigate increased runoff from construction of impervious surfaces, the project proposes to route storm water to bio-retention basins located within the project limits (see Exhibit 2 for basin locations). Based on proposed site grading, 3 DMA's were established for this site and each DMA contains its own bio-retention basin (see Exhibit 2 for DMA delineations). The basins were designed to capture and retain the volume of water calculated by the State of California Volumetric spreadsheet, see Attachment C for these calculations. The required retention volume from the spreadsheet was cross-checked with peak storm routing (see Attachment B). Based on results of the peak storm analysis, the basins will effectively detain or "hold back" the necessary volume of water, while only releasing the pre-project 2-year storm peak flow rate.

The retention basins will operate in tandem with outlet control structures that will meter flow out of the basins at a rate less than or equal to the pre-project runoff flows listed in Attachment A. The outlet control structures will consist of weirs and orifices that will be sized accordingly for each design storm.

After stormwater leaves the outlet control structures, it will flow into the cross-culvert extension as described above. The ultimate discharge point of storm water will be into the existing City storm drain system located in Sutton Way.

Storm Water Quality & Post Construction Standard Plan Compliance

To comply with the State California Post Construction Standard requirements, the project proposes to mitigate storm water quality by including the following components within the bio-retention basin:

> installation of an 18" layer of highly permeable planting material located at the bottom of the basin to allow for percolation into the underlying soils;
>
> installation of appropriate plant species that will allow for evapotranspiration of storm water;
>
> and installation a 4" perforated pipe set in a 12" thick section of drain rock (underdrain) to transport any filtered water that the underlying soil strata will not accept to the outlet structure.

The underdrain will also help keep the basin dry and fee of any standing water.

Calculations

As described above, hydrology calculations were performed using the rational method to obtain flowrates for the pre and post project conditions and are summarized in Attachment A.

Peak storm routing and outflow from the basins were calculated using the rational method, and rainfall intensities from NOAA Atlas 14 and are found in Attachment B.

Additional storm water analysis and modeling will be performed during final design of the project.

Conclusion

If constructed and maintained properly, the proposed storm water bio-retention basin will effectively mitigate storm water quantity (100-year storm) by holding back peak flows. The bio-retention basin will capture the required treatment volume based on the State of California volumetric criteria calculator, and release runoff at a rate less than the pre-project 2-yr storm which meets the requirements of the City of Grass Valley Post Construction regulations. The bio-retention facility has been designed based on CASQA recommendations. The basin meets a majority of the recommendations and satisfies the intent of BMP-32. Should the basin become totally inundated, storm water would spill out of the basin and flow overland in the westerly direction towards Sutton Way, similar to the existing drainage patterns.

PRE-CONSTRUCTION TRIB AREAS
BRUNSWICK COMMONS
OLD TUNNEL ROAD
GRASS VALLEY, CA
PACIFIC ASSOCIATES
EX.1
Robertson Erickson
CIVIL ENGINEERS & SURVEYORS
888 Manzanita Court
Chico, California 95926
530-894-3500 Fax 530-894-8955
robertsonerickson.com
19-548 GLL
PRE-CONSTRUCTION TRIBUTARY AREA
A = 5.0 ac
C = 0.56
GENERAL DRAINAGE
DIRECTION, TYP
OLD TUNNEL ROAD
SUTTON WAY
EX. BLDG
EX. BLDG
EX. BLDG
SCALE: 1" =80'
80
0
80
160
240

POST-CONSTRUCTION CONDITIONS
BRUNSWICK COMMONS
OLD TUNNEL ROAD
GRASS VALLEY, CA
PACIFIC ASSOCIATES
EX.2
Robertson Erickson
CIVIL ENGINEERS & SURVEYORS
888 Manzanita Court
Suite 101
Chico, California 95926
530-894-3500 Fax 530-894-8955
robertsonerickson.com
19-548 GLL TLG
DMA 1
A = 0.53 ac
C = 0.92
Vreq'd = 1,381 cf
DMA 2
A = 0.45 ac
C = 0.92
Vreq'd = 1,172 cf
DMA 3
A = 0.22 ac
C = 0.95
Vreq'd = 577
BIO-RETENTION BASIN 1
DEPTH = 2-ft
V = 3,320 cf
BIO-RETENTION BASIN 2
DEPTH = 2.5-ft
V = 1,981 cf
BIO-RETENTION BASIN 3
DEPTH = 2.5-ft
V = 715 cf
GENERAL DRAINAGE
DIRECTION, TYP
OLD TUNNEL ROAD
SUTTON WAY
EX. BLDG
EX. BLDG
EX. BLDG
SCALE: 1" =80'
80
0
80
160
240

Attachment A

Brunswick Commons Hydrology Calculations
05/09/19

By: Gavin Leiper, PE 73954

Pre-Construction Hydrology
Use Rational Method
Q=CIA

Area = 5.0 acres

Pre-Construction Runoff coefficient "C"
Caltrans Highway Design Manual Figure 819.2A

Relief	18% +/-	0.24
Soil Infiltration	loam/clay loam/shallow gravelly clay	0.12
Vegetal Cover	Wooded coverage, at least 90%	0.05
Surface Storage	Negligible surface, steep drainageways	0.15
	C=	**0.56**

Pre-Construction Time of concentration
Average Slope = (2740'-2690')/281'=18%
Site contains forest.
Use Figure 816.6 from Caltrans HDM to determine velocity.
V=1.1 ft/sec

Tt = L/60V=281/(60*1.1)= 4.3 minutes
Per Caltrans guidance in section 816.6, assume a minimum of 5 minutes for areas with slopes greater than 10:1

Rainfall Intensities at Tc=5 min (per NOAA Atlas 14)

2-yr	2.33	in/hr
10-yr	3.36	in/hr
25-yr	4.1	in/hr
100-yr	5.45	in/hr

Pre-Construction runoff (Tc=5 mins)

Q2=	**6.52**	**cfs**
Q10=	**9.41**	**cfs**
Q25=	**11.48**	**cfs**
Q100=	**15.26**	**cfs**

Pre-Construction runoff (Tc=24 hrs)

i=	**0.195**	**in/hr**
Q2=	**0.55**	**cfs**

Post-Construction Hydrology

Post-Construction runoff coefficient, "C"

Description	Area (sf)	Area (ac)	C value
Buildings	18,956	0.44	0.95
Hardscape	55,142	1.27	0.90
Landscape	143,748	3.30	0.56
Total	217,846	5.00	

Weighted, post construction C value **0.68**
Percent Impervious 0.3401394

Post-Construction time of concentration = 10 min
Rainfall intensities at Tc=10min

2-yr	1.7	in/hr
10-yr	2.41	in/hr
25-yr	2.94	in/hr
100-yr	3.91	in/hr

Post-Construction runoff (Tc=10 min)

Q2=	**5.8**	**cfs**
Q10=	**8.2**	**cfs**
Q25=	**5.0**	**cfs**
Q100=	**13.3**	**cfs**

Attachment B (1 of 2)

Underground Detention Calculation for DMA 1 + 2
Post Construction Storm Water Quality Mitigation

Required Capture Volume from SMARTS calculator: 2,553 cf
Acutal bio-retention basin volume: 5,301 cf

0.98 =Site Area (DMA 1 & 2)
0.92 =C-post value (DMA 1 &2)

PEAK STORM ROUTING

2-yr 24 hour storm

0.56 =C-pre value 1.28 =Qpre 2-yr 24 hour

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
5	300	2.33	2.101	N/A	1.279	0.822	246.607	< 5,301, OK
10	600	1.67	1.506	N/A	1.279	0.227	136.181	
15	900	1.34	1.208	N/A	1.279	-0.071	-63.504	
30	1800	0.89	0.802	N/A	1.279	-0.476	-857.304	
60	3600	0.624	0.563	N/A	1.279	-0.716	-2577.980	
120	7200	0.466	0.420	N/A	1.279	-0.859	-6181.620	
180	10800	0.396	0.357	N/A	1.279	-0.922	-9954.040	
360	21600	0.31	0.279	N/A	1.279	-0.999	-21582.893	
720	43200	0.243	0.219	N/A	1.279	-1.060	-45775.377	
1440	86400	0.195	0.176	N/A	1.279	-1.103	-95289.869	

Trench will contain increase in runoff from post constuction condition.

10-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	2.41	2.173	N/A	1.279	0.894	536.491	< 5,301, OK
15	900	1.94	1.749	N/A	1.279	0.470	423.360	
30	1800	1.29	1.163	N/A	1.279	-0.116	-208.152	
60	3600	0.902	0.813	N/A	1.279	-0.465	-1675.659	
120	7200	0.67	0.604	N/A	1.279	-0.675	-4857.350	
180	10800	0.567	0.511	N/A	1.279	-0.767	-8288.965	
360	21600	0.442	0.399	N/A	1.279	-0.880	-19012.251	
720	43200	0.352	0.317	N/A	1.279	-0.961	-41529.923	
1440	86400	0.291	0.262	N/A	1.279	-1.016	-87811.638	

25-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	2.94	2.651	N/A	1.279	1.372	823.200	< 5,301, OK
15	900	2.37	2.137	N/A	1.279	0.858	772.279	
30	1800	1.57	1.416	N/A	1.279	0.137	246.254	
60	3600	1.1	0.992	N/A	1.279	-0.287	-1032.998	
120	7200	0.814	0.734	N/A	1.279	-0.545	-3922.572	
180	10800	0.685	0.618	N/A	1.279	-0.661	-7139.966	
360	21600	0.529	0.477	N/A	1.279	-0.802	-17317.964	
720	43200	0.421	0.380	N/A	1.279	-0.899	-38842.433	
1440	86400	0.348	0.314	N/A	1.279	-0.965	-83371.438	

100-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	3.91	3.525	N/A	1.279	2.247	1347.931	
15	900	3.15	2.840	N/A	1.279	1.561	1405.202	< 5,301, OK
30	1800	2.09	1.884	N/A	1.279	0.606	1090.152	
60	3600	1.46	1.316	N/A	1.279	0.038	135.475	
120	7200	1.07	0.965	N/A	1.279	-0.314	-2260.742	
180	10800	0.89	0.802	N/A	1.279	-0.476	-5143.824	
360	21600	0.676	0.609	N/A	1.279	-0.669	-14455.204	
720	43200	0.53	0.478	N/A	1.279	-0.801	-34596.979	
1440	86400	0.435	0.392	N/A	1.279	-0.887	-76594.291	

Attachment B (2 of 2)

Underground Detention Calculation for DMA 3

Post Construction Storm Water Quality Mitigation

Required Capture Volume from SMARTS calculator: 577 cf
Acutal bio-retention basin volume: 715 cf

0.22 =Site Area (DMA 3)
0.95 =C-post value (DMA 3)

PEAK STORM ROUTING

2-yr 24 hour storm

0.56 =C-pre value 0.29 =Qpre 2-yr 24 hour

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
5	300	2.33	0.487	N/A	0.287	0.200	59.974	< 715, OK
10	600	1.67	0.349	N/A	0.287	0.062	37.184	
15	900	1.34	0.280	N/A	0.287	-0.007	-6.296	
30	1800	0.89	0.186	N/A	0.287	-0.101	-181.883	
60	3600	0.624	0.130	N/A	0.287	-0.157	-563.904	
120	7200	0.466	0.097	N/A	0.287	-0.190	-1365.566	
180	10800	0.396	0.083	N/A	0.287	-0.204	-2206.354	
360	21600	0.31	0.065	N/A	0.287	-0.222	-4800.946	
720	43200	0.243	0.051	N/A	0.287	-0.236	-10206.821	
1440	86400	0.195	0.041	N/A	0.287	-0.246	-21280.406	

Trench will contain increase in runoff from post constuction condition.

10-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	2.41	0.504	N/A	0.287	0.217	129.980	< 715, OK
15	900	1.94	0.405	N/A	0.287	0.118	106.564	
30	1800	1.29	0.270	N/A	0.287	-0.017	-31.403	
60	3600	0.902	0.189	N/A	0.287	-0.099	-354.737	
120	7200	0.67	0.140	N/A	0.287	-0.147	-1058.587	
180	10800	0.567	0.119	N/A	0.287	-0.169	-1820.372	
360	21600	0.442	0.092	N/A	0.287	-0.195	-4205.045	
720	43200	0.352	0.074	N/A	0.287	-0.213	-9222.682	
1440	86400	0.291	0.061	N/A	0.287	-0.226	-19546.877	

25-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	2.94	0.614	N/A	0.287	0.327	196.442	< 715, OK
15	900	2.37	0.495	N/A	0.287	0.208	187.447	
30	1800	1.57	0.328	N/A	0.287	0.041	73.933	
60	3600	1.1	0.230	N/A	0.287	-0.057	-205.762	
120	7200	0.814	0.170	N/A	0.287	-0.117	-841.896	
180	10800	0.685	0.143	N/A	0.287	-0.144	-1554.023	
360	21600	0.529	0.111	N/A	0.287	-0.176	-3812.292	
720	43200	0.421	0.088	N/A	0.287	-0.199	-8599.694	
1440	86400	0.348	0.073	N/A	0.287	-0.214	-18517.594	

100-yr 24 hour storm

Tc (min)	Duration (sec)	I (in/hr)	Qin (cfs)	Qout: trench (cfs)	Qout: pre const flow	Qnet (cfs)	Req'd Storage (cf)	
10	600	3.91	0.817	N/A	0.287	0.530	318.080	
15	900	3.15	0.658	N/A	0.287	0.371	334.165	< 715, OK
30	1800	2.09	0.437	N/A	0.287	0.150	269.557	
60	3600	1.46	0.305	N/A	0.287	0.018	65.102	
120	7200	1.07	0.224	N/A	0.287	-0.063	-456.667	
180	10800	0.89	0.186	N/A	0.287	-0.101	-1091.297	
360	21600	0.676	0.141	N/A	0.287	-0.146	-3148.675	
720	43200	0.53	0.111	N/A	0.287	-0.176	-7615.555	
1440	86400	0.435	0.091	N/A	0.287	-0.196	-16946.582	

Two Options for Calculating the Design Volume for the Volumetric BMPs

For projects in the Central Valley from Shasta County to Fresno County

Perform the following steps and enter the requested data. Print this page and include with the project's submittal.

Name of the DMA: DMA 1

Step 1: **Enter the size of the Drainage Management Area (DMA):** 23,293 *Square Feet*

Step 2: **Enter the total percentage of impervious area in the DMA:** 100 *% impervious*

i = 1.00 *This is the impervious coefficient (i) used for the Urban Runoff Quality Management approach*

Enter the number of existing or planned trees in the DMA:

Evergreen: Deciduous:

Total Tree Credit: 0.0 ft^3

Step 3: **Specify the project location:**

Mileage:	Redding to Sacramento	150 miles	
	Sacramento to Fresno	160 miles	
	Is the project north or south of Sacramento?		North *Select One*
	What is the distance from Sacramento?		50 *Enter miles*
	Percent of distance from Sacramento to	Redding	33.3%

Step 4: **Specify the composite (average) runoff coefficient for the DMA:**

Enter average runoff coefficient for the DMA: 0.92 *Enter decimal coefficient (Refer to the coefficient tab)*

C = 0.892 *This is the average c using the Urban Runo Management approac impervious area.*

This is your volumetric design value for the DMA based on the site location and average runoff coefficient.

DMA's Unit Basin Storage Volume (inches): 0.71

P6 = 0.55 inches *See the P6 Table tab*

Basis for the Calculations (Refer to the attached CASQA Rain Graphs):

Weather Stations	Runoff Coefficients 0.25	0.50	0.75	1.00
Redding	*0.22*	*0.44*	*0.66*	*0.88*
Sacramento	*0.18*	*0.36*	*0.54*	*0.72*
Fresno	*0.12*	*0.24*	*0.37*	*0.49*
Project Location	**0.19**	**0.39**	**0.58**	**0.77**

Unit Basin Storage Volumes (inches) using 80% runoff capture with 48-hour draw down times

Regression constant for 48-hour draw down (a) = 1.963 *Per the CASQA BMP for the Urban Runoff Management Approa*

Step 5: **Select one of the two optional calculations of the required BMP capture volume for the DMA:**

Using the CASQA BMP Handbook Approach:

Required Capture Volume:
1,381 cubic feet
10,330 gallons
0.032 acre-feet

Use this one *Specify selection*

Using the Urban Runoff Quality Management Approach:

Required Capture Volume:
1,869 cubic feet
13,983 gallons
0.043 acre-feet

Don't use this one *Specify selection*

Maximum Detention Volume (Po) = 0.963 inches =(a)(P6)(C)

Attachment C (2 of 3)

Two Options for Calculating the Design Volume for the Volumetric BMPs

For projects in the Central Valley from Shasta County to Fresno County

Perform the following steps and enter the requested data. Print this page and include with the project's submittal.

Name of the DMA: DMA 2

Step 1: **Enter the size of the Drainage Management Area (DMA):** 19,761 *Square Feet*

Step 2: **Enter the total percentage of impervious area in the DMA:** 100 *% impervious*

i = 1.00 *This is the impervious coefficient (i) used for the Urban Runoff Quality Management approach*

Enter the number of existing or planned trees in the DMA:

Evergreen: Deciduous:

Total Tree Credit: 0.0 ft^3

Step 3: **Specify the project location:**

Mileage:	Redding to Sacramento	150 miles	
	Sacramento to Fresno	160 miles	
	Is the project north or south of Sacramento?		North *Select One*
	What is the distance from Sacramento?		50 *Enter miles*
	Percent of distance from Sacramento to	Redding	33.3%

Step 4: **Specify the composite (average) runoff coefficient for the DMA:**

Enter average runoff coefficient for the DMA: 0.92 *Enter decimal coefficient (Refer to the coefficient tab)*

C = 0.892 *This is the average c using the Urban Runo Management approac impervious area.*

This is your volumetric design value for the DMA based on the site location and average runoff coefficient.

DMA's Unit Basin Storage Volume (inches): 0.71

P6 = 0.55 inches *See the P6 Table tab*

Basis for the Calculations (Refer to the attached CASQA Rain Graphs):

		Runoff Coefficients				
		0.25	0.50	0.75	1.00	
Weather Stations	Redding	*0.22*	*0.44*	*0.66*	*0.88*	*Unit Basin Storage Volumes (inches) using 80% runoff capture with 48-hour draw down times*
	Sacramento	*0.18*	*0.36*	*0.54*	*0.72*	
	Fresno	*0.12*	*0.24*	*0.37*	*0.49*	
	Project Location	**0.19**	**0.39**	**0.58**	**0.77**	

Regression constant for 48-hour draw down (a) = 1.963 *Per the CASQA BMP for the Urban Runoff Management Approa*

Step 5: **Select one of the two optional calculations of the required BMP capture volume for the DMA:**

Using the CASQA BMP Handbook Approach:

Required Capture Volume:
1,172 cubic feet
8,764 gallons
0.027 acre-feet

Use this one *Specify selection*

Using the Urban Runoff Quality Management Approach:

Required Capture Volume:
1,586 cubic feet
11,863 gallons
0.036 acre-feet

Don't use this one *Specify selection*

Maximum Detention Volume (Po) = 0.963 inches =(a)(P6)(C)

Two Options for Calculating the Design Volume for the Volumetric BMPs

For projects in the Central Valley from Shasta County to Fresno County

Perform the following steps and enter the requested data. Print this page and include with the project's submittal.

Name of the DMA: DMA 3

Step 1: **Enter the size of the Drainage Management Area (DMA):** 9,432 *Square Feet*

Step 2: **Enter the total percentage of impervious area in the DMA:** 100 *% impervious*

i = 1.00 *This is the impervious coefficient (i) used for the Urban Runoff Quality Management approach*

Enter the number of existing or planned trees in the DMA:

Evergreen: Deciduous:

Total Tree Credit: 0.0 ft^3

Step 3: **Specify the project location:**

Mileage:	Redding to Sacramento	150 miles	
	Sacramento to Fresno	160 miles	
	Is the project north or south of Sacramento?		North *Select One*
	What is the distance from Sacramento?		50 *Enter miles*
	Percent of distance from Sacramento to	Redding	33.3%

Step 4: **Specify the composite (average) runoff coefficient for the DMA:**

Enter average runoff coefficient for the DMA: 0.95 *Enter decimal coefficient (Refer to the coefficient tab)*

C = 0.892 *This is the average c using the Urban Runo Management approa impervious area.*

This is your volumetric design value for the DMA based on the site location and average runoff coefficient.

DMA's Unit Basin Storage Volume (inches): 0.73

P6 = 0.55 inches *See the P6 Table tab*

Basis for the Calculations (Refer to the attached CASQA Rain Graphs):

Weather Stations	Runoff Coefficients 0.25	0.50	0.75	1.00
Redding	*0.22*	*0.44*	*0.66*	*0.88*
Sacramento	*0.18*	*0.36*	*0.54*	*0.72*
Fresno	*0.12*	*0.24*	*0.37*	*0.49*
Project Location	**0.19**	**0.39**	**0.58**	**0.77**

Unit Basin Storage Volumes (inches) using 80% runoff capture with 48-hour draw down times

Regression constant for 48-hour draw down (a) = 1.963 *Per the CASQA BMP for the Urban Runoff Management Approa*

Step 5: **Select one of the two optional calculations of the required BMP capture volume for the DMA:**

Using the CASQA BMP Handbook Approach:

Required Capture Volume:
577 cubic feet
4,319 gallons
0.013 acre-feet

Use this one *Specify selection*

Using the Urban Runoff Quality Management Approach:

Required Capture Volume:
757 cubic feet
5,662 gallons
0.017 acre-feet

Don't use this one *Specify selection*

Maximum Detention Volume (Po) = 0.963 inches =(a)(P6)(C)

KD Anderson & Associates, Inc.
Transportation Engineers

April 29, 2019

Mr. Cameron Johnson
AMG & Associates, LLC
PO Box 260770
Encino, CA 91426

RE: GRASS VALLEY APARTMENTS PROJECT: TRIP GENERATION ASSESSMENT

Dear Mr. Johnson:

As requested, KD Anderson & Associates has completed this assessment of the probable trip generation associated with the Brunswick Commons Apartment Project proposed on Old Tunnel Road in the unincorporated area of Nevada County adjoining the City of Grass Valley. The proposed project involves creation of 41 affordable apartment units. The apartments adjoin a proposed Resource Center that will primarily provide services to the community's homeless. This assessment is intended to suggest whether the traffic impacts of these two uses together may be significant under the guidelines of the California Environmental Quality Act (CEQA) and local agency guidelines.

Approach. Both the City of Grass Valley and Nevada County initially consider development proposals within the contest of an initial trip generation screen line in order to determine whether additional traffic analysis is needed to confirm the status of traffic impact significance. Because all the streets that would be expected to carry additional project traffic are within the City of Grass Valley, Nevada County staff agreed that the trip generation threshold established under City Traffic Impact Study Guidelines is the applicable screen line. The City's screen line threshold is 63 trips in the p.m. peak hour, and those projects causing fewer than 63 p.m. peak hour trips are judged to have traffic impacts that are less than significant. This assessment is intended to determine whether the project's p.m. peak hour trip generation estimate exceeds the City of Grass Valley's trip generation threshold.

Assumptions. Two alternative methods were employed to estimate the p.m. peak hour trip generation associated with new development in this area. For the apartments the number of trips was estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. ITE rates are commonly accepted by Nevada County and the City of Grass Valley, and while rates specific to affordable apartments are not available, ITE rates for **"Multifamily Housing – Low Rise**" represent a "worst case" basis for the forecast.

Because ITE rates are not available for the Resource Center, our estimate makes use of a description of that project in terms of the travel by employees, volunteer, service providers and clients to assemble an estimate. This information was assembled through input from the project architect and from a telephone conversation with Ms. Nancy Baglietto, Executive Director of Hospitality House, the existing homeless shelter that caters to the population that will be the primary recipient of services provided at the Resource Center.

The Resource Center will be accessible in several ways besides the private automobile. A Gold Country Stage Bus Route 4 stops at Hospitality House, and a stop is planned at the Resource Center. Hospitality House currently operates a shuttle bus, which will be directed to the Resource Center as needed.

Apartment Trip Generation Forecast. Table 1 presents the ITE trip generation rate that is applicable to conventional apartments, as well as the resulting estimate for this uses. As shown, 40 apartments would generate 23 p.m. peak hour trips.

TABLE 1
TRIP GENERATION RATES / PM PEAK HOUR FORECAST

ITE Code	Description	Unit / Quantity	Trips per Unit / PM Peak Hour Trips
	Apartments		
220	Multifamily Housing – Low Rise	dwelling	0.56
	Proposed Project	41 dwellings	23 trips
	Resource Center		
	Employee Travel	2 employees	2 trips
	Service Provider Travel	10 providers	10 trips
	Transitional Housing	9 beds	3 trips
	HH Client Travel – Shuttle Bus	Evening pick-up	2 trips
	HH Client Travel – Personal Vehicles	25% of 21 motorists	5 trips
Total			45 p.m. trips

Resource Center Trip Generation Forecast. The Resource Facility will operate from 8:00 to 5:00 p.m. The facility will primarily provide services for guests of Hospitality House, an emergency shelter that exists north of project site. Hospitality House (1262 Sutton Way) provides 60 beds for overnite use as well as 4 beds associated with recovery care. The operation of Hospitality House requires all guests to leave the site in the morning and return in the afternoon. Guests leave by 7:15 a.m. and begin to return in the late afternoon to check in between 4:00 and 5:30 p.m. prior to its doors closing for the evening. Roughly 20% to 30% of the shelter's guests typically have personal automobiles, although that percentage varies from day to day.

We have identified four elements of the operation of the Resource Center that could result in automobile traffic during the weekday p.m. Peak Hour (i.e., 4:00 to 6:00 p.m.). These elements are discussed in the text which follows.

Employees. Two employees arrive in the morning and will leave at some point within the 4:00 to 6:00 p.m. window. Two p.m. peak hour trips result.

Service Providers. The facility is visited by up to 10 service provides who will drive to the site. We assumed all will have their own car and all will leave in the 4:00 to 6:00 p.m. window, generating 10 p.m. peak hour trips.

Transitional Housing. The facility will provide eight beds associated with transitional housing. Assuming the same share of transitional housing clients have cars (i.e., 20% to 30%) then 2 to 3 vehicles could be involved. If every vehicle made a peak hour trip, then three p.m. peak hour trips would be added.

Hospitality House Guest / Others Travel. It is reasonable to expect that Hospitality House guests will travel to and from the Resource Center as will others, although not every client will visit the Resource Center every day and that travel will be spread through the day.

We assume that the Hospitality House shuttle will make an evening trip to and from the Resource Center. That would create two p.m. peak hour trips.

The Hospitality House guests and others with access to private automobiles will travel to and from destinations in the Grass Valley area all day, including the Resource Center. Assuming that the number of Resource Center clients that have automobile access is equal to 30% of the Hospitality House beds, then there could be 21 potential drivers each day. On public streets roughly 10% of the daily traffic typically falls into the p.m. peak hour, and for this assessment we have conservatively assumed that 25% of those with automobile access will make a trip leaving the Resource Center in the p.m. peak hour. This would be equivalent to 5 p.m. peak hour trips.

Trip Generation Forecast. The number of peak hour trips associated with the project has been totaled, and the results are also presented in Table 1. As shown, the two projects could generate 45 trips in the p.m. peak hour.

Conclusion. Because the projects' p.m. peak hour trip generation forecasts of 45 trips is less than the 63 trips screen line employed by the City of Grass Valley, we can conclude that its traffic impacts are not significant under CEQA, and no additional analysis is required.

Please feel free to contact me if you have any questions or need additional information.

Sincerely yours,

KD Anderson & Associates, Inc.



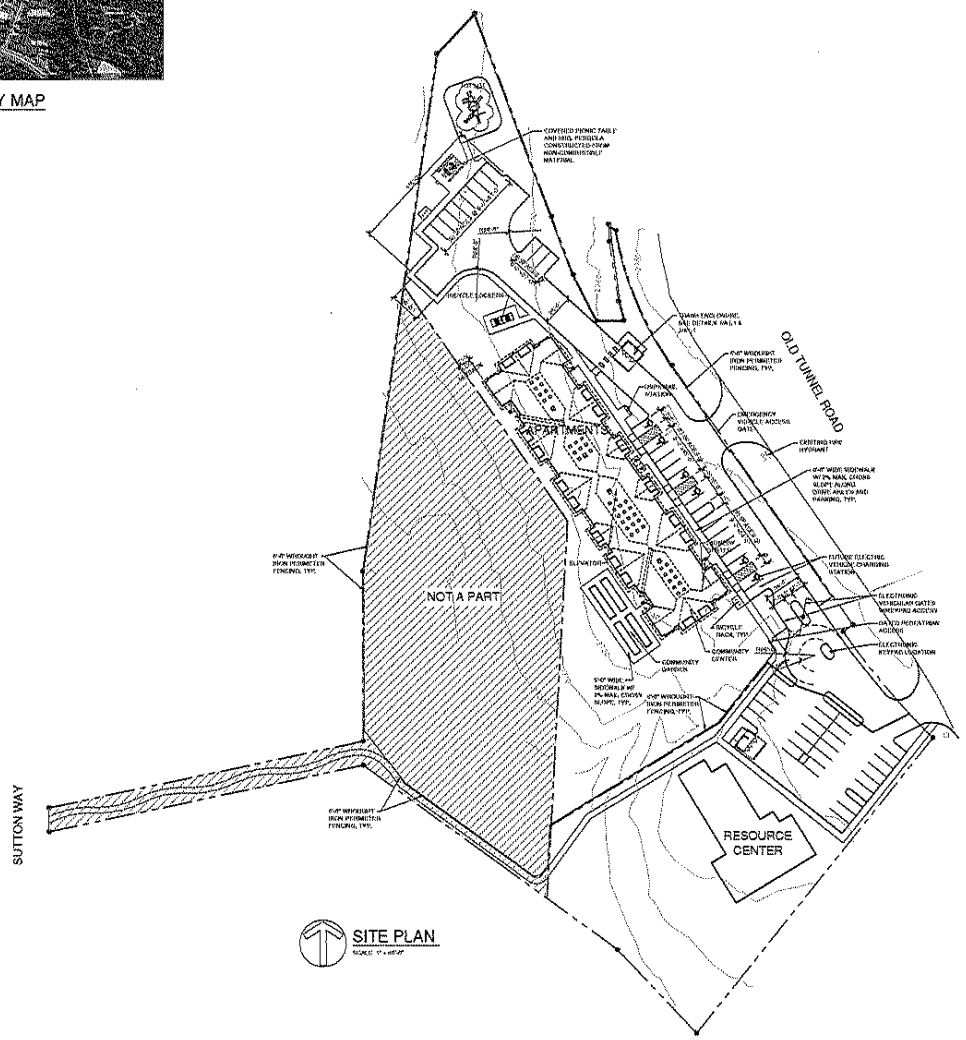
Kenneth D. Anderson, P.E.
President

Attachment: site plan

KDA



VICINITY MAP



SITE PLAN

OWNER
LINDSAY LAND DEVELOPMENT, LLC
CAMERON JOHNSON
P.O. BOX 940170
ENCINO, CA. 91409
(818) 574-0404

ARCHITECT
PACIFIC WEST ARCHITECTURE
SOUTHERN OREGON, CALIFORNIA ARCHITECT CENTER
4505 STATE STREET, SUITE 9G
EAGLE POINT, OR 97524
(541) 941-1007

APARTMENTS

ACCESSIBILITY	# OF UNITS	PERCENTAGE
ADAPTABLE UNITS (ALL GROUND FLOOR UNITS REQ.)	56	
ACCESSIBLE UNITS (10% TOTAL)	5	10.00 %
VISION IMPAIRED UNITS (4% TOTAL)	3	6.00 %

UNIT MIX SUMMARY		CONDITIONED SQ. FOOTAGES
(32) 1-BEDROOM UNITS	(32) @ 667 S.F. =	21,344 S.F.
(24) 2-BEDROOM UNITS	(24) @ 798 S.F. =	19,152 S.F.
(56) UNITS TOTAL	39,496 S.F. + 3,369 S.F. =	39,496 S.F.
COMMUNITY CENTER		3,595 S.F.
TOTAL		24,091 S.F.

PARKING SUMMARY

PROPOSED

1.5 SPACES / 1 UNIT = 41 * 1.5 = 59 SPACES

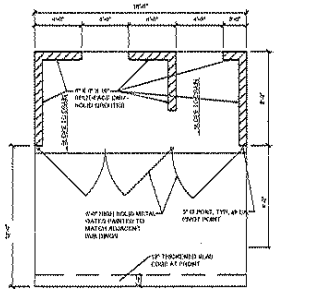
PROVIDED

22 SPACES + 4 ACCESSIBLE SPACES

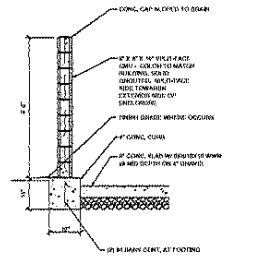
TOTAL PARKING SPACES PROVIDED = 26 SPACES

SITE DATA

39,116 SQ.F. / 0.89 ACRES
47.67 UNITS PER ACRE



1 TRASH ENCLOSURE
1/8" = 1'-0"



2 TRASH ENCLOSURE SECTION A-A
1/2" = 1'-0"

REVISIONS

DRAWN
GB

CHECKED
ANG/AMJ

PACIFIC WEST ARCHITECTURE

Pacific West Architecture
4505 STATE STREET, SUITE 9G
EAGLE POINT, OR 97524
(541) 941-1007

ALASKA - ARIZONA - CALIFORNIA - COLORADO - HAWAII - IDAHO - MONTANA - NEVADA - NEW MEXICO - OREGON - UTAH - WASHINGTON - WYOMING

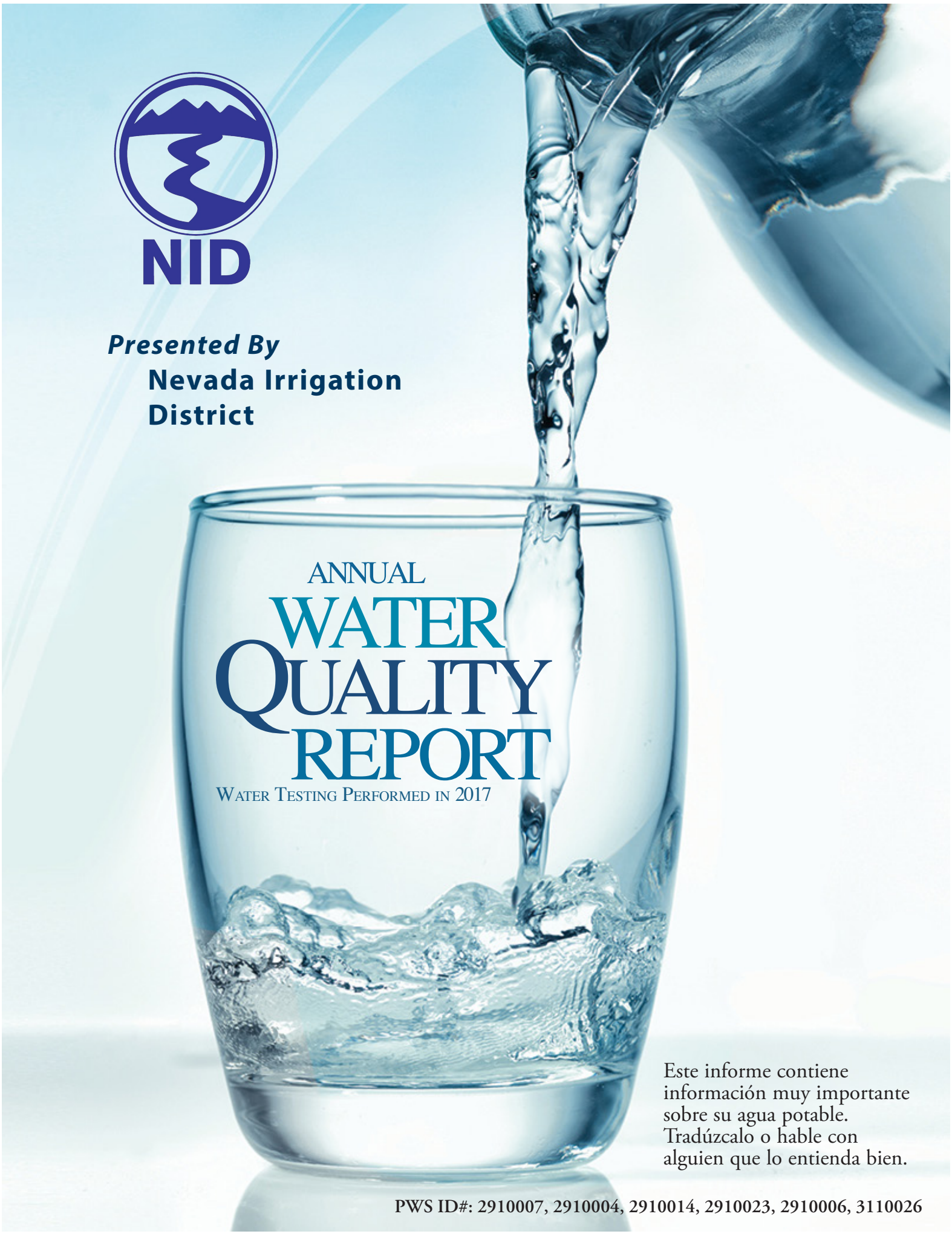
BRUNSWICK COMMONS

PROJECT
EXISTING ROAD

-A1.1

SCHEMATIC SET / NOT FOR CONSTRUCTION

Brunswick Commons - Apts



NID

Presented By

Nevada Irrigation District

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

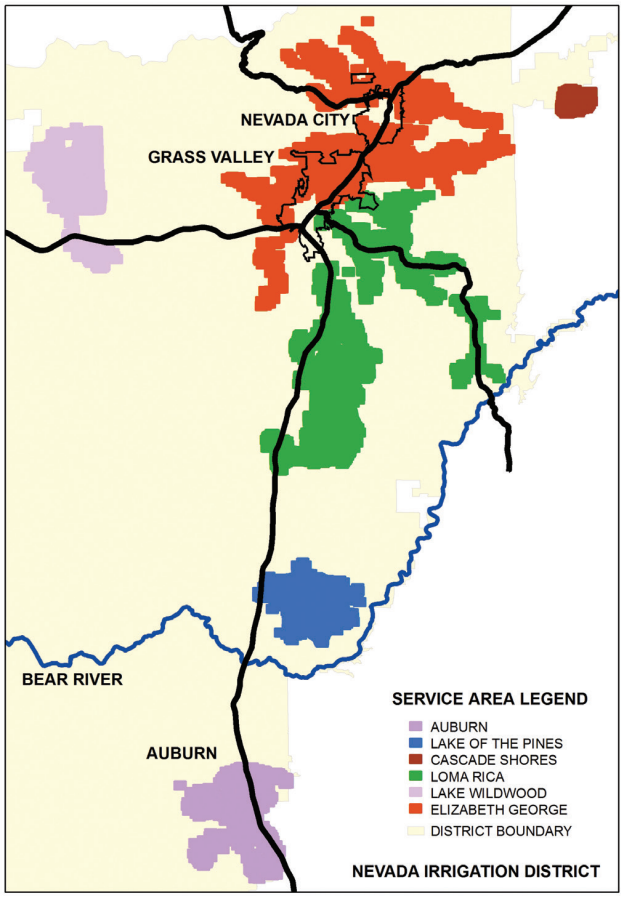
PWS ID#: 2910007, 2910004, 2910014, 2910023, 2910006, 3110026

Quality First

Once again we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Nevada Irrigation District Customers Served



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.



Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Water Quality Testing

Effective operation and maintenance of the drinking water distribution system assures that high-quality drinking water travels through the system to your meter. The residual chlorine in the water after treatment prevents re-growth of organisms during storage and transmission in the distribution system. Annual flushing of water mains and rotation of stored supplies also keep water fresh and limit growth of organisms. The district conducts weekly water quality testing in the distribution system to ensure that drinking water continues to meet state and federal requirements.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/lead.

NID Pledges Water Quality; Seeks Public Participation

The Board of Directors encourages public participation on issues concerning our water systems. District policy is set by the elected Board of Directors. Board meetings are held at 9 a.m. on the second and fourth Wednesdays of each month at the NID Business Center in Grass Valley. Check NID's Web site (www.nidwater.com) or call the Customer Service office at (530) 273-6185 to confirm meeting times.



Sierra Snowpack Is the Source of Your Water

NID treated and distributed more than 2.9 billion gallons of surface water last year. This water originates in the Sierra Nevada snowpack on five mountain watersheds. These include the Middle and South Yuba rivers, the Bear River, north fork of the North Fork American River, and Deer Creek.

Most of this water is routed through Lake Spaulding and transported to NID's water treatment plants via canal systems operated by NID and the Pacific Gas and Electric Company.



Source Water Assessment

In 2016 and 2017, NID teamed with the Placer County Water Agency and Starr Consulting to update its Source Water Susceptibility Assessment. This assessment describes the susceptibility and types of constituents that may come into contact with your drinking water source. The report confirmed that district watersheds have very low levels of contaminants. To a limited extent, those contaminants found are usually associated with wildlife and human recreational activity. Leading sources of potential contamination include highways, roadways, and railroads near rivers and raw water canals, septic tanks, unidentified utility pipelines crossing canals, recreation at upstream reservoirs, historic and active mining operations, and utility operations. This new assessment (Watershed Sanitary Survey 2017 Update) can be found on the NID Web site (http://nidwater.com/ybrwss-2017-update-final/).

QUESTIONS?

For additional water quality information, customers may contact NID Treated Water Superintendent Fred Waymire at the district office. In Nevada County, call (530) 273-6185.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

				Loma Rica		North Auburn		Cascade Shores			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2017	[4.0 (as Cl2)]	[4 (as Cl2)]	0.75	0.30–1.40	0.79	0.40–1.60	0.82	0.36–1.30	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2017	TT	NA	0.66	0.51–0.80	0.76	0.72–0.81	0.62	0.30–0.85	No	Various natural and man-made sources
Cryptosporidium (Oocysts/L)	2017	Surface water treatment=TT	HPC=NA; Others = (0)	ND	NA	0.0076[1]	0–0.09[1]	ND[1]	NA[1]	No	Naturally present in the environment
E. coli (Positive samples)	2017	see footnote 2	(0)	0	NA	0	NA	0	NA	No	Human and animal fecal waste
Haloacetic Acids (ppb)	2017	60	NA	20.4	10.0–33.0	14.63	10.0–18.0	24.0	16.0–34.0	No	By-product of drinking water disinfection
Hexavalent Chromium[3] (ppb)	2017	NS	0.02	ND	NA	0.058	NA	0.090	NA	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	34.6	14.0–64.0	33.6	26.0–41.0	28.88	17.0–52.0	No	By-product of drinking water disinfection
Total Coliform Bacteria (Positive samples)	2017	TT	NA	0	NA	0	NA	0	NA	No	Naturally present in the environment
Turbidity[4] (NTU)	2017	TT	NA	0.027 average	0.02–0.25	0.046 average	0.02–0.25	0.043 average	0.02–0.28	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100%	NA	100%	NA	100%	NA	No	Soil runoff

REGULATED SUBSTANCES

				Elizabeth George		Lake Wildwood		Lake of the Pines			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2017	[4.0 (as Cl2)]	[4 (as Cl2)]	0.82	0.65–1.05	0.82	0.52–1.50	0.82	0.28–1.40	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2017	TT	NA	0.63	0.34–0.85	0.93	0.60–1.20	0.88	0.84–0.96	No	Various natural and man-made sources
Cryptosporidium (Oocysts/L)	2017	Surface water treatment=TT	HPC=NA; Others = (0)	0.01	0.0–0.093	0.0884[1]	0.0–0.74[1]	0.0266[1]	0.0–0.036[1]	No	Naturally present in the environment
E. coli (Positive samples)	2017	see footnote 2	(0)	0	NA	0	NA	0	NA	No	Human and animal fecal waste
Haloacetic Acids (ppb)	2017	60	NA	16.98	5.7–34.0	22.25	12.0–36.0	21.25	16.0–26.0	No	By-product of drinking water disinfection
Hexavalent Chromium[3] (ppb)	2017	NS	0.02	0.090	NA	0.061	NA	0.12	NA	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Elizabeth George AMOUNT DETECTED	Elizabeth George RANGE LOW-HIGH	Lake Wildwood AMOUNT DETECTED	Lake Wildwood RANGE LOW-HIGH	Lake of the Pines AMOUNT DETECTED	Lake of the Pines RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	30.19	13.0–62.0	39.13	22.0–67.0	39.75	31.0–48.0	No	By-product of drinking water disinfection
Total Coliform Bacteria (Positive samples)	2017	TT	NA	0	NA	0	NA	0	NA	No	Naturally present in the environment
Turbidity[4] (NTU)	2017	TT	NA	0.043 average	0.02–0.28	0.038 average	0.02–0.13	0.038 average	0.02–0.20	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100%	NA	100%	NA	100%	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	Loma Rica AMOUNT DETECTED (90TH%TILE)	Loma Rica SITES ABOVE AL/TOTAL SITES	North Auburn AMOUNT DETECTED (90TH%TILE)	North Auburn SITES ABOVE AL/TOTAL SITES	Cascade Shores AMOUNT DETECTED (90TH%TILE)	Cascade Shores SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.11[5]	0/30[5]	0.077	0/20	0.091[6]	0/10[6]	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	0[5]	0/30[5]	0	0/20	0[6]	0/10[6]	No	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	Elizabeth George AMOUNT DETECTED (90TH%TILE)	Elizabeth George SITES ABOVE AL/TOTAL SITES	Lake Wildwood AMOUNT DETECTED (90TH%TILE)	Lake Wildwood SITES ABOVE AL/TOTAL SITES	Lake of the Pines AMOUNT DETECTED (90TH%TILE)	Lake of the Pines SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	0.3	0.053[5]	0/30[5]	0	0/20	0.071	0/20	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2017	15	0.2	0[5]	0/30[5]	0	0/20	0	0/20	No	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Loma Rica AMOUNT DETECTED	Loma Rica RANGE LOW-HIGH	North Auburn AMOUNT DETECTED	North Auburn RANGE LOW-HIGH	Cascade Shores AMOUNT DETECTED	Cascade Shores RANGE LOW-HIGH	Elizabeth George AMOUNT DETECTED	Elizabeth George RANGE LOW-HIGH	Lake Wildwood AMOUNT DETECTED	Lake Wildwood RANGE LOW-HIGH	Lake of the Pines AMOUNT DETECTED	Lake of the Pines RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2017	200	NS	51	NA	ND	NA	ND	NA	ND	NA	ND	NA	110	NA	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2017	500	NS	2.4	NA	2.0	NA	2.8	NA	2.8	NA	3.7	NA	3.8	NA	No	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2017	50	NS	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	17	0–37	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2017	1,600	NS	52	NA	69	NA	63	NA	63	NA	96	NA	76	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2017	500	NS	8.6	NA	8.9	NA	6.4	NA	6.4	NA	12.0	NA	10	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2017	1,000	NS	41.0	NA	32	NA	33	NA	33	NA	60	NA	44	NA	No	Runoff/leaching from natural deposits

OTHER SUBSTANCES

		Loma Rica		North Auburn		Cascade Shores		Elizabeth George		Lake Wildwood		Lake of the Pines	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Alkalinity (ppm)	2017	11	NA	12	NA	11	NA	11	NA	20	NA	14	NA
Calcium (ppm)	2017	3.0	NA	2.8	NA	5.4	NA	5.4	NA	3.9	NA	7.5	NA
Hardness [as CaCO3] (ppm)	2017	8.8	NA	9.8	NA	15	NA	15	NA	15	NA	23	NA
pH (Units)	2017	7.3	NA	7.4	NA	7.4	NA	7.4	NA	8.1	NA	7.4	NA
Sodium (ppm)	2017	7.3	NA	7.1	NA	3.1	NA	3.1	NA	11	NA	3.2	NA

[1] Sampled in 2010.
[2] MCL: Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.
[3] There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.
[4] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
[5] Sampled in 2015.
[6] Sampled in 2016.



Definitions

AL (Regulatory Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Western Sierra Medical Clinic
Better Health Together

Grass Valley

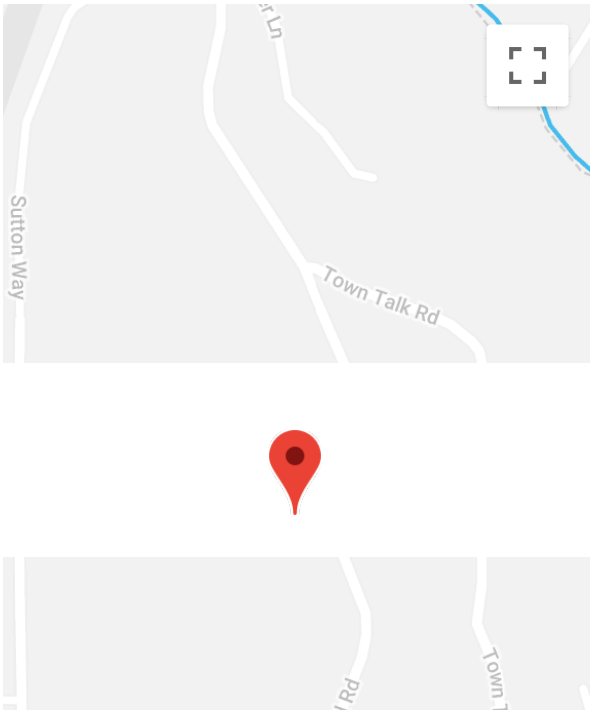
Location

844 Old Tunnel Road
Grass Valley, CA 95945

Medical, Dental, Pediatrics, Behavioral and Maternity Health

Phone: 530-274-WSMC (9762)

Fax: 530-273-7255: FAX



Appointments

Medical: Monday – Friday, 7 am – 5 pm
Dental: Monday – Friday, 8:30 am – 4 pm

Pharmacy: Monday – Friday, 9 am – 5:30 pm
Closed 1 – 1:30 pm

Phone: 530-273-0182

Fax: 530-273-0698

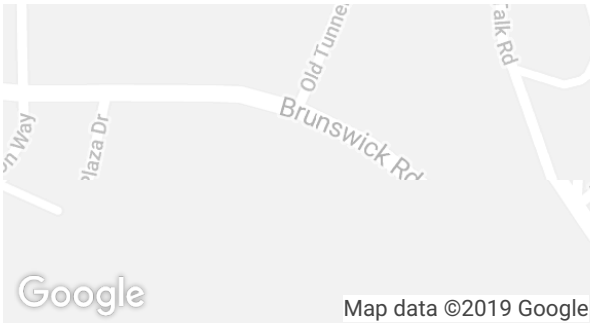
Lab: Monday – Friday, 8 am – 4:30 pm
Last patient seen at 4:15pm; closed 12:30-1:15pm
(530) 272-7898 for information only — no appointments



Urgent Care

Monday-Saturday
8 am-5 pm
(subject to
provider availability)

Last patient check-in for the day is 4:30 pm



Western Sierra Medical Clinic
Better Health Together

Public Notice

This health center receives HHS funding and has Federal Public Health Service (PHS) deemed status with respect to certain health or health-related claims, including medical malpractice claims, for itself and its covered individuals.

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Grass Valley, CA

Sierra Nevada Memorial Hospital

Open 24 Hours

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155 Glasson Way
Grass Valley, CA 95945

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Featured Services

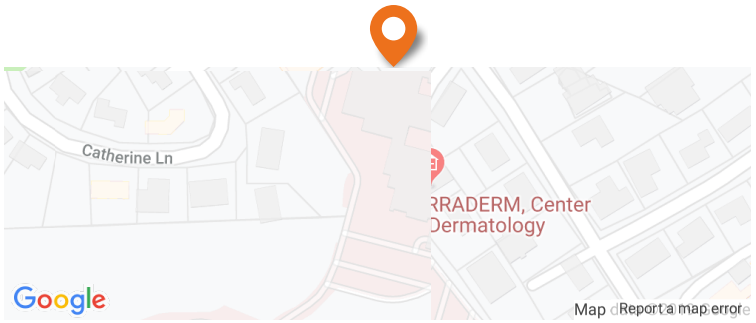
Heart and Vascular Care

Neurological Care

Cancer Care

Emergency Department

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About Sierra Nevada Memorial Hospital

Sierra Nevada Memorial Hospital is a hospital that offers many services, including heart and vascular care, neurological care, and cancer care. Visit Sierra Nevada Memorial Hospital located at 155 Glasson Way, Grass Valley, CA. This Grass Valley hospital is one of the best in California. As part of the Dignity Health network, Sierra Nevada Memorial Hospital is dedicated to delivering high quality, compassionate care and access to Grass Valley and nearby communities.

dignityhealth.org

Services at Sierra Nevada Memorial Hospital

Cancer Care

Emergency Department

Heart and Vascular Care

Neurological Care

Orthopedics

Women's Health

Locations Close to Sierra Nevada Memorial Hospital

Ambulatory Treatment Center

0.0 mi

Open until 5:00 PM

(530) 274-6626

155 Glasson Way
Building 3
Grass Valley, CA 95945

Emergency Room - Sierra Nevada Memorial Hospital

0.0 mi

Open 24 Hours

(844) 337-2245

155 Glasson Way
Grass Valley, CA 95945

SNMH Community Cancer Center

0.0 mi

Open until 4:30 PM

(530) 390-6347

155 Glasson Way
Building 3
Grass Valley, CA 95945

Sierra Nevada Memorial Hospital Cardiac Rehabilitation

0.0 mi

Open until 4:30 PM

(530) 274-6103

155 Glasson Way
Building 3
Grass Valley, CA 95945

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