

# INITIAL STUDY and ENVIRONMENTAL CHECKLIST

FOR

## ALDERPOINT ROAD TANK REPLACEMENT PROJECT GARBERVILLE SANITARY DISTRICT



**Lead Agency:**  
**Garberville Sanitary District**  
**919 Redwood Drive**  
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**Garberville, California 95542**

**May 2013**

**Prepared by:**

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**LACO Project No. 7714.00**

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# **I. PROJECT SUMMARY**

**Date:** May 2013

**Project Title:** Alderpoint Road Tank Replacement Project

**Lead Agency:** Garberville Sanitary District

**Contact:** Jennie Short  
Capital Projects Manager  
(707) 923-9566

**Location:** Garberville, Humboldt County, California

**Coastal Zone:** No

**Affected Parcel:** 223-181-009

## **Humboldt County Zoning (Existing)**

According to Humboldt County WebGIS, (as of February 14, 2013) the affected parcel is zoned AE-B-6 (Agriculture Exclusive and Special Building Site Combining Zone). According to Humboldt County Zoning Regulations, a water storage tank is a principally-permitted use in the AE-B-6 zone, under the category of Civic Use, Essential Services. The B-6 Special Building Site Combining Zoning designation is not relevant for the current use of the site because that zoning designation refers to modified requirements for lot area and yards of residential parcels.

## **Humboldt County General Plan Designation (Existing)**

According to Humboldt County WebGIS, (as of February 14, 2013) the general plan land use designation for the affected parcel is AR (GRBAP) (Agricultural Rural-1987 Garberville-Benbow-Redway-Alderpoint Community Plan). The character and use of the parcel for water storage and transmission are compatible with the Humboldt County General Plan.

## **Anticipated Permits and Approvals**

As a public facility, construction of the water tank and the grading associated with construction of the tank are exempt from Humboldt County building permit and grading permit requirements and Humboldt County Planning Division permit requirements (California Government Code Section 53091).

A grading permit may be required for improvements to the access driveway and parking area unless the improvements meet the criteria for exemption described in the Humboldt County Grading, Excavation, Erosion and Sedimentation Control Ordinance (Title III, Land Use and Development; Division 3, Building Regulations Section 331-12). For exemption, the excavation must meet the following requirements:

- Be less than 2 feet deep
- Be less than 50 cubic yards
- Not obstruct a drainage course or encroach on a wetland

An encroachment permit will be needed from Humboldt County Public Works Department for work within the County's right-of-way.

Because the new tank will have a capacity greater than 100,000 gallons, a Water Supply Permit from the California Department of Public Health (CDPH) will be required (Section 64556 of the California Water Works Standards, California Code of Regulations, Title 22). It may be possible to amend an existing Water Supply Permit or submit a combined Water Supply Permit for a concurrent District project. (Per personal communication on May 10, 2013, with CDPH Klamath District Engineer, Tony Wiedemann).

The State Water Resources Control Board, North Coast Regional Water Quality Control Board, and California Department of Public Health will be involved in this project as regulating agencies. The County of Humboldt will be a responsible reviewing agency. The following is a list of agencies with some reviewing or permitting authority:

- Garberville Sanitary District Board of Directors
- County of Humboldt
  - Public Works Department
  - Department of Health and Human Services, Public Health Branch
  - Planning and Building Department
  - Planning Commission
  - Board of Supervisors
- Local Agency Formation Commission (LAFCO)
- California Regional Water Quality Control Board (CRWQCB)
- California Department of Fish and Wildlife (DFW)
- U. S. Army Corps of Engineers (USACE)
- California Department of Public Health (CDPH)

### **CEQA Requirement**

This project is subject to the requirements of the California Environmental Quality Act (CEQA). The Lead Agency is Garberville Sanitary District. The purpose of this Initial Study (IS) is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration. This IS is intended to satisfy the requirements of CEQA (Public Resources Code, Div 13, Sec 21000-21177) and State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).



CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts (CEQA Section 20180[c] [2] and State CEQA Guidelines Section 15070[b] [2]).

Section 15063(d) of State CEQA Guidelines states that an IS shall contain the following information in brief form:

- A description of the project including the project location
- Identification of the environmental setting
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries
- Discussion of means to mitigate significant effects identified, if any
- Examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls
- The name of the person or persons who prepared and/or participated in the Initial Study

## **II. PROJECT DESCRIPTION**

### *Summary*

Garberville Sanitary District (GSD) is located in the community of Garberville, a census-designated place in unincorporated Humboldt County, California. Garberville is approximately 65 miles south of Eureka, California and approximately 200 miles north of San Francisco. The project site is approximately 1.7 miles northeast of the center of Garberville, on the north side of Alderpoint Road. The project consists of the replacement of an existing water tank (“Alderpoint Road Tank” or “existing tank”) with a new water tank in the same location (on the footprint of the existing tank). The specific location of the tank is depicted on Figure 1: *Project Location Map* and Figure 2: *Parcel Map*.

The capacity of the existing tank is 30,000 gallons (SHN Consulting Engineers & Geologists, Inc., 2013). The tank is made of redwood and was built in the mid-1970s as a part of the Meadows Subdivision, Unit 1, Phase 1 (per personal communication on January 21, 2013, with Garberville Sanitary District Capital Projects Manager, Jennie Short). The existing tank leaks at the rate of approximately 6-12 gallons per minute (Kassel, 2013). The District proposes to construct a new 200,000-gallon tank made of coated steel painted earth tone or forest green color and with an aluminum dome roof. (See Table 1, Comparison of Existing Tank with New Tank, below).

The existing tank sits on an 18 foot by 18 foot concrete pad, which is on the top of a small knoll that is sloped away from the tank in all directions for efficient drainage. The site is not fenced (see Figure 3: *Unfenced Access to Existing Water Tank*). After the existing tank and the concrete pad are removed, the site will be excavated approximately 4 feet and graded to create a flat base. A new, 40 foot by 40 foot concrete pad will be poured on-site and the new tank will be installed. A new, 8-foot high, green or black, cyclone security fence and gate will be installed around the tank. Because the new tank will be wider than the existing tank, it will have a slightly larger footprint, extending over the existing footprint to the north and east. The existing tank is surrounded by mature trees and vegetation that enhance visual screening from view from Alderpoint Road and adjoining parcels (see Figure 4: *Google Earth Aerial Alderpoint Road Water Tank*). The wider footprint of the new tank, as well as the need for access during construction, will necessitate removal of several trees, estimated to be between 10 and 20, depending on the final site design.

Table 1: Comparison of Existing Tank with New Tank

	Existing Tank	New Tank	Difference
Capacity	30,000 gallons	200,000 gallons	170,000 gallons
Diameter	18 feet	40 feet	22 feet
Side water depth	17 feet	20 feet	3 feet
Approx. Height	18 feet	23-24 feet	1-2 feet (due to excavation)
Material	Redwood	Coated steel, painted earth tone or forest green color, with an aluminum dome roof.	N/A
Base	18 ft. x 18 ft. concrete pad	40 ft. x 40 ft. concrete pad	1,276 square feet
Security fence and gate	None	Green or black cyclone	N/A

Access to the site is via Alderpoint Road at an unmarked, unpaved, roadside pull-out, which also serves as a parking area for maintenance vehicles (see Figure 5: *Roadside Pull-Out and Parking Area*). The pull-out area is approximately 1,000 square feet. On the northwest side of the pull-out, a short, narrow, existing, graded access driveway continues uphill for approximately 100 feet to the water tank. Improvements to the roadside pull-out and unpaved access drive will be completed to facilitate the tank replacement. Improvements to the pull-out and access drive will result in better access during construction, as well as during long-term operations and maintenance.

The replacement of the tank will prevent the continued loss of water resources caused by the leak, as well as increase reliability and redundancy for domestic water use and fire flows. The project is not motivated by anticipated population growth. The primary upper constraint to the District's water system capacity is the limited water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River. The permit will remain in place and appropriation rights will not increase.

*Description of the Leak*

The tank has been leaking at the rate of approximately 6-12 gallons per minute for an unknown length of time (Kassel, 2013). The *Alderpoint Road Tank Supplemental Project Report* (Appendix A) noted that the signs of erosion in the drainage away from the tank indicated that the tank has been continually leaking over time and accounted for a considerable loss of water from the system. Prior to pursuing the replacement of the tank, the District contracted with divers to attempt to repair it; however, it became evident that the tank could not be repaired (SHN Consulting Engineers & Geologists, Inc., 2013).

The water stored at the Alderpoint Road Tank is normally drawn from the South Fork Eel River intake, treated at the existing surface water treatment plant, passed through the system's transmission lines, and pumped uphill via multiple booster stations. The Alderpoint Road Tank can also be filled from the Tobin Well (a shallow groundwater well owned and operated by GSD).

#### *Alderpoint Road Tank Replacement Project*

The District contracted with SHN Consulting Engineers and Geologists (SHN) to perform a feasibility study and scoping efforts necessary to determine the parameters of the project and verify that there are no known geological constraints that would preclude the District from locating a replacement tank on the existing site. On November 2, 2012, SHN conducted a site-evaluation visit with engineering, geotechnical, and environmental staff. The results of the study were documented in the *Alderpoint Road Tank Supplemental Project Report* (Appendix A), which concludes that it is feasible to replace the tank on the existing site and the estimated cost of the project is approximately \$500,000 (SHN Consulting Engineers & Geologists, Inc., 2013).

After the existing tank and the 18 foot by 18 foot concrete pad are removed, the site will be excavated approximately 4 feet and graded to create a flat base. A new concrete pad will be poured on-site and the new tank will be installed. A new 8-foot high green or black cyclone security fence and gate will be installed. The expected dimensions of the tank are approximately 40 feet in diameter, 20 feet side water depth and 23 to 24 feet in height. Due to the excavation of the site, the difference in height between the existing tank and the new one will be minimal. As the new tank will be wider than the existing tank, it will have a slightly larger footprint, extending over the existing footprint to the north and east. The wider footprint of the new tank, as well as the need for access during construction, will necessitate removal of several trees, estimated to be between 10 and 20, depending on the final site design. A plan for replacing the removed trees is described as a Mitigation Measure under Aesthetics (AESTHETIC-2).

There are currently two telephone lines, used for telemetry, that are attached to the top of the existing tank. The lines will be reattached to the new tank. The new tank will have a check valve, which will allow water to be added to the top of the tank and drawn from the bottom, and reversed, as needed. This improvement will aid in achieving a more uniform distribution of chlorine throughout the tank.

During construction a temporary method for providing water to approximately seven houses will need to be implemented. Measures for the temporary provision of water will be implemented prior to any disruption of existing services. These seven houses receive their water directly from the line that provides water to the existing tank. To complete the tank replacement project, the existing tank will be disconnected and removed. A plan to provide for the water needs of these residences during the removal and replacement will be addressed by Mitigation Measure UTILITIES-1.

Existing traffic associated with the project site is generally limited to site maintenance. Currently, access to the site is via Alderpoint Road at an unmarked, unpaved, roadside pull-out, which also serves as a parking area for maintenance vehicles (see Figure 5: *Roadside Pull-Out and Parking Area*). The pull-out area is approximately 1,000 square feet. On the northwest side of the pull-out, a short, narrow, existing, graded access driveway continues uphill for approximately 100 feet to the water tank. The pull-out and access driveway are both in functional condition; however, where the unpaved pull-out meets the asphalt of Alderpoint Road there is a sharp change in grade. To accommodate construction traffic and to create reliable future access for maintenance vehicles, this area will require minor improvements, including approximately 30 cubic yards of compacted base rock/gravel to match the adjacent edge of Alderpoint Road. The short access driveway leading from the pull-out to the water tank site will be widened from 3 feet to approximately 6-8 feet to improve access. Improvements to the pull-out and access drive will result in better access during construction, as well as during long-term operations and maintenance.

*Background: Garberville Sanitary District History, Current District System Description, Related Improvements, and Water System Deficiencies*

It should be noted that an unrelated water system improvement project (Garberville Sanitary District's Drinking Water Improvement Project) is currently under construction. The purpose of that project is to make a substantial contribution towards the District's goal of providing increased storage capacity and improving the distribution system. LACO Associates prepared the CEQA *Initial Study and Environmental Checklist for Garberville Sanitary District Water System Improvement Project* in April 2010. Construction is anticipated to be completed by the end of 2014.

If funded and constructed, Garberville Sanitary District's Drinking Water Improvement Project would include four main improvements:

1. Upgrade of the raw water intake facility
2. Demolition of the existing surface water treatment plant (SWTP)
3. Construction of a new surface water treatment plant (SWTP)
4. Construction of new piping
  - a. A 6-inch-diameter raw water distribution main from the intake to the new SWTP;
  - b. An 8-inch-diameter finished water main from the new SWTP to the Kimtu waterline in Sprowel Creek Road;
  - c. An 8-inch-diameter finished water main between the Kimtu waterline in Sprowel Creek Road near the U.S. Highway 101 off-ramp to the existing 8-inch-diameter finished waterline in the Sprowel Creek Road/Redwood Drive intersection; and
  - d. A finished waterline at the existing main storage tank located on the Hurlbutt property to replace the waterline that runs beneath the Hurlbutt residence.

As described in the *CEQA Initial Study and Environmental Checklist for Garberville Sanitary District Water System Improvement Project (LACO, April 2010)*, the District has determined that its community water system requires improvement to achieve an adequate level of service reliability. The current system lacks sufficient storage, which increases vulnerability to service interruptions under a number of circumstances, including power failure, temporary increases in source water turbidity, and equipment maintenance or failure. California Department of Public Health (CDPH) Drinking Water Regulations require public water systems with less than 1,000 service connections to have storage capacity equal to or greater than the maximum day demand (MDD), unless the system can demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement. CDPH determines Water Works Standards, which are codified in Title 22 of the California Code of Regulations. MDD means the amount of water utilized by consumers during the highest day of use (midnight to midnight), excluding fire flow, as determined pursuant to Section 64554.

To evaluate the District's storage capacity deficit, the total current storage capacity (260,000 gallons) must be subtracted from the maximum day dry weather (MDDW) demand. During the late 1990s through 2004, the recorded water usage exceeded 400,000 gallons per day on several occasions. Historical data indicates a MDDW demand of 427,780 gallons recorded in August 1999. In recent years, an MDDW demand of 338,000 gallons was recorded in July 2006 and an MDDW of 321,000 gallons was recorded in August 2010. In 2012, the District connected an additional 20 residential services in the Kimtu area. The MDDW demand recorded during August 2012 was 319,000, the lowest recorded MDDW demand (SHN Consulting Engineers & Geologists, Inc., 2013).

Using the lowest (319,000 in 2012) and highest (427,780 gallons in 1999) MDDW records, the District's system is operating at a deficit of between 74,000 and 182,780 gallons of storage capacity. The new Alderpoint Road storage tank will have a capacity of 200,000 gallons, an increase of 170,000 gallons.

The District has permits to allow water diversion from the South Fork Eel River at a maximum rate of 80 million gallons per year which will be adequate to meet the MDD. Replacement of the Alderpoint Road Tank will make a substantial contribution towards the District's goal of providing adequate storage capacity.

#### *Garberville Sanitary District History and Current Water System Conditions*

The following information is from the *Garberville Sanitary District Municipal Service Review* (Humboldt LAFCo (Local Agency Formation Commission), 2013).

*The Garberville Sanitary District currently provides the following services:*

- o Wastewater Collection, Treatment, and Disposal; and*
- o Water Treatment and Distribution*

*The Garberville Sanitary District was formed by the Humboldt County Board of Supervisors on April 12, 1932, pursuant to the Sanitary District Act of 1923, after a majority vote was cast in a general election. The District was originally formed for the purpose of providing sanitary sewer services as specified under Health and Safety Code Section 6400 et seq.*

*In 2004, the community voted to acquire the assets of the Garberville Water Company (GWC), a private water system owned by the Hurlbutt family. The Garberville Sanitary District Board of Directors approved the provision of water service within its jurisdictional boundary, on July 13, 2004, by Resolution 2004-02 (on file with Humboldt LAFCo). The sale of the GWC to the District was effective November 18, 2004. The District began operating the system on November 18, 2004 and started monthly billings. The District has owned, operated, maintained, and managed the water system ever since.*

*The California Department of Public Health issued the Garberville Sanitary District a Domestic Water Supply Permit #01-01-11(P)-004 to be effective on December 27, 2004. In addition, the California Public Utilities Commission (CPUC), in their power to regulate the GWC as a privately held utility provider, issued an Order that the GWC could be sold to the Garberville Sanitary District on November 30, 2006. The GWC Permit and License from the State Water Resources Control Board (State Water Board) Division of Water Rights was transferred to the District.*

*The water system consists of two water sources, a treatment plant, four water tanks, three booster stations, approximately 420 active water service connections, and a waterline distribution network. One of the water sources is surface water from the South Fork of the Eel River and one is a shallow well in downtown Garberville. The surface water source is regulated by the California Surface Water Treatment Rules and Regulations.*

*The South Fork of the Eel River Infiltration Gallery provides collection of the main water source. It was originally installed in 1940. The infiltration gallery has one 6-inch, 320-gpm, 50-HP submersible pump that was installed in November 2009 and was replaced in November 2012. The pump operates against an approximate 380 feet differential elevation head. The pump discharges to the water treatment plant adjacent to the 160,000-gallon main storage tank. The pressure filter in the water treatment plant has a limited capacity of 250 gpm. Over the past five years, the treatment plant processed between 55 and 65 million gallons of water each year. The largest year on record was shown on the 1999 Annual Progress Report submitted by the GWC to the State Water Resources Control Board, which showed 80 million gallons of water processed.*

*The District holds a water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork of the Eel River. The permit is number 20789. This permit allows the District to divert a maximum of 0.595 cubic feet per second (267 gpm) from the river, year round. The District also has a fixed license that allows the District to divert an additional 0.155 cfs. The total maximum instantaneous diversion allowed is 0.75 cfs (336 gpm). This would equate to a maximum daily diversion of approximately 484,700 gallons and 177 million gallons per year, if adequate pumps and treatment facilities were available.*

*The Tobin Well is the only subsurface water source and it has a limited capacity of 40 to 70 gpm. There is substantial draw down during sustained pumping. The District is evaluating the replacement of the pump with a duplex pumping system.*  
(Humboldt LAFCo (Local Agency Formation Commission), 2013)



### **III. PROJECT SETTING AND LOCATION**

A brief overview of existing environmental conditions is presented below. Additional information about the setting is presented in the environmental checklist, as necessary for discussion of each item.

The District is located in the community of Garberville, a census-designated place in unincorporated Humboldt County, California. Garberville is approximately 65 miles south of Eureka, California and approximately 200 miles north of San Francisco. The project site is approximately 1.7 miles northeast of the center of Garberville, on the north side of Alderpoint Road. The specific location of the tank is depicted on Figure 1: *Project Location Map* and Figure 2: *Parcel Map*.

Listed below are basic details about the affected parcel:

- Assessor's Parcel Number: 223-181-009
- Property Address: 1081 Alderpoint Road, Garberville, California 95542-9407
- Owner Names: Kenneth & Meredith Wallan (per [www.parcelquest.com](http://www.parcelquest.com) accessed May 29, 2013). District staff have indicated that escrow has been opened to transfer the site to District ownership (per personal communication on May 28, 2013, with Garberville Sanitary District Capital Projects Manager, Jennie Short).
- Mailing Address: Post Office Box 211, Garberville, California 95542
- Acres: 2.07

#### ***Surrounding Land Uses***

The project site is located in southern Humboldt County, California, approximately 1.7 mile northeast of the center of the Town of Garberville. Site elevation is approximately 800 feet above mean sea level. The project site lies within the Coast and Interior Coast Ranges, consisting of many small mountain ranges, forests, rivers, creeks, and streams. Many of the ridges are steep and wooded while the valleys are flat and broad. The interior of the Eel River sub-region is usually beyond the reach of coastal fog and is subject to drought during the hot, dry summer months; the winter season is characterized as mild and rainy. Recent historical land uses in the surrounding area include timber harvest, gravel mining, and tourism.

According to Humboldt County WebGIS, (as of February 14, 2013) the general plan land use designation for the affected parcel is AR (GRBAP) (Agricultural Rural-1987 Garberville-Benbow-Redway-Alderpoint Community Plan). The character and use of the parcel for water storage and transmission are compatible with the Humboldt County General Plan. The character and use of the parcel for water storage and transmission are compatible with the Humboldt County General Plan. The three parcels adjacent to the west and south have the same land use designation as the subject parcel, Agricultural Rural. The two parcels to the north and east have the land use designation Rural Residential. The nearest residences are approximately 500 feet down a steep hill from the project site. There is currently no other known type of development nearby.

According to Humboldt County WebGIS, (as of February 14, 2013) the affected parcel is zoned AE-B-6 (Agriculture Exclusive and Special Building Site Combining Zone). According to Humboldt County Zoning Regulations, a water storage tank is a principally-permitted use in the AE-B-6 zone, under the category of Civic Use, Essential Services. The B-6 Special Building Site Combining Zoning designation is not relevant for the current use of the site because that zoning designation refers to modified requirements for lot area and yards of residential parcels.

### ***Flora and Fauna***

Mixed coniferous and hardwood forests dominate the area around the Town of Garberville. Douglas-fir and redwoods are the dominant coniferous species while the hardwood component consists largely of black oak, pacific madrone, and tan oak. Grasslands occur in forest openings and include alien and native grasses and forbs. Riparian vegetation such as arroyo willow and red alder border the river and its associated drainages. Common invasive species in the area include Himalayan blackberry, silver wattle, and broom.

In general, animals that frequent the above-described vegetation communities include a variety of large and small mammals, waterfowl, various fish species, and invertebrate resources. The variety of fauna is dependent upon the vegetation communities present. The large and small mammals that are often found near lake, river, and pond margin environments include the following: mule deer, black-tailed deer, black bear, mountain lion, coyote, bobcat, ground squirrel, cottontail, jack rabbit, kangaroo rat, and ringtail. Birds include turkey vulture, eagle, hawk, owl, heron, mourning dove, mockingbird, scrub jay, western meadowlark, finch, and sparrow.

Section IV. Biological Resources of this Initial Study was prepared by the project biologist and contains a more detailed description of the project site and area biological resources.

### ***Geology***

The Coast Range is mapped as Mesozoic sedimentary and meta-sedimentary rocks, primarily of the Franciscan Complex which dates to the Cretaceous and Jurassic periods, containing sandstone with small amounts of shale, chert, limestone, conglomerate and serpentines with blue schist, or eclogite scattered above it. The tank is situated on the crest of a sinuous ridgeline. The slopes are underlain by Pleistocene- to Miocene-aged sediments of the Wildcat Formation. There is no fault mapped at the tank; however, the tank is within the Garberville fault zone, an area of inactive fault strands. Near the tank, slopes are hummocky and appear to have been disrupted by previous logging operations (skid road grading). There are no active slope failures immediately adjacent to the tank (SHN Consulting Engineers & Geologists, Inc., 2013).

## **IV. ENVIRONMENTAL EFFECTS**

With the recommended Mitigation Measures, no significant adverse effects are expected from any of the proposed activities. Following this section is an environmental checklist which addresses all potential adverse effects and recommends mitigations to ensure that significant impacts to the environment do not occur as a result of this project. The following Mitigation Measures have been added to the project to prevent or reduce potential environmental impacts. These measures, described in the environmental checklist explanatory notes, are listed here for ease of reference. The numbers are keyed to the environmental checklist.

- AESTHETIC-1
- AESTHETIC-2
- AIR-1
- BIO-1
- CULT-1
- CULT-2
- GEO-1
- HYDRO-1 (see GEO-1)
- NOISE-1
- TRAFFIC-1
- UTILITIES-1

## V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “**Potentially Significant Impact**” or “**Less Than Significant with Mitigation Incorporation**” as indicated by the checklist on the following pages.

X	Aesthetics		Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Geology and Soils
	Green House Gas Emissions		Hazards and Hazardous Materials	X	Hydrology and Water Quality
	Land Use and Planning		Mineral Resources	X	Noise
	Population and Housing		Public Services		Recreation
X	Transportation/Traffic	X	Utilities and Service Systems		Mandatory Findings of Significance

An explanation for all checklist responses is included, and all answers take into account the whole action involved, including off-site as well as on-site; cumulative as well as project-level; indirect as well as direct; and construction as well as operational impacts. The explanation of each issue identifies (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. In the checklist the following definitions are used:

**Potentially Significant Impact** means there is substantial evidence that an effect may be significant.

**Less Than Significant with Mitigation Incorporation** means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

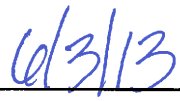
**Less Than Significant Impact** means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

**No Impact** means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the proposed project.

**DETERMINATION: (To be completed by the Lead Agency on the basis of this initial evaluation)**

<input type="checkbox"/>	<p>I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.</p>
<input checked="" type="checkbox"/>	<p>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.</p>
<input type="checkbox"/>	<p>I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.</p>
<input type="checkbox"/>	<p>I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.</p>
<input type="checkbox"/>	<p>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.</p>

  
 \_\_\_\_\_  
 Signature

  
 \_\_\_\_\_  
 Date

  
 \_\_\_\_\_  
 Title

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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers whether the proposed project would have any significant effects on visual aesthetics because of (a) the short-term or long-term presence of project-related equipment or structures; (b) project-related changes in the visual character of the project area that may be perceived by residents or visitors as a detraction from the visual character of the project area; (c) permanent changes in physical features that would result in the effective elimination of key elements of the visual character of the project area near a state scenic highway; or (d) the presence of short-term, long-term, or continuous bright light, such as from welding or nighttime construction, or from permanently-installed new lighting that would detract from a project area that is otherwise generally dark at night or that is subject to little artificial light.

**DISCUSSION**

The project includes the replacement of an existing 30,000-gallon redwood water tank with a new, 200,000-gallon, steel water tank, in the same location. After the existing tank and the 18 foot by 18 foot concrete pad are removed, the site will be excavated approximately 4 feet and graded to create a flat base. A new concrete pad will be poured on-site and the new tank will be installed. A new, 8-foot high, green or black, cyclone security fence and gate will be installed around the tank site. The dimensions of the new tank are 40 feet in diameter, 20 feet side water depth and 23 to 24 feet in height. Due to the excavation of the site, the difference in height between the existing tank and the new one will be minimal. The existing tank is surrounded by mature trees and vegetation that enhance visual screening from view from Alderpoint Road and adjoining parcels (see Figure 4: Google Earth Aerial Alderpoint Road Water Tank). As the new

tank will be wider than the existing tank, it will have a slightly larger footprint, extending over the existing footprint to the north and east. This wider footprint, as well as the need for access during construction, will necessitate removal of several trees, estimated to be between 10 and 20, depending on the final site design. The new tank will be painted in earth tone or forest green color to blend visually with the background. The nearest residences are approximately 500 feet down a steep hill from the project site. There is no other type of development nearby.

I.a) The project would not have a substantial adverse effect on a scenic vista because the project site is not located within a City- or County-mapped or designated scenic vista, or scenic resources area. While the site is on a hilltop, the height of the new tank will not substantially exceed the height of the existing tank.

✓ **No Impact** would occur.

I.b) The project would not substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway because the project would not be located within an area visible from a state scenic highway. The closest highway is U.S. Highway 101, located approximately 0.6 miles to the west (straight line distance), across mountainous terrain. U.S. Highway 101 is eligible for state scenic highway designation, but has not been officially designated as such.

✓ **No Impact** would occur.

I.c) With mitigation incorporation, the project would not substantially degrade the existing visual character or quality of the site and its surroundings. All work will take place in close proximity to the location of the existing tank. The new tank will be painted in earth tone or forest green color to blend visually with the background (AESTHETIC-1). A new, 8-foot high, green or black, cyclone security fence and gate will be installed around the tank site. The color of the new tank and the security fence were selected to blend visually with the surrounding forest (Figure 6: Cyclone Fence Example). The wider footprint of the new tank, as well as the need for access during construction, will necessitate the removal of several trees, estimated to be between 10 and 20, depending on the final site design. Per Mitigation Measure AESTHETIC-2, trees that are removed will be replaced at a 2-to-1 ratio. The replaced trees will be planted adjacent to the new fence to enhance visual screening.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

I.d) This project would have a less than significant impact on day or nighttime views in this area due to light and glare. No new light sources would be created as a part of this project. The dense vegetation around the tank site and the color selection will prevent glare due to sunlight reflecting on the tank and fence.

✓ **Less Than Significant Impact** would occur.

## **MITIGATION MEASURES**

**AESTHETIC-1:** The new tank will be painted in earth tone or forest green color to blend visually with the background.

**AESTHETIC-2:** Trees that are removed will be replaced on-site at a 2-to-1 ratio. The replaced trees will be planted adjacent to the new fence to enhance visual screening.

**FINDINGS**

With mitigation, the project would have a *Less Than Significant Impact* on Aesthetic Resources.



II. AGRICULTURE AND FORESTRY RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would (a) change the availability or use of agriculturally-important land areas designated under one or more of the programs above; (b) cause or promote changes in land use regulation that would adversely affect agricultural activities in lands zoned for those uses, particularly lands designated as Agriculture Exclusive or under Williamson Act contracts; (c) conflict with existing zoning for forest land or timberland zoned Timberland Production; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) cause changes to the environment that would result in the conversion of agricultural or forestland to non-agricultural or non-forest uses.

## DISCUSSION

The affected parcel (APN 223-181-009) has a General Plan land use designation of Agricultural Rural and a zoning designation of Agriculture Exclusive. Surrounding land uses are rural residential. The project consists of replacing an existing water tank with a new one on the same footprint. The footprint will be enlarged slightly to accommodate the new, larger tank. The project would include a new concrete base for the tank, a new security fence, and improvements to the roadside pull-out and unpaved access driveway. The affected parcel is not currently used for farmland, agricultural practices, or timber production. The project would not require a change in zoning and would not convert agricultural land or forestland. Additionally, no portion of the affected parcel or any of the surrounding properties are under Williamson Act contract.

II.a) The California Resources Agency has not completed the Farmland Mapping and Monitoring Program for Humboldt County. According to Humboldt County WebGIS, the affected parcel is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

✓ **No Impact** would occur.

II.b) The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract because the proposed use is consistent with the parcel's current zoning designation and there are no Williamson Act contracts on the affected parcel or on any of the surrounding parcels. Furthermore, the project would have no effect upon the use of any of the surrounding parcels for agricultural or forestry activities.

✓ **No Impact** would occur.

II.c) The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production because the project does not include changes to the zoning code or any conversion of land uses.

✓ **No Impact** would occur.

II.d) Because the affected parcel does not include forest land, the project would not result in the loss of forest land or conversion of forest land to non-forest use.

✓ **No Impact** would occur.

II.e) The project would not 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 forestland to non-forest use.

✓ **No Impact** would occur.

## MITIGATION MEASURES

No mitigation required.

## FINDINGS

The project would have a **No Impact** on Agricultural and Forestry Resources.

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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would (a) directly interfere with the attainment of long-term air quality objectives identified by the North Coast Unified Air Quality Management District (NCUAQMD); (b) contribute pollutants that would violate an existing air quality standard, or contribute to a non-attainment of air quality objectives in the applicable air basin; (c) produce pollutants that would contribute as part of a cumulative effect to non-attainment for any priority pollutant; (d) produce pollutant concentrations near identified sensitive receptors that would cause locally significant air quality impacts; or (e) release odors that would affect a substantial number of people.

**DISCUSSION**

The project would involve the removal of the existing redwood water tank, site excavation and grading, and the installation of a new concrete pad, a steel water tank, painted in earth tone or forest green and an 8-foot high, green or black, cyclone security fence and gate.

The project site is located within the North Coast Air Basin (NCAB) and is subject to North Coast Unified Air Quality Management District (NCUAQMD) requirements. NCUAQMD is responsible for monitoring and enforcing local, state, and federal air quality standards in the County of

Humboldt. Air quality standards are set for emissions that may include, but are not limited to, visible emission, particulate matter, and fugitive dust. The Humboldt County portion of the NCAB is currently designated as “non-attainment” or in excess of allowable limits for breathable particulate matter of 10 microns or less (PM<sub>10</sub>) and at “attainment” or within allowable limits with respect to the balance of the criteria pollutants (<http://www.ncuaqmd.org/index.php?page=air.monitoring>).

Because NCAB is in “non-attainment” for PM<sub>10</sub>, NCUAQMD has prepared a draft PM<sub>10</sub> Attainment Plan identifying cost-effective control measures that can be implemented to bring ambient PM<sub>10</sub> levels to within California standards. More information on California standards and the draft PM<sub>10</sub> Attainment Plan can be found on NCUAQMD’s website <http://www.ncuaqmd.org/index.php>.

During construction, the contractor is expected to use machinery such as a backhoe, trencher, and large trucks. Machinery will be maintained in good condition throughout project construction.

III.a-c) With mitigation incorporation, the project would have a less than significant impact on the implementation of California standards and the draft PM<sub>10</sub> Attainment Plan. The project would not violate an air quality standard, nor contribute substantially to an existing or projected air quality violation. The project would have a less than significant impact on cumulatively considerable net increases of any criteria pollutants. As noted above, the County is in “non-attainment” for PM<sub>10</sub>. Therefore, any use or activity that generates unnecessary airborne particulate matter may be of concern to NCUAQMD and has the potential to create significant project-specific and cumulative effects to air quality. While project construction would generate temporary emissions, the project will not include any source of visible emissions, including intentional fire/burning or manufacturing. The project will not obstruct implementation of California standards or the draft PM<sub>10</sub> Attainment Plan.

NCUAQMD has advised that generally an activity that individually complies with the state and local standards for air quality emissions will not result in a cumulatively considerable net increase in the countywide PM<sub>10</sub> air quality violation. With the incorporation of the mitigation measures listed below, which require compliance with NCUAQMD standards and regulations, the project will not result in adverse air quality impacts, or result in a cumulatively considerable net increase in the PM<sub>10</sub> non-attainment levels in Humboldt County.

Mitigation Measure AIR-1 will require the contractor to keep all construction equipment in good working order such that exhaust emissions are minimized and fugitive dust is controlled. With mitigation incorporated, the project will not create objectionable odors affecting a substantial number of people over a long term.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

III.d) The project would have a less than significant effect on exposure of sensitive receptors to substantial pollutant concentrations. Due to the limited scope of soil disturbance and construction, the project is not anticipated to generate substantial pollutant concentrations. The project will be

conducted in a sparsely-populated area adjacent to Alderpoint Road. Temporary exhaust from construction equipment will be minimal for short periods of time and may slightly impact motorists driving on Alderpoint Road. Mitigation Measure AIR-1 will require the contractor to keep all construction equipment in good working order such that exhaust emissions are minimized and potential fugitive dust is controlled. Suppression of fugitive dust will be conducted pursuant to North Coast Unified Air Quality Management District Air Quality Regulation 1 – Air Quality Control Rules, Rule 104, Section 4.0 – Fugitive Dust Emissions. Operations at the facility will not generate pollutants. No sensitive receptors have been identified near the construction site.

✓ **Less Than Significant Impact** would occur.

III.e) The project would not create objectionable odors affecting a substantial number of people. Temporary objectionable odors may be generated during the construction phase and these odors for short periods of time may potentially affect motorists driving on Alderpoint Road; however, a substantial number of people will not be affected. Operation of the facility will not create objectionable odors.

✓ **Less Than Significant Impact** would occur.

## MITIGATION MEASURES

**AIR-1:** At all times, the project shall be constructed in compliance with Air Quality Regulation 1– Air Quality Control Rules, Rule 104, Section 4.0 – Fugitive Dust Emissions. The project contractor will be required to do the following:

- Cover open-bodied trucks when used for transporting materials likely to give rise to airborne dust.
- Conduct trench digging, backfill, and paving of water pipe trenches in such a manner as to minimize the creation of airborne dust. Use water for control of dust during construction operations.
- Apply asphalt, water, or suitable chemicals on exposed earth surfaces, materials stockpiles, and other surfaces which can give rise to airborne dust.
- Pave the backfilled trenches as soon as practicable after backfill of the trenches.
- Promptly remove earth or other track-out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment.
- Maintain construction equipment in good condition to minimize excessive exhaust emissions.

## FINDINGS

With mitigation, the project would have a **Less Than Significant Impact** on Air Quality.

IV. <b>BIOLOGICAL RESOURCES.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers whether the proposed project would result in significant adverse direct or indirect effects to: (a) individuals of any plant or animal species (including fish) listed as rare, threatened, or endangered by the federal or state government, or effects to the habitat of such species; (b) more than an incidental and minor area of riparian habitat or other sensitive habitat (including wetlands) types identified under federal, state, or local policies; (c) more than an incidental and minor area of wetland identified under federal or state criteria; (d) key habitat areas that provide for continuity of movement for resident or migratory fish or wildlife; (e) other biological resources identified in planning policies adopted by the County of Humboldt; or (f) a local, regional, or state habitat conservation plan.

**DISCUSSION**

Prior to completing site visits on January 18, April 25, and May 23, 2013, the project biologist referenced lists of sensitive species which have the potential to occur in the vicinity of the project. The biologist reviewed sensitive species lists for the Garberville quad, as well as the eight adjacent quads: Miranda, Etersburg, Fort Seward, Harris, Noble Butte, Piercy, Bear Harbor, Briceland. Appendices, as noted below, include lists of sensitive species which have the potential to occur in the vicinity of the project.

The project biologist completed three site visits:

1. On January 18, 2013, the project biologist completed an initial site visit, the purpose of which was to identify the biological resources within the project area and to provide recommendations for precautionary measures. The project biologist did not find the presence of any sensitive species.
2. On April 25, 2013, the project biologist completed a second site visit to coincide with the blooming period of coast fawn lily (*Erythronium revolutum*), a CNPS special status 2.2 species (plants rare, or threatened and/or endangered in California, but more common elsewhere) and none were found. During this site visit, the project biologist heard native songbird species in the trees, shrubs and understory. While these native birds are not listed as candidate, sensitive or special status species, their nests cannot be moved during the breeding season without a permit (Migratory Bird Treaty Act of 1918).
3. On May 23, 2013, the project biologist completed a third site visit to coincide with the blooming period of beaked tracyina (*Tracyina rostrata*), a CNPS special status 1B.2 species (plants rare, or threatened and/or endangered in California and elsewhere) and none were found.

The project biologist referenced the following sources:

- Project Location Map (Figure 1)
- Aerial Photography (Google Earth)
- California Department of Fish and Wildlife California Natural Diversity Database Occurrence Report (Appendix B)
- California Native Plant Society Sensitive Plant Species Database Search (Appendix C)
- United States Fish and Wildlife Service Listed/Proposed Threatened and Endangered Species for the Garberville Quad (Appendix D)

IV.a-b) With mitigation incorporation, the project would have a less than significant effect, either directly or through habitat modifications, on any candidate, sensitive, or special status species and on any riparian habitat or other sensitive natural community identified in state, national, local, or regional plans, policies, or regulations. During the three site visits, the project biologist did not determine the presence of any plant species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

During the first site visit, the project biologist identified several of the habitat types that are potential hosts for candidate, sensitive, or special status bird species on an intermittent or migratory basis. Mitigation is proposed to limit the potential effect of habitat modification to special status species. All removal of vegetation should be completed during the non-breeding season (approximately September-February). If the clearing cannot be done during the off-season, then a qualified biologist should conduct a nesting bird survey (BIO-1).

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

IV.c) The project would not have a substantial adverse effect on federally protected wetlands. A search of Humboldt County GIS and the National Wetlands Inventory was conducted and no wetlands were shown. No likely wetland areas were identified during the site survey by the project biologist.

✓ **No Impact** would occur.

IV.d) During the first site visit, the project biologist determined that the vegetation habitat located at the storage tank site could potentially support native and migratory nesting birds. During the second site visit, the project biologist heard native songbird species in the trees, shrubs and understory. While these native birds are not listed as candidate, sensitive or special status species, their nests cannot be moved during the breeding season without a permit (Migratory Bird Treaty Act of 1918). Mitigation is proposed to limit the potential effect of habitat modification to these species. All removal of vegetation should be completed during the non-breeding season (approximately September-February). If the clearing cannot be done during the off-season, then a qualified biologist should conduct a nesting bird survey (BIO-1).



With mitigation, the project would not 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. Replacement of the storage tank will not increase the location or amount of water diverted from the South Fork Eel River. The storage tank replacement project would not affect riparian or river wildlife. The project will require removal of several (estimated to be between 10 and 20, depending on the final site design) adjacent trees and vegetation near the storage tank site. The minimal amount of vegetation being removed will not affect the overall habitat capabilities of the area. There are sufficient adjacent trees and vegetation to serve as habitat for resident or migratory species. The project will not alter fish or wildlife habitat and will not divide existing habitat.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

IV.e-f) The project would not conflict with any local policies or ordinances protecting biological resources, or provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The parcel where the project would occur is not covered in any local, regional, or state conservation plans. The Community Plan for the areas of Garberville-Redway-Benbow-Alderpoint discusses Sensitive and Critical Habitats in the areas. Section 3400 of the Community Plan states:

*The sensitive plant species called beaked-tracyina occurs in the vicinity of Garberville. Discretionary projects which may affect the plant are to be referred to the California Department of Fish and Wildlife and other agencies as may be necessary for mitigation recommendations.*

Seasonally appropriate surveys were conducted by the project biologist prior to construction. The absence of sensitive species was identified by the project biologist during each site visit. These precautionary actions will support the objectives of the Garberville-Redway-Benbow-Alderpoint Community Plan.

✓ **Less Than Significant Impact** would occur.

## **MITIGATION MEASURES**

**BIO-1:** For any project-related tree removal or construction activities proposed during the raptor nesting season (March 1 to August 15), a pre-construction survey of the project site for nesting raptors and other migratory birds shall be conducted by a qualified biologist and provided to the DFW and The District for review and approval. The active bird nest survey shall be conducted no more than 15 days prior to construction and/or tree removal. If nesting raptors or other migratory birds are found during the survey, either: (1) the proposed tree removal and construction activities shall be delayed until after the nesting season; or (2) a 500-foot buffer shall be established between the nest and any proposed tree removal and construction activities. Such a buffer shall be maintained until August 15 or until a subsequent study verifies that the nest is no longer in use.

## **FINDINGS**

With mitigation, the project would have a **Less Than Significant Impact** on Biological Resources.

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

### THRESHOLDS OF SIGNIFICANCE

This Initial Study considers to what degree the proposed project would cause (a) physical changes in known or designated historical resources, or in their physical surroundings, in a manner that would impair their significance; (b) adverse physical changes in archaeological sites that represent important or unique archaeological or historical information; (c) destruction to a unique paleontological resource site or unique geologic feature; or (d) disturbance of human burial locations.

### DISCUSSION

On March 12, 2013, a pre-consultation letter was sent to the North West Information Center (NWIC) to request a non-confidential records search for the affected parcel (Appendix E). The response letter, received on March 18, 2013 (Appendix F), states that the “project area has a low possibility of containing unrecorded archaeological site(s). Therefore, no further study for archaeological resources is recommended.” Regarding traditional, cultural, and religious heritage values, the NWIC recommended contacting the Native American Heritage Commission (NAHC). The NAHC was contacted via phone and email (Appendix G) on March 25, 2013, to request a search of the NAHC Sacred Lands File. The response letter, received on April 12, 2013 (Appendix H), states that the Sacred Lands File did not indicate the presence of any sites on the affected parcel or the surrounding area.

The project consists of construction in areas previously disturbed by the installation of the existing water tank.

V.a-b) With mitigation incorporation, the project would have a less than significant effect on any historical or archeological resource (as defined by '15064.5'). No known features on the affected parcel meet the criteria to be considered one of these types of resources. According to the NWIC response letter, the project site has a low possibility of containing unrecorded archaeological sites. However, any excavation activity has the potential to uncover archeological or similar culturally-significant resources. Mitigation Measure CULT-1 provides guidance regarding the steps to take if such materials are found on the project site.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

V.c) The project would have a less than significant effect on any unique paleontological resource or site; or any unique geologic feature. The University of California Museum of Paleontology database was queried on May 10, 2010. No records of paleontological sites were identified in the vicinity. (See Appendix I: UC Museum of Paleontology Specimens for Humboldt County)

✓ **Less Than Significant Impact** would occur.

V.d) With mitigation incorporation, the project would have a less than significant effect on the disturbance of any human remains. Any excavation activity has the potential to uncover human remains. As described in California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.94 and 5097.98, if human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie human remains. Mitigation Measure CULT-2 provides guidance regarding the steps to take if human remains are found on the subject site.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

## MITIGATION MEASURES

**CULT-1:** If potential archaeological or paleontological resources are encountered during project subsurface construction activities, all work within 50 feet per the requirements of CEQA (January 1999 Revised Guidelines, Title 14 CCR 15064.5 (f)) and 36 CFR § 800.13 (a-b), shall stop. Work near the archaeological finds shall not resume until a qualified archaeologist, funded by the applicant and who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action. The applicant shall be responsible for implementing the mitigation prior to construction activities being re-started at the discovery site.

**CULT-2:** In accordance with California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.94 and 5097.98, if human remains are uncovered during project construction work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie human remains. The Humboldt County Coroner shall be immediately notified. If the remains are determined by the Coroner to be Native American in origin, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains.

## FINDINGS

With mitigation, the project would have a **Less Than Significant Impact** on Cultural Resources.

VI. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### THRESHOLDS OF SIGNIFICANCE

This Initial Study considers project-related effects that could involve or result from: (a) damage to project elements as a direct result of fault movement along a fault identified in the Alquist-Priolo study or other known fault; (b) damage to project elements as a direct or indirect effect of seismically derived ground movement; (c) damage to project elements because of landslides that

are not seismically related; (d) project-derived erosion by water or wind of more than a minimal volume of earth materials; (e) project-derived or project caused secondary instability of earth materials that could subsequently fail, damaging project elements or other sites or structures; (f) location of project elements on expansive soils that are identified by professional geologists, which could result in damage to project elements or other sites or structures.

## **DISCUSSION**

As noted in the project description, the project consists of the replacement of an existing water tank with a new water tank in the same location. The existing tank sits on an 18 foot by 18 foot concrete pad, which is on the top of a small knoll that is sloped away from the tank in all directions for efficient drainage. After the existing tank is removed, as well as the concrete pad, the site will be excavated approximately 4 feet and graded to create a flat base. A new concrete pad will be poured on-site and the new tank will be installed. A new 8-foot high, green or black cyclone security fence and gate will be installed around the tank site. As the new tank will be wider than the existing tank, it will have a slightly larger footprint, extending over the existing footprint to the north and east. The existing tank is surrounded by mature trees and vegetation that enhance visual screening from view from Alderpoint Road and adjoining parcels (see Figure 4: *Google Earth Aerial Alderpoint Road Water Tank*). The wider footprint of the new tank, as well as the need for access during construction, will necessitate removal of several trees, estimated to be between 10 and 20, depending on the final site design.

The water tank will not be accessible to the public. Existing traffic associated with the project site is generally limited to site maintenance. During construction, people working on the project will be at the site; however, once construction is complete, the amount and frequency of people at the water tank will return approximately to pre-project levels.

Currently, access to the site is via Alderpoint Road at an unmarked, unpaved, roadside pull-out, which also serves as a parking area for maintenance vehicles (see Figure 5: *Roadside Pull-Out and Parking Area*). The pull-out area is approximately 1,000 square feet. On the northwest side of the pull-out, a short, narrow, existing, graded access driveway continues uphill for approximately 100 feet to the water tank. The short access driveway leading from the pull-out to the water tank site will be widened from 3 feet to approximately 6-8 feet to improve access. The pull-out and access driveway are both in relatively good condition; however, where the unpaved pull-out meets the asphalt of Alderpoint Road there is a sharp change in grade. In order to accommodate construction traffic and reliable future access for maintenance vehicles, this area will require improvements including, but not limited to, approximately 30 cubic yards of compacted base rock/gravel. The short, unpaved access driveway leading from the pull-out to the water tank site may require removing some vegetation for access.

Because the area of soil disturbance is under an acre and the project is not part of a larger common plan of development that in total disturbs one or more acres, a Storm Water Pollution Prevention Plan (SWPPP) is not required.

The *Alderpoint Road Tank Supplemental Project Report* prepared by SHN (Appendix A) describes the findings of the project geologist, who conducted a reconnaissance inspection of the slopes surrounding the tank, and reviewed soils exposed in the road cut along Alderpoint Road. The report concludes:

The tank site is situated on the crest of a sinuous ridgeline. Geologic mapping indicates the slopes are underlain by Pleistocene to Miocene aged sediments of the Wildcat Formation. The undifferentiated Wildcat sediments are described as “primarily of fine-grained, massive sandstone with minor amounts of siltstone, mudstone, and pebbly conglomerate.” In subsurface investigations in and around the Garberville area, the Wildcat formation is characterized as a very dense soil-like material or soft bedrock (moderately lithified). There is no fault mapped at the tank site itself; however, the tank site is within the Garberville fault zone, a series of northwest trending strike-slip faults. The relative age and activity of these faults are not well known; however, none of the fault strands within the Garberville fault has been zoned as active. From a geologic standpoint, the greatest concern is the stability of the slopes to the north. Although no slope-stability feature is mapped within the tank site, springs and “disrupted ground” have been mapped on the slopes north of the site. Our quick field overview of the slopes revealed that the slopes are indeed hummocky and appear to have been disrupted; however, we attribute this disruption to logging operations (skid road grading) and did not see evidence of any active slope failures. The proposed tank location, as described during the site visit, was approximately 15 feet from the slope break, which appears adequate. In general, SHN did not observe any significant geologic issue that would affect the proposed project.

VI.a) The project would have a less than significant impact on the exposure of people to potential substantial adverse effects involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure; and liquefaction or landslides. The water tank will not be accessible to the public. Therefore, although there are no significant hazards listed herein, even if there were, once construction is completed, the project would not cause people to be exposed to these hazards as a result of the project, other than during infrequent maintenance visits. There is no fault mapped at the tank site itself; however, the tank site is within the Garberville fault zone, a series of northwest trending strike-slip faults. The relative age and activity of these faults are not well known; however, none of the fault strands within the Garberville fault has been designated as active. Therefore, significant seismic activity is not expected to occur in the Garberville area. As noted in the *Alderpoint Road Tank Supplemental Project Report* prepared by SHN, the project geologist found “no significant geologic issue [such as landslides] that would affect the proposed project.”

✓ **Less Than Significant Impact** would occur.

VI.b) With mitigation incorporation, amounts of erosion or siltation on- or off-site will be insubstantial. Existing drainage patterns on site and nearby may be altered slightly during construction, which has the potential to result in some erosion or siltation on- or off-site. With the proposed mitigation measures (HYDRO-1/GEO-1), the grading and excavation that the project

includes would have a less than significant effect on soil erosion and the loss of topsoil. (See information on the Erosion and Sediment Control Plan (ESCP) requirement below.)

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

VI.c) The project would have no impact on on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse because, according to the *Alderpoint Road Tank Supplemental Project Report*, the project is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.

✓ **No Impact** would occur.

VI.d) The project would have no impact on creating substantial risks to life or property due to expansive soil because, according to the *Alderpoint Road Tank Supplemental Project Report*, the project is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994).

✓ **No Impact** would occur.

VI.e) The project would have no impact with regard to soil suitability for septic systems because the water tank will not have any restroom facilities and does not have the potential to generate wastewater.

✓ **No Impact** would occur.

**MITIGATION MEASURES**

**GEO-1:** Erosion and Sediment Control Plan (This Mitigation Measure also applies to Hydrology and Water Quality Mitigation Measure, HYDRO-1)

Prior to earth moving activities, an Erosion and Sediment Control Plan (ESCP) will be prepared by a Qualified Stormwater Developer (QSD) or a Qualified Stormwater Practitioner (QSP). The ESCP will include BMPs (Best Management Practices) that shall be implemented by the Project Contractor during any ground disturbance that may occur as a part of project construction. BMPs will be implemented to ensure no erosion or sediment transport impacts existing drainage channels or the South Fork Eel River.

The BMPs shall include, but not be limited to, the following measures described below.

1. Silt fencing shall be installed in areas where work occurs near waterways. The utilization of erosion control techniques, such as sterile straw bales, matting, and/or brush mats, will decrease water runoff velocities and retard surface soil erosion.
2. Additional BMP strategies may be identified for work conducted near sensitive habitat areas. These alternate BMP strategies shall include the use of fiber rolls, silt fencing, and/or other methodologies as applicable to specific sensitive areas identified in the Biological Study.
3. BMPs for construction staging and materials stockpiling areas shall be determined by the QSD or QSP and implemented by the project engineer. These measures may include the use of silt fencing, fiber rolls, sterile straw bales, matting, brush mats, or other site-specific methods for prevention of sediment and contaminants from entering sensitive habitats.

4. Disturbed areas will be fully re-vegetated before BMPs are removed ensuring no erosion or sedimentation after project completion.
5. Disturbed areas outside the limits of placed gravel will be fully re-vegetated before BMPs are removed ensuring no erosion or sedimentation after project completion (CALTRANS (State of California Department of Transportation), 2003).

## **FINDINGS**

With mitigation, the project would have a *Less Than Significant Impact* on Geology and Soils.



VII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would contribute to greenhouse gas emissions (GHG) and global warming.

**DISCUSSION**

The project site is located within the North Coast Air Basin (NCAB) and is subject to North Coast Unified Air Quality Management District (NCUAQMD) requirements. The NCUAQMD is responsible for monitoring and enforcing local, state, and federal air quality standards in the County of Humboldt.

VII. a and b) The project would have a less than significant impact on the emissions of greenhouse gases because the project will not generate a significant amount of GHGs. A limited amount of greenhouse gas emissions may occur during construction activities, during trips to and from the site, as the existing tank is removed, while the site is prepared, and while the new tank is installed. During construction the contractor is expected to use machinery such as a backhoe, trencher, and large trucks. Machinery will be maintained in good condition throughout project construction. Once the tank replacement project is complete, operational GHG emissions are expected to remain at the same level as existing GHG emissions.

✓ **Less Than Significant Impact** would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The project will have a **Less Than Significant Impact** on Greenhouse Gas Emissions.

VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized area or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would involve: (a) potential transport, storage or use, on a regular basis, of chemicals that could be hazardous if released into the environment; (b) operating conditions that would be likely to result in the generation and release of hazardous materials; (c) use of hazardous materials, because of construction-related activities or operations, within a quarter-mile of an existing or proposed school; (d) project-related increase in use intensity by people within the boundaries of, or within two miles of, the Airport Planning Areas; (e) project-derived physical changes that would interfere with emergency responses or evacuations; and (f) potential major damage because of wildfire.

**DISCUSSION**

The project will not emit hazardous emissions or handle acutely hazardous materials, substances, or waste. The District’s drinking water is treated with chlorine at the water treatment facility, which is over a mile southwest of the project site. The District is in compliance with all regulations pertaining to chlorine treatment.

VIII.a-b) The project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The new tank will not result in a safety hazard for people residing or working in the project area.

✓ **No Impact** would occur.

VIII.c) The project will not emit hazardous emissions or handle acutely hazardous materials, substances, or waste. The Mattole Valley Charter School is the closest school and it is located 3 miles from the project site at 3105 Redwood Dr., Redway, CA 95560. Redway School is located 4 miles from the project site at 344 Humboldt Ave., Redway, CA 95560 Redway School is also the location for a College of the Redwood Southern Humboldt Instructional Site.

✓ **No Impact** would occur.

VIII.d) The locations of all project elements have been checked against the lists of hazardous materials sites maintained by the State of California (<http://www.envirostor.dtsc.ca.gov/public/>) for Humboldt County. The project will not be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5, and would not have the potential to release hazardous materials from such sites during construction.

✓ **No Impact** would occur.

VIII.e-f) The project site is located approximately 2.5 miles from the Garberville public airport. The site is not included in the airport plan. The project is not located within the vicinity of a private airstrip. No use or height limitations related to the airport apply to the strip.

✓ **No impact** would occur.

VIII.g) The project will have no impacts on, nor will it interfere with, the adopted *Humboldt County Operational Area Hazard Mitigation Plan*, which is the guiding document for emergency response and evacuation.

✓ **No impact** would occur.

VIII.h) The project would have no effect on the exposure of people or structures to risks associated with wildland fires. The Humboldt County GIS system identifies the site as subject to a “High” fire rating and a “Very High” fire hazard severity due to its location in a generally wooded area. However, because the new tank and fence will be metal and the new pad will be concrete, these elements would be essentially inflammable and at very low risk from fire. The parcel where the project would occur is within the State Responsibility Area (Public Resources Code 4201-4204) for fire protection service from the California Department of Forestry and Fire Protection. The Garberville Fire Protection District is approximately 2 miles southwest. The project will improve fire suppression capabilities within the community by providing added storage capability. The project will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

✓ **No Impact** would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The project will have a **No Impact** on Hazards or Hazardous Materials.

<b>IX. HYDROLOGY AND WATER QUALITY.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk or loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### THRESHOLDS OF SIGNIFICANCE

This Initial Study considers to what degree the proposed project would involve: (a) improvements that would violate standards set for water quality and for discharge of waste water; (b) use of, or interference with ground water such that the amount of flow of groundwater is adversely impacted; (c) drainage improvements that would alter or cause an increase in amount or flow of drainage, or that would affect the free-flow of a stream or river or cause an increase in silt runoff as to cause adverse impact; (d) added runoff from the site that would exceed the capacity of drainage facilities; (e) the creation of polluted runoff or other general adverse water quality impacts; (f) the placement of housing or other structures within the 100-year flood plain, or other areas subject to flooding; (g) development in such a manner or location that it would be adversely affected by seiche, tsunami, or mudflow.

### DISCUSSION

The project includes minor grading activities during construction. The existing tank sits on an 18 foot by 18 foot concrete pad, which is on the top of a small knoll that is sloped away from the tank in all directions for efficient drainage. After the existing tank is removed, as well as the concrete pad, the site will be excavated approximately 4 feet and graded to create a flat base. A new concrete pad will be poured on-site and the new tank will be installed. A new 8-foot high, green or black cyclone security fence and gate will be installed around the tank site. As the new tank will be wider than the existing tank, it will have a slightly larger footprint, extending over the existing footprint to the north and east. The wider footprint of the new tank, as well as the need for access during construction, will necessitate removal of several trees, estimated to be between 10 and 20, depending on the final site design.

No increase in the permitted or actual amount of diversion from the South Fork Eel River is proposed. Because the area of soil disturbance is under an acre and the project is not part of a larger common plan of development that in total disturbs one or more acres, a Storm Water

Pollution Prevention Plan (SWPPP) is not required. Prior to earth moving activities, an Erosion and Sediment Control Plan (ESCP) will be prepared by a Qualified Stormwater Developer (QSD) or a Qualified Stormwater Practitioner (QSP).

IX.a) The project would not violate any water quality standards or waste discharge requirements, as no discharges are proposed into any surface water body or groundwater basin.

✓ **No Impact** would occur.

IX.b) The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge because no increase in the permitted or actual amount of diversion from the South Fork Eel River is proposed.

✓ **No Impact** would occur.

IX.c) With mitigation incorporation, the project would have a less than significant effect on the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site. Once the tank is installed, the project would have no effect on the course of any streams or rivers. However, existing drainage patterns on-site and nearby may be altered slightly during construction, which has the potential to result in some erosion or siltation on- or off-site. With the proposed mitigation measures (HYDRO-1/GEO-1), amounts of erosion or siltation on- or off-site will be insubstantial.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

IX.d) The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site. Although the project involves grading during construction, the scope of such work is too limited to have the potential to result in flooding on- or off-site.

✓ **No Impact** would occur.

IX.e) The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The parcel where the project would take place has no paving and no additional paving is proposed. The new water tank will sit on the footprint of the existing tank, so although the new base will be 1,276 square feet larger than the existing base, and the effect on stormwater runoff would be negligible. During and after construction, stormwater will continue to infiltrate directly into the ground or drain into existing, natural drainage courses. The project would not have the capacity to produce polluted runoff.

✓ **Less Than Significant Impact** would occur.

IX.f) With mitigation incorporation, the project would not otherwise substantially degrade water quality. No discharges are proposed into any surface water body or groundwater basin as a result of this project. Compliance with the proposed mitigation measures (HYDRO-1/GEO-1) is sufficient to prevent inadvertent discharges during construction.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

IX.g-h) The project would not place housing or other structures within a 100-year flood hazard area because the project is not located near the 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

✓ **No Impact** would occur.

IX.i) The project is not located in the vicinity of a water course with an upstream dam. The project would not expose people or structures to a significant risk or loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

✓ **No impact** would occur.

VIII.j) The project would not result in inundation by seiche, tsunami, or mudflow because it would be located approximately 15 miles from the Pacific Ocean and is not adjacent to a lake or bay which could generate a seiche or tsunami.

✓ **No Impact will occur.**

## **MITIGATION MEASURES**

**HYDRO-1:** See section VI Geology and Soils, GEO-1 Erosion and Sediment Control Plan (ESCP)

## **FINDINGS**

With mitigation, the project would have a **Less Than Significant Impact** on Hydrology and Water Quality.



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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would (a) divide an established community or conflict with existing land uses within the project's vicinity, such as agriculture resources; (b) conflict with the County of Humboldt General Plan designations, policies, and zoning ordinances regarding industrial and residential areas; (c) conflict with applicable environmental plans and protection measures enforced by regulatory agencies that have jurisdiction over the project, such as habitat conservation plans or a natural community conservation plan.

**DISCUSSION**

The project would be located over a mile from the urbanized portion of the community of Garberville, to the northeast (see Figure 1: *Project Location Map*). The area surrounding the parcel where the project will occur is residential and is relatively sparsely populated. The project will occur on an existing tank site and continue the same use. According to Humboldt County WebGIS, the parcel where the project will occur (APN 223-181-009) is zoned as AE-B-6, Agriculture Exclusive and "B" Special Building Site Combining Zone. According to Humboldt County Zoning Regulations, a water storage tank is a principally permitted use in the AE-B-6 zone, under the category of Civic Use, Essential Services. The B-6 Special Building Site Combining Zoning designation is not relevant for the current use of the site because that zoning designation refers to modified requirements for lot area and yards of residential parcels. According to Humboldt County WebGIS, the general plan land use designation for the affected parcel is AR (GRBAP) (Agricultural Rural-1987 Garberville-Benbow-Redway-Alderpoint Community Plan). The character and use of the parcel for water storage and transmission are compatible with the Humboldt County General Plan.

X.a) The project would not physically divide the community of Garberville. The project would be located over a mile from the urbanized portion of the community of Garberville, to the northeast (see Figure 1: *Project Location Map*). The area surrounding the parcel where the project will occur is residential and is fairly sparsely populated. The project will take place on existing site and continue the same use.

✓ **No impact** will occur.

X.b) The project would not conflict with the designations of the Garberville-Benbow-Redway-Alderpoint Community Plan (GRBAP), the Humboldt County General Plan, or the Humboldt County Zoning Code. The project would not change the use or character of the parcel where it would occur. A water storage tank is a principally permitted use in the AE-B-6 zone, under the category of Civic Use, Essential Services. The character and use of the parcel for water storage and transmission are compatible with the Land Use designation for the project site, AR (Agricultural Rural). According to the GRBAP and the Humboldt County General Plan, the AR land use designation describes areas with large lots and rural, agricultural, or timberland character. The new tank and security fence will be screened by vegetation which will ensure that the forested visual character will remain. The entire parcel where the project would occur is 2.07 acres. The area that will be affected by this project will be under a half acre. Thus, the remainder of the parcel will remain available for the land uses for which it has been designated, such as, “agriculture and timber harvesting under intensive management, single-family residences, cottage industries, educational and religious activities and recreational uses.”

✓ **Less Than Significant Impact** would occur.

X.c) The project would not conflict with any applicable habitat conservation plan or natural community conservation plan because none are applicable to the parcel where the project will occur.

✓ **No Impact** will occur.

## MITIGATION MEASURES

No mitigation required.

## FINDINGS

The project will have **No Impact** on Land Use and Planning.

XI. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources that would otherwise be available for construction or other consumptive uses.

**DISCUSSION**

There are no mining or other mineral extraction activities occurring in the vicinity of the project site. There is a rock quarry 0.3 miles north of the project site. The project will have no effect on the rock quarry.

The project does not include components that include mining or the extraction of mineral resources. Currently, access to the project site is via an unmarked, unpaved roadside pull-out, which also serves as a parking area for maintenance vehicles (see Figure 5: Roadside Pull-Out and Parking Area) and a short, narrow, unpaved, existing, graded access driveway. They are both in relatively good condition; however, where the unpaved pull-out meets Alderpoint Road there is a sharp change in grade. In order to accommodate construction traffic and reliable future access for maintenance vehicles, this area will require improvements including, but not limited to, approximately 30 cubic yards of compacted base rock/gravel.

X.a-b) The project would have a less than significant impact on mineral resources. The parcel where the project will occur does not contain mineral resources that are of value locally, to the region, or to residents. The only mineral resource that could potentially be used for the project is the compacted base rock/gravel used for improvements to the roadside pull-out access driveway. The project includes a small amount of road improvements, consisting of re-graveling parking areas and site access. The project will not 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, as the project site is not identified as a locally important mineral resource recovery site.

✓ **Less Than Significant Impact** would occur.

## **MITIGATION MEASURES**

No mitigation required.

## **FINDINGS**

The project will have a *Less Than Significant Impact* on Mineral Resources.

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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers whether the proposed project would produce: (a) noise levels in excess of the County of Humboldt and HUD noise standards; (b) excessive ground vibrations and low-frequency sound that would interfere with normal activities and which are not currently present in the project area; (c) a substantial increase in permanent ambient noise levels above existing levels; (d) temporary or periodic changes in ambient noise levels above existing levels in the project area.

## DISCUSSION

Noise is generally defined as unwanted sound. Whether a sound is considered a noise depends on the source of the sound, the loudness relative to the background noise, the time of day, the surroundings, and the listener. The difference in people's reactions to different noises or sounds is explained by the perceived noisiness, or how undesirable the sound is to the people in the vicinity of the source. An unwanted sound may be extremely irritating although it is not unreasonably loud. The area's most vulnerable to the harmful effects of sound are residential locations, particularly at night.

The nearest residence is approximately 500 feet from the project location. There is no other type of development nearby. Motorists and other users of Alderpoint Road may hear periodic high volume noises during construction, as they drive in close proximity to the construction activity. The project will not create a substantial long-term increase in noise levels.

XII.a) The project would have a less than significant impact on the exposure of persons to or generation of noise levels in excess of applicable standards. Noise generated during construction will be located a considerable distance from the nearest potential receptor and therefore will have a less than significant impact. Motorists and other users of Alderpoint Road may hear periodic high volume noises during construction, as they drive in close proximity to the construction activity. Due to the brief duration of exposure, noise impacts to those traveling by will have a less than significant impact. After construction is complete, noise levels of the facility should return to pre-construction levels and will not result in a substantial permanent increase in ambient noise levels above current facility levels.

✓ **Less Than Significant Impact** would occur.

XI.b) The project would have a less than significant impact on the exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels. None of the pumping equipment or other equipment associated with the project has the potential to generate ground-based noise and vibration. No construction activities such as blasting or pile-driving, which are typically associated with substantial ground-borne vibration or noise, are anticipated. Modest and temporary vibration may occur as a result of construction activities potentially including heavy equipment such as jackhammers, backhoes, and heavy trucks, and other equipment that are known to produce noticeable noise and ground borne vibration.

✓ **Less Than Significant Impact** would occur.

XI.c) The project would have no impact on permanent increases of ambient noise levels. After construction is complete, noise levels of the facility should return to pre-construction levels.

✓ **No Impact** will occur.

XI.d) With mitigation incorporation, the project would have a less than significant effect on substantial temporary or periodic increase in ambient noise levels. Construction activities could cause short-term deterioration of ambient noise levels in the immediate vicinity of project activities. However, the use of heavy equipment to accomplish project construction will be localized to the site and restricted to general daytime hours (NOISE-1).

✓ ***Less Than Significant Impact*** would occur with Mitigation Incorporation.

XII.e-f) The project would have no impact on the exposure of noise to people residing or working near a public, public-use, or private airport or airstrip because the project is not located in an airport plan area or in the vicinity of a private airstrip.

✓ ***No Impact*** will occur.

### **MITIGATION MEASURES**

**NOISE-1:** To minimize noise disturbance, construction activities will be limited to the hours of 7:00 AM to 7:00 PM. To minimize impacts related to noise, the contractor will be required to utilize equipment that is in good working condition and that is properly muffled to reduce noise generated by equipment.

### **FINDINGS**

With mitigation, the project would have a ***Less Than Significant Impact*** on Noise.

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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would result in, or contribute to, population growth, displacement of housing units, demolition or removal of existing housing units, or any project-related displacement of people from occupied housing.

**DISCUSSION**

As noted in the project description, the District proposes to replace a redwood water tank on the same footprint as the existing tank. The replacement of the tank will prevent the continued waste of water resources caused by the leak, as well as, increase reliability and redundancy for the water supplied to customers. The project is not motivated by anticipated population growth, and the primary upper constraint to the District’s water system capacity is the limited allowed water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River. The permit (number 20789) allows the District to divert up to 80 million gallons of water per year. The District is not requesting a new license or increased diversion rights. The additional storage is necessary to meet state standards.

California Department of Public Health (CDPH) Drinking Water Regulations require public water systems with less than 1,000 service connections to have storage capacity equal to or greater than the maximum day demand (MDD), unless the system can demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement. CDPH determines Water Works Standards, which are codified in Title 22 of the California Code of Regulations. MDD means the amount of water utilized by consumers during the highest day of use (midnight to midnight), excluding fire flow, as determined pursuant to Section 64554.



To evaluate the District's storage capacity deficit, the total current storage capacity (260,000 gallons) must be subtracted from the maximum day dry weather (MDDW) demand. During the late 1990s through 2004, the recorded water usage exceeded 400,000 gallons per day on several occasions. Historical data indicates a MDDW demand of 427,780 gallons recorded in August 1999. In recent years, an MDDW demand of 338,000 gallons was recorded in July 2006 and an MDDW of 321,000 gallons was recorded in August 2010. In 2012, the District connected an additional 20 residential services in the Kimtu area. The MDDW demand recorded during August 2012 was 319,000, the lowest recorded MDDW demand (SHN Consulting Engineers & Geologists, Inc., 2013).

Using the lowest (319,000 in 2012) and highest (427,780 gallons in 1999) MDDW records, the District's system is operating at a deficit of between 74,000 and 182,780 gallons of storage capacity. The new Alderpoint Road storage tank will have a capacity of 200,000 gallons, an increase of 170,000 gallons.

The District has permits to allow water diversion from the South Fork Eel River at a maximum rate of 80 million gallons per year which will be adequate to meet the MDD. Replacement of the Alderpoint Road Tank will make a substantial contribution towards the District's goal of providing adequate storage capacity.

XIII.a) The project would have a less than significant impact on population growth in the local community. The project does not propose new homes and/or businesses. The project does not propose extending roads or other infrastructure. The increased storage capacity of the new tank would have a less than significant impact on population growth because the primary upper constraint to the District's water system capacity is the limited allowed water diversion permit from the State Water Resources Control Board.

✓ ***Less Than Significant Impact*** would occur.

XIII.b-c) The project would have no impact on housing. The new water tank will be located on the same footprint as the existing tank. The project will not displace any homes or people, nor require the construction of replacement housing.

✓ ***No Impact*** would occur.

## **MITIGATION MEASURES**

No mitigation required.

## **FINDINGS**

The project would have a ***Less Than Significant Impact*** on Population and Housing.

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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would result in any changes in existing fire or police protection service levels, or a perceived need for such changes, as well as any substantial changes in the need for, or use of, schools, parks, or other public facilities, that would require new or physically altered governmental or other public facilities that would create a significant impact on the environment.

**DISCUSSION**

As noted in the project description, the District proposes to replace a redwood water tank on the same footprint as the existing tank. The replacement of the tank will prevent the continued waste of water resources caused by the leak, as well as, increase reliability and redundancy for the water supplied to customers. The project is not motivated by anticipated population growth, and the primary upper constraint to the District’s water system capacity is the limited allowed water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River. The project is not proposing to increase or expand the District’s services and does not involve the creation of new housing or employment opportunities likely to increase population.

XIV.a) The project would have no impact on the provision of fire protection. The parcel where the project will occur is located within the jurisdiction of the Garberville Fire Protection District. No structures or facilities would be constructed as part of the project; therefore, no additional fire protection services would be required. The project might provide additional fire protection ability by allowing for increased storage capacity.

✓ **No Impact** would occur.

XIV.b) The project would have no impact on the provision of police protection. The Garberville Sub-Station of the Humboldt County Sheriff's Department serves the communities of Garberville, Redway, Shelter Cove, Miranda, Phillipsville, Weott, Myers Flat, and Alderpoint. The station is staffed with one Sergeant, five Deputies, one resident Deputy assigned to Shelter Cove, one Correctional Officer, and a Senior Legal Office Assistant. The project does not have the potential to impact police services within the project area.

✓ **No Impact** would occur.

XIV.c) The project would have no impact on schools. The Mattole Valley Charter School is the closest school and it is located 3 miles from the project site at 3105 Redwood Dr., Redway, CA 95560. Redway School is located 4 miles from the project site at 344 Humboldt Ave., Redway, CA 95560. Redway School is also the location for a College of the Redwood Southern Humboldt Instructional Site. The project does not have the potential to adversely affect area schools as no new housing or employment activities would affect substantial new enrollment.

✓ **No Impact** would occur.

XIV.d) The project would have no impact on parks. The project is not likely to increase population and therefore does not have the potential to substantially adversely impact parks within the project area.

✓ **No Impact** would occur.

XIV.e) The project would have no impact on other public facilities.

✓ **No Impact** would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The project would have a **No Impact** on Public Services.

XV. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree any aspect of the proposed project would demand new recreational facilities or increase use of existing recreational areas such that those areas are physically degraded, including secondary effects such as degradation through over-use of environmentally sensitive areas.

**DISCUSSION**

As noted in the project description, the District proposes to replace a redwood water tank on the same footprint as the existing tank. The replacement of the tank will prevent the continued waste of water resources caused by the leak, as well as, increase reliability and redundancy for the water supplied to customers. The project is not motivated by anticipated population growth, and the primary upper constraint to the District’s water system capacity is the limited allowed water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River.

The project is not proposing to increase or expand the District’s services and does not involve the creation of new housing or employment opportunities likely to increase population.

XV.a-b) The project would have no impact on recreation. The project does not involve elements likely to increase the population; therefore, the project is not expected to increase the use of existing parks or recreational facilities in the community. The project does not include new recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

✓ **No Impact** will occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The project would have **No Impact** on Recreation.

XVI. TRANSPORTATION / TRAFFIC. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestions management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:**

This Initial Study considers to what degree, if any, the project would be associated with (a) changes in traffic, circulation, or other changes that might be perceived as adverse, including traffic effects resulting from temporary construction related changes; (b) any project-related changes in levels-of-service on County or state highways; (c) increase in traffic or transportation-related hazards; (d) project-associated travel restrictions that would prevent emergency vehicles

from reaching their destinations; and (e) conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

### **DISCUSSION:**

The project will take place adjacent to Alderpoint Road. The nearest intersections are approximately one-third of a mile in either direction. Traffic along Alderpoint Road is modest, providing primary access from the community of Garberville to residences and the community of Alderpoint. Existing traffic associated with the project site is generally limited to site maintenance. Currently, access to the site is via Alderpoint Road, at an unmarked, unpaved, roadside pull-out, which also serves as a parking area for maintenance vehicles (see Figure 5: *Roadside Pull-Out and Parking Area*). The pull-out area is approximately 1,000 square feet. On the northwest side of the pull-out, a short, narrow, existing, graded access driveway continues uphill for approximately 100 feet to the water tank. Alderpoint Road is a steep road with sharp curves. There is a blind corner both above and below the roadside pull-out that will be used to access the tank. During construction, heavy equipment such as bulldozers and trenchers may be transported to the subject site. During construction, equipment will have the potential to create a traffic hazard due to limited visibility. Once the tank replacement project is complete, operational traffic is expected to return to pre-project levels.

XVI.a) With mitigation incorporation, the project would have a less than significant impact on the capacity of the street system, level of service standards established by the County, or the overall effectiveness of the circulation system. The project would not have an impact on an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Alderpoint Road is a steep road with sharp curves. There is a blind corner both above and below the roadside pull-out that will be used to access the tank. During construction, heavy equipment such as bulldozers and trenchers may be transported to the subject site. During construction, equipment will have the potential to create a traffic hazard due to limited visibility. Once the tank replacement project is complete, operational traffic is expected to remain at the same level as existing traffic. A traffic mitigation plan (TRAFFIC-1) to ensure motorists' safety during the tank replacement is described below. Such effects will be addressed in a Traffic Management Plan which the Project Contractor is required to prepare, to the satisfaction of the Humboldt County Department of Public Works prior to issuance of encroachment permits. The plan will include strategies for signage, traffic control, flagging, and maintenance of access through construction areas.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

XVI.b) The project would have no impact on a congestion management program or on level of service, travel demand, or other standards established by a county congestion management agency because there are no applicable standards.

✓ **No Impact** will occur.

XVI.c) The project would have no impact on air traffic patterns because the project is not within the approach pathway to any airports.

✓ **No Impact** will occur.

XV.d-e) The project would have no impact on traffic hazards or emergency access because the project does not consist of changes to existing roads.

✓ **No Impact** will occur.

XV.f) The project would have no impact on adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. The project will occur adjacent to Alderpoint Road. The nearest intersections are approximately one-third of a mile in either direction. Traffic along Alderpoint Road is generally limited to access to surrounding residences. The project would not change the usage of Alderpoint Road related to public transit, bicycle, or pedestrian means of travel.

✓ **No Impact** will occur.

#### **MITIGATION MEASURES**

**TRAFFIC-1:** The Project Contractor must prepare a Traffic Management Plan to the satisfaction of the Humboldt County Department of Public Works prior to issuance of encroachment permits. The plan will include strategies for signage, traffic control, flagging, and maintenance of access through construction areas.

#### **FINDINGS**

With mitigation, the project would have a **Less Than Significant Impact** on Transportation and Traffic.



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

**THRESHOLDS OF SIGNIFICANCE**

This Initial Study considers to what degree the proposed project would be related to: (a) a substantial demand for water supplies affecting existing entitlements and resources; (b) increase

in runoff intensity that exacerbates drainage conditions and changes; and (c) insufficient provision for solid waste disposal.

## DISCUSSION

The project has no appreciable bearing on stormwater, wastewater treatment, or solid waste facilities or disposal needs. The project will not result in any significant adverse impacts to utilities and service systems.

XVII. a) The project would have no impact on wastewater treatment because the project does not include it. Thus, it will not exceed the wastewater treatment requirements of the North Coast Regional Water Quality Control Board.

✓ **No Impact** will occur.

XVII.b) With mitigation incorporation, the project would have a less than significant impact on the need to construct new water or wastewater facilities or the need to expand existing facilities. The project consists of the installation of a new water tank. This infrastructure upgrade will resolve the issue of the leak in the current tank and provide greater storage capacity. The environmental effects of the installation of the new tank are described in this document. Once the new tank is operational, this project will not require or result in the need for additional facilities or the expansion of existing facilities. However, during construction a temporary method for providing water to approximately seven houses will need to be implemented. These seven houses receive their water directly from the line that provides water to the existing tank. To complete the tank replacement project, the existing tank will be disconnected and removed. Measures for the temporary provision of water will be implemented prior to any disruption of existing services. A plan to provide for the water needs of these residences during the removal and replacement will be addressed by Mitigation Measure UTILITIES-1. With mitigation (UTILITIES-1), there will be a less than significant impact on Utilities and Service Systems.

✓ **Less Than Significant Impact** would occur with Mitigation Incorporation.

XVII.c) The project would have no impact on stormwater or drainage facilities. The parcel where the project would occur has no paving and no additional paving is proposed. The new water tank will sit on the footprint of the existing tank, so although the new base will be 1,276 square feet larger than the existing base, the effect on stormwater runoff would be negligible. During and after construction, stormwater will continue to infiltrate directly into the ground or drain into existing, natural drainage courses.

✓ **No Impact** will occur.

XVII.d) The project would have no impact on the need for entitlements for water supplies. The primary upper constraint to the District's water system capacity is the limited allowed water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River. The permit (number 20789) allows the District to divert up to 80 million gallons of water per year. The District is not requesting a new license or increased diversion rights. The additional storage is necessary to meet state standards.

✓ **Less Than Significant Impact** will occur.

XVII.e) The project would have no impact on wastewater because the project does not include features requiring treatment. The project will not increase wastewater demands or exceed the wastewater treatment requirements of the North Coast Regional Water Quality Control.

✓ **No Impact** will occur.

XVII.f-g) The project would have no impact on solid waste because the project does not include features which will generate solid waste. Therefore the project would not affect the capacity of the landfill serving the area or violate any regulations related to solid waste.

✓ **No Impact** will occur.

### **MITIGATION MEASURES**

**UTILITIES-1:** Temporary water provision for approximately seven houses. The District will implement measures for the temporary provision of water for houses that ordinarily receive their water directly from the line that provides water to the existing tank. Measures will be implemented prior to any disruption of existing services. Such measures may include temporary water tanks, delivery of bottled water, or similar means to ensure the continued provision of domestic water service.

### **FINDINGS**

With mitigation, the project would have a **Less Than Significant Impact** on Utilities and Service Systems.

XVIII.MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. a) The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. This is because:

1. The project would not result in significant impacts to air quality, biological resources, prime farmland, forestland, water quality, or other natural resources after mitigation;
2. The project site is already modified from its natural state, it contains an existing storage tank on a concrete pad, an unpaved roadside pull-out and graded driveway for site access;
3. No wetlands were found at the project site;

4. No special-status plant or animal species were found on-site during any of the site visits by the project biologist;
5. Mitigation measures are incorporated to require pre-construction surveys for special-status and protected animal species, including nesting birds and raptors; and
6. According to the project biologist that visited the site, the minimal amount of vegetation being removed will not affect the overall habitat capabilities of the area. There are sufficient adjacent trees and vegetation to serve as habitat for resident or migratory species.

XVIII. b) The project does not have impacts that are individually limited, but cumulatively considerable as defined in CEQA. This is because:

1. The project consists of replacing an existing water tank with a larger water tank to solve the issue of the leak in the current tank and provide greater storage capacity, which will contribute towards achieving the system-wide storage capacity that is needed to meet State standards;
2. The project will not alter the way in which the site is currently used;
3. The project is not requesting a new License for Diversion and Use of Water from the California State Water Resources Control Board and will not exceed its current rights;
4. The project, as designed, is not intended to increase or expand services and does not involve the creation of new housing or employment opportunities likely to increase population;
5. The project would not add appreciably to cumulative utilities or service demand, park demand, water demand, energy consumption, or other growth-related cumulative impacts; and
6. The project would not contribute to the cumulative loss of prime farmland, special-status species or their habitat, wetlands or other natural community, mineral resources, or other cumulative impacts to natural resources.
7. When the Water System Improvement Project has been completed (an unrelated District project, described in the Project Summary section of this document), both that project and the Alderpoint Road Tank Replacement Project will provide additional water storage; however, that storage is necessary to meet CDPH Minimum Water Works Standards for the existing population.

XVIII. c) The project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. This is because:

1. The project consists of replacing an existing water tank with a larger water tank to solve the issue of the leak in the current tank and provide greater storage capacity, which will contribute towards achieving the system-wide storage capacity that is needed to meet State standards;
2. The project would not result in long-term elevated noise levels;
3. The project would not cause visual blight as seen from a scenic highway or by sensitive visual receptors (e.g., residential uses);
4. The project would not result in long-term alterations to traffic on or adjacent to the site; and

5. The project would not create a demand for public services (fire protection, police protection, parks, etc.) such that the level of existing service experienced by residents would be adversely affected.

### ***Mitigation Monitoring Plan and Reporting Program***

A Mitigation Monitoring Plan and Reporting Program are provided as Appendix J.

## VIII. REFERENCES

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## IX. REPORT AUTHORS

This Initial Study was prepared by:  
Nicole West, AICP  
Planner/Landscape Designer, LACO Associates

Randy Rouda, AICP  
Senior Planner, LACO Associates

Jennie Short  
Capital Projects Manager, Garberville Sanitary District

\\172.16.10.3\projects\7700\7714 Garberville Sanitary District\7714.00 Garberville Sanitary District - Alderpoint Road Tank Replacement\06 Planning\Environmental Docs\_CEQA\_NEPA\7714 Draft Alderpoint Road Tank Replacement IS\_MND v7.docx

## FIGURES

- Figure 1: Project Location Map**
- Figure 2: Parcel Map**
- Figure 3: Unfenced Access to Existing Water Tank**
- Figure 4: Google Earth Aerial Alderpoint Road Water Tank**
- Figure 5: Roadside Pull-Out and Parking Area**
- Figure 6: Cyclone Fence Example**

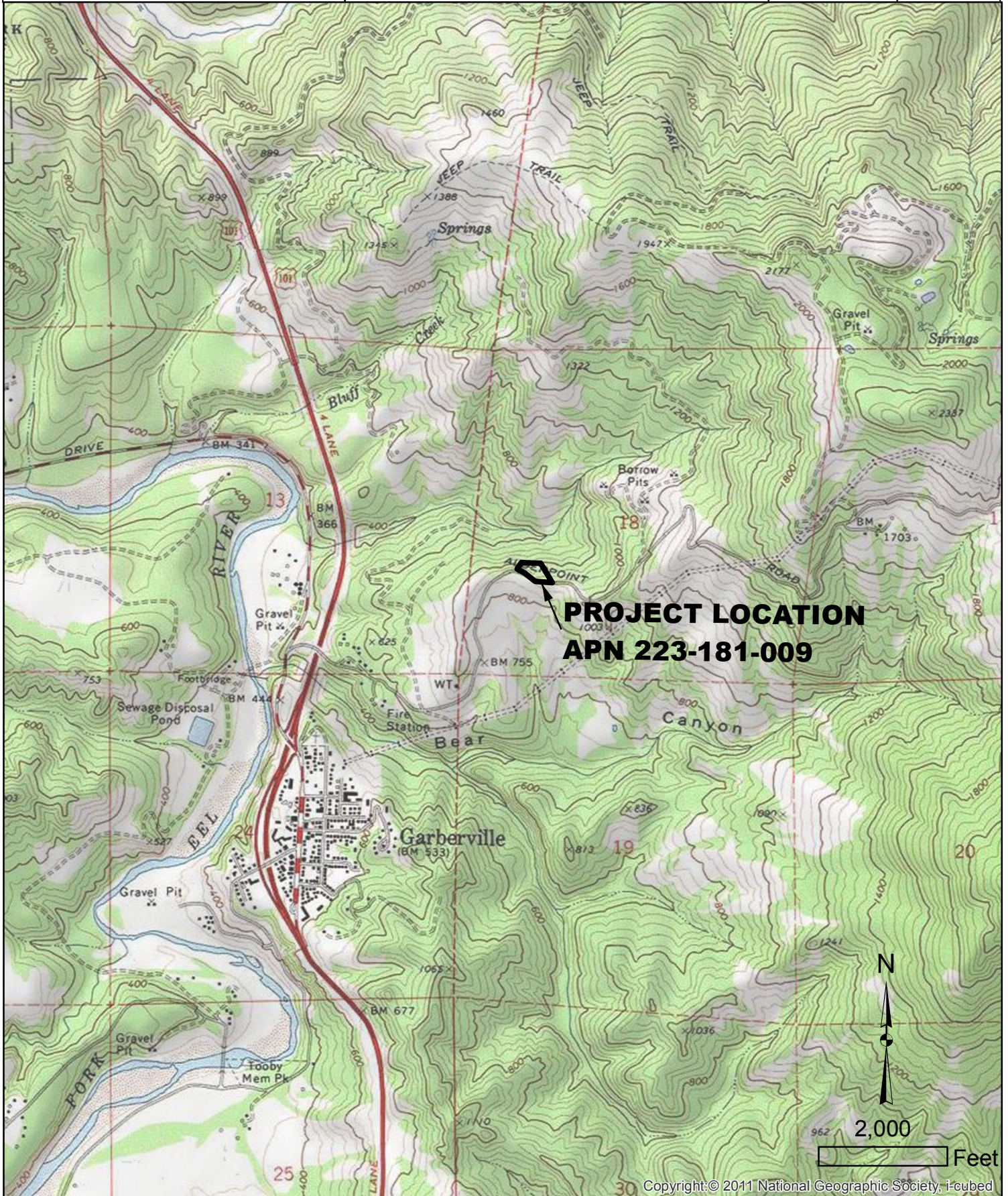


# LACO

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1-800-515-5054 www.lacoassociates.com

PROJECT	GARBERVILLE SANITARY DISTRICT CEQA	BY	JB	FIGURE	1
CLIENT	GABERVILLE SANITARY DISTRICT	CHECK	NAW	JOB NO.	
LOCATION	ALDERPOINT ROAD, GARBERVILLE, CA.	DATE	1/14/13		
	LOCATION MAP				7714.00





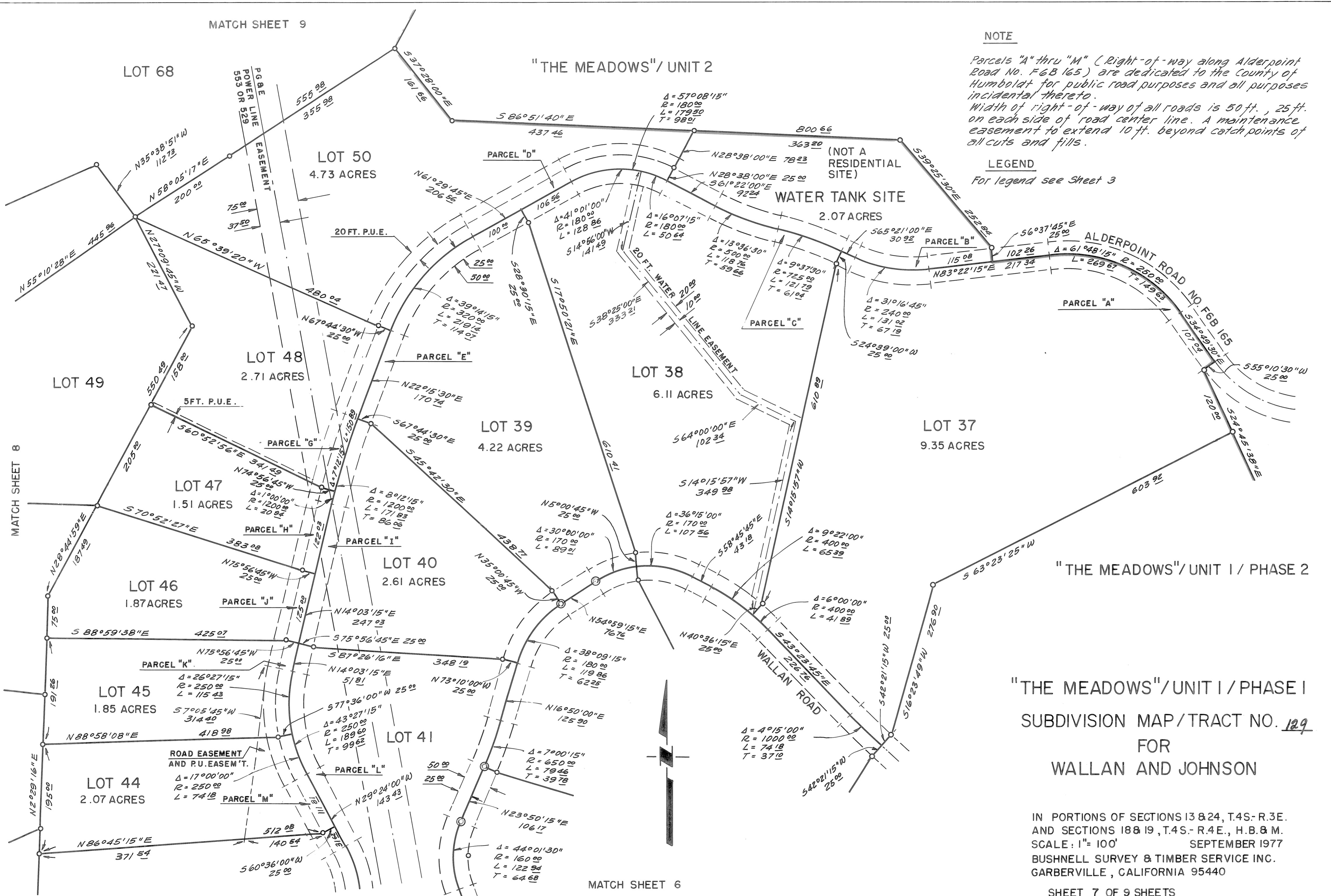
NOTE

Parcels "A" thru "M" (Right-of-way along Alderpoint Road No. F6B 165) are dedicated to the County of Humboldt for public road purposes and all purposes incidental thereto. Width of right-of-way of all roads is 50 ft., 25 ft. on each side of road center line. A maintenance easement to extend 10 ft. beyond catch points of all cuts and fills.

LEGEND

For legend see Sheet 3

"THE MEADOWS" / UNIT 2



"THE MEADOWS" / UNIT I / PHASE I  
SUBDIVISION MAP / TRACT NO. 129  
FOR  
WALLAN AND JOHNSON

IN PORTIONS OF SECTIONS 13 & 24, T.4S.-R.3E.  
AND SECTIONS 18 & 19, T.4S.-R.4E., H.B. & M.  
SCALE: 1"= 100'  
SEPTEMBER 1977  
BUSHNELL SURVEY & TIMBER SERVICE INC.  
GARBERVILLE, CALIFORNIA 95440

**Figure 3**



**Unfenced Access to Existing Water Tank**



**Figure 4**



**Google Earth Aerial Alderpoint Road Water Tank**



**Figure 5**



**Roadside Pull-Out and Parking Area**

**Figure 6**



**Cyclone Fence Example**

## APPENDIX A

### **Alderpoint Road Tank Supplemental Project Report**





Reference: 012222

February 14, 2013

Ms. Jennie Short, CIP Coordinator  
Garberville Sanitary District  
PO Box 211  
Garberville, CA 95542

**Subject: Alderpoint Road Tank Supplemental Project Report, Garberville Sanitary District, Garberville, California**

Dear Ms. Short:

The Garberville Sanitary District (GSD) requested that SHN investigate the potential of replacing the existing Alderpoint Road storage tank with a new storage reservoir, to increase the storage in the existing water system.

## **Background**

The GSD owns and operates the existing domestic water system, including a raw water intake structure and pump station, an existing surface water treatment plant (SWTP), a shallow groundwater well, four storage reservoirs, and pump stations. The District is currently in the design phase for the construction of a water system improvement project, which will provide system upgrades to the raw water pump station, a new raw water transmission line, an extension to the existing 8-inch distribution piping, and the construction of a new SWTP. The current design project does not provide for additional storage.

As stated above, the existing water distribution system includes four storage reservoirs. The Hurlbutt tank (located adjacent to the existing SWTP) provides approximately 160,000 gallons of water storage—the main water storage reservoir for the GSD water system. In addition to the Hurlbutt tank, the Robertson tank is reported to provide an additional 50,000 gallons of storage. The two smaller tanks, Alderpoint Road tank and the Wallan Road tank provide 30,000 gallons and 20,000 gallons, respectively for a total system storage capacity of approximately 260,000 gallons.

The three small tanks (Alderpoint, Robertson, and Wallan Road) all receive water through a 6-inch aerial transmission line that crosses Bear Canyon. The aerial transmission line is subject to slide hazards at the crossing. Repairs to the transmission line from past slides have replaced a portion of the 6-inch pipeline with a 3-inch section restricting the flow capacity of the pipeline. There are 65 customers that are served from these three small tanks. This accounts for approximately 16% of the total customers.

During the late 1990s through 2004, the recorded water usage exceeded 400,000 gallons per day on several occasions. Historical data indicates a maximum day dry weather (MDDW) demand of 427,780 gallons recorded in August 1999. In recent years, an MDDW demand of 338,000 gallons



was recorded in July 2006 and an MDDW of 321,000 gallons was recorded in August 2010. In 2012, GSD connected an additional 20 residential services in the Kimtu area. The MDDW demand recorded during August 2012 was 319,000.

California Department of Public Health (CDPH) Drinking Water Regulations require public water systems to have the capacity to meet the system's maximum day demand (MDD). For systems with less than 1,000 service connections, the system shall have storage capacity equal to or greater than the MDD, unless the system can demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement.

To meet the minimum storage requirements of 427,780 gallons, GSD will need to provide an additional 167,780 gallons of storage, assuming the community does not experience any additional increase in demand.

## **Field Investigation**

On November 2, 2012, SHN staff visited the Alderpoint Road tank site located on a 2.07 acre parcel (APN 223-181-09) on the north side of Alderpoint Road (See Figure 1). The purpose of the visit was to assess the feasibility of replacing the tank with a tank of larger diameter. The existing tank sits on top of a small knoll which slopes down away from the existing tank foundation. The tank is relatively well hidden from view from Alderpoint Road and adjoining parcels. The site has an unimproved access road from Alderpoint Road to a small parking area adjacent to the existing tank.

The existing tank is an 18-foot-diameter redwood tank with a sidewater depth of 17 feet, providing a total capacity approximately 30,000 gallons. The tank sits on an 18-foot-square concrete pad and is sloped away from the tank for efficient drainage. On the day of the site visit, the tank had a significant leak around its base. The signs of erosion in the drainage away from the tank indicate the tank has been leaking over time and accounts for a considerable loss of water from the system.

During the site visit, an SHN geologist conducted a reconnaissance inspection of the slopes surrounding the tank, and reviewed soils exposed in the road cut along Alderpoint Road. The tank site is situated on the crest of a sinuous ridgeline. Geologic mapping indicates the slopes are underlain by Pleistocene to Miocene aged sediments of the Wildcat Formation. The undifferentiated Wildcat sediments are described as "primarily of fine-grained, massive sandstone with minor amounts of siltstone, mudstone, and pebbly conglomerate." In subsurface investigations in and around the Garberville area, the Wildcat formation is characterized as a very dense soil-like material or soft bedrock (moderately lithified). There is no fault mapped at the tank site itself; however, the tank site is within the Garberville fault zone, a series of northwest trending strike-slip faults. The relative age and activity of these faults are not well known; however, none of the fault strands within the Garberville fault has been zoned as active. From a geologic standpoint, the greatest concern is the stability of the slopes to the north. Although no slope-stability feature is mapped within the tank site, springs and "disrupted ground" have been mapped on the slopes north of the site. Our quick field overview of the slopes revealed that the slopes are indeed hummocky and appear to have been disrupted; however, we attribute this disruption to logging operations (skid road grading) and did not see evidence of any active slope failures. The proposed

MATCH SHEET 9

### PROPOSED LOCATION OF NEW 200,000 GALLON STORAGE TANK "THE MEADOWS" / UNIT 2

#### NOTE

Parcels "A" thru "M" (Right-of-way along Alderpoint Road No. F68 165) are dedicated to the County of Humboldt for public road purposes and all purposes incidental thereto. Width of right-of-way of all roads is 50 ft., 25 ft. on each side of road center line. A maintenance easement to extend 10 ft. beyond catch points of all cuts and fills.

#### LEGEND

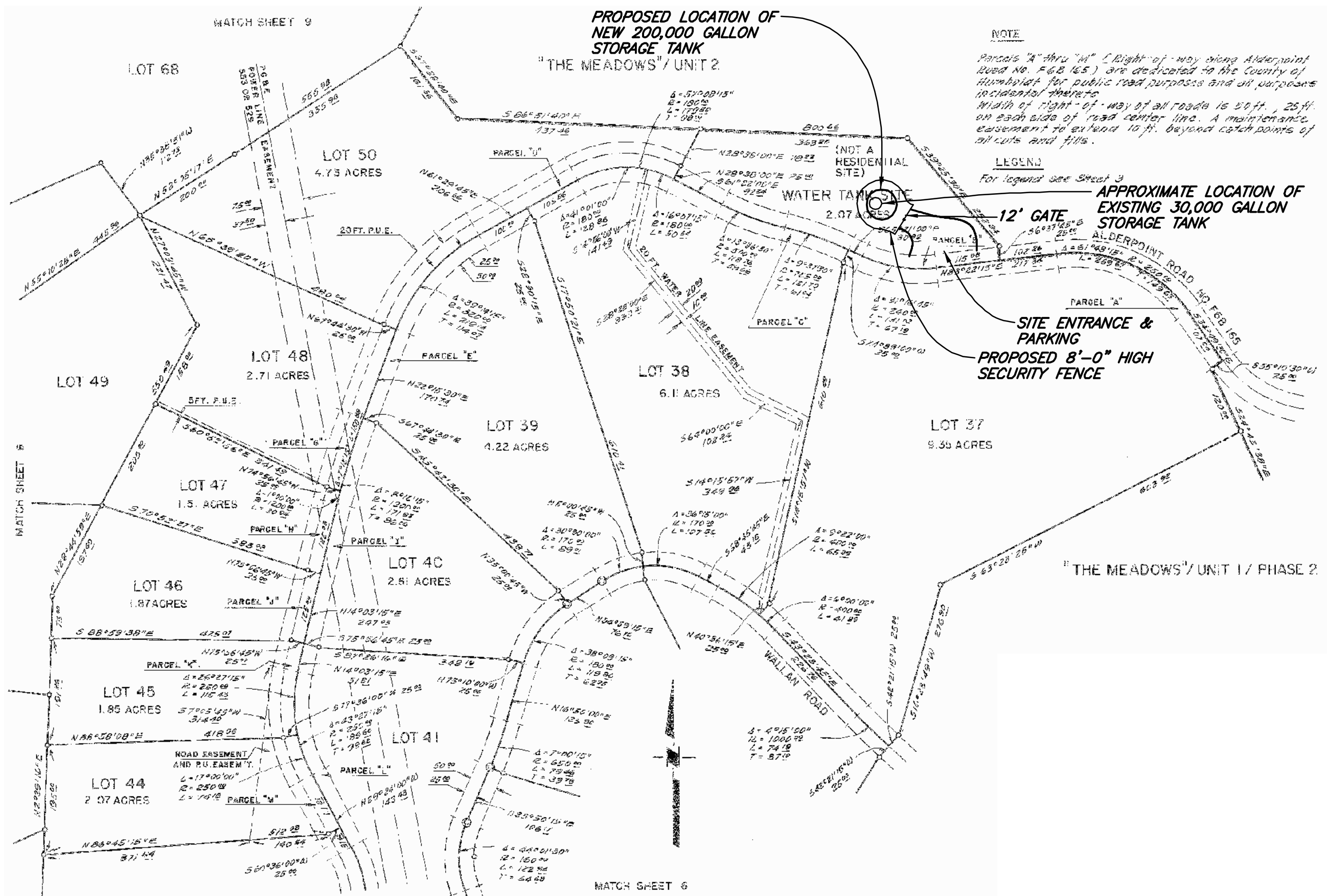
For legend see Sheet 3

APPROXIMATE LOCATION OF  
EXISTING 30,000 GALLON  
STORAGE TANK

12' GATE

SITE ENTRANCE &  
PARKING  
PROPOSED 8'-0" HIGH  
SECURITY FENCE

"THE MEADOWS" / UNIT 1 / PHASE 2



MATCH SHEET 6



\\az\eng\Projects\2012\012222-GSD-Scoping\Drawings - SAVED: 2/11/2013 10:55 AM - CNEWELL, PLOTTED: 2/14/2013 8:49 AM - CHRIS D. NEWELL

	Garberville Sanitary District Alderpoint Road Tank Evaluation Garberville, California	Existing Alderpoint Road Tank Site SHN 012222
	February 2013	012222-ALDER-TANK-SITE

tank location, as described during the site visit, was approximately 15 feet from the slope break, which appears adequate. In general, SHN did not observe any significant geologic issue that would affect the proposed project.

Based upon the existing layout and topography, the existing tank site could accommodate a tank of approximately 40 feet in diameter. Assuming a 20-foot-sidewater depth, the site would easily accept a new tank in the 190,000- to 200,000-gallon range, increasing the total storage capacity to approximately 460,000 gallons. Increasing the total storage capacity on the north side of Bear Canyon will more evenly distribute the storage within the geographical boundaries of the system and supply the 30% of the customers with adequate water storage. Eventually the District should consider constructing additional storage on the south side of Bear Canyon.

The placement of a 40-foot-diameter tank at the existing site would require the removal of the existing tank and excavation of 3 to 5 feet of material to provide a suitable flat surface area large enough to place the proposed tank. Decreasing the tank invert elevation by 3 feet would allow for the 20-foot-sidewater depth without increasing the maximum water surface elevation from that of the existing tank. Maintaining the water surface elevation will maintain the existing pressure zone downstream of the tank. The proposed tank would require additional freeboard to allow for the standing wave during seismic events, which will require the overall height of the tank to be increased.

The proposed tank location will require the removal of a limited number of existing trees, but screening of the new tank from Alderpoint Road and adjacent properties will remain. SHN has contacted Pacific Tank Solutions to request a proposal for the installation of a 200,000-gallon glass-fused-to-steel tank (See Attachment 1).

## **Options and Recommendations**

Based on our field investigation, SHN recommends the District replace the existing 30,000-gallon Alderpoint reservoir with a 190,000- to 200,000-gallon steel reservoir. The addition of the new tank will provide the District with the additional storage capacity to meet the CDPH storage requirement as well as removing the existing failing tank. See Figure 1 for the proposed site plan.

There are three options for the construction of the steel reservoir: 1) a conventional bolted steel tank, 2) a welded steel tank, and 3) a glass-fused-to-steel bolted tank. Although the conventional bolted steel tank would be the least cost of construction, it also has the shortest life expectancy and a higher operation and maintenance cost based on the need for frequent painting of the tank. A welded steel tank has a longer life expectancy, but also comes with the high cost of repainting every 10 to 15 years. The glass-fused-to-steel tank has a slightly higher initial capital cost, but has a much lower cost of maintenance, as the coated steel tank does not require repainting. See Attachment 1 for additional detail.

Due to the increased size and height of the proposed tank, additional screening elements should be considered to minimize the visual impacts of the larger tank. These measures could include the color selection of the tank and additional vegetation or fence to screen the site. Any of the tank options can be constructed with a variety of colors to provide additional screening and aesthetics.

The site development should include the improvement of the site entrance and parking area, and the installation of a security fence around the tank location. The proposed site does provide for a limited area for construction laydown and equipment staging. Additional adjacent property may be required during construction. The construction methods associated with the glass-fused-to-steel tank requires a smaller staging area, as large cranes are not required.

Increasing the volume of the Alderpoint Road tank will place a significant portion of the District's storage on the north side of Bear Canyon. This redistribution of storage will rely on the existing aerial crossing to both feed the Alderpoint Road area and backfeed the downtown area during periods of high use. Locating a large portion of the District's storage to the north of Bear Canyon will require the relocation or replacement of the aerial crossing in order to increase the reliability of the water supply to and from the downtown area.

In December 2010, David Lindberg, CEG performed a field investigation of the water line route adjacent to the landslide in Bear Canyon. In a letter to the District, dated December 30, 2010, Mr. Lindberg noted that the area around the existing aerial crossing continued to be unstable and recommended the existing aerial crossing be relocated to provide long-term reliability of the water supply to the north side of Bear Canyon. Mr. Lindberg recommended the aerial be located to more stable area east of the existing crossing.

A proposed alternate route for the relocation of the water supply line would be to route the supply line from the existing distribution system along Redwood Drive to Alderpoint Road, over Highway 101, along Alderpoint Road to the Alderpoint Road Pump Station. The placement of the water supply line within the road rights-of-way would provide for a reliable and easily accessible route eliminating the more difficult aerial crossing.

The projected project costs itemized below do not include the costs associated with the relocation of the existing aerial.

## **Environmental Compliance and Permitting**

Based on the above project understanding, California Environmental Quality Act (CEQA) compliance is anticipated to consist of an initial study and a mitigated negative declaration. Particular attention should be given to the potential impacts associated with aesthetics, biological resources, cultural resources, and growth inducement.

A biological report will need to be conducted to evaluate the biological resources and habitat types present in the project vicinity. The biological report should include a review of the California Natural Diversity Database for special status species that may be impacted by the project. The biological report should identify potential project impacts to biological resources and should recommend suitable mitigation measures to minimize the project's effects. Seasonally appropriate rare plant surveys are recommended, particularly for disturbance-tolerant species. Nesting bird surveys may be necessary, depending on the timing of construction.

To evaluate the project's effect on aesthetics, a photo simulation of the new tank could be useful, although that decision should be made during the CEQA process. This would involve

identification of key viewpoints from which the project site can be observed, documentation of existing views from these points, and preparation of simulations that depict the view from these points with the proposed tank in place.

The North Coastal Information Center, local tribes, and the State Office of Historic Preservation should be contacted in order to evaluate the potential for the project to impact cultural resources.

Construction of the water tank and grading associated with construction of the tank is exempt from Humboldt County building permit and grading permit requirements (California Government Code section 53091). However, grading permit requirements would apply to work associated with improvements to the access road and parking area.

Likewise, project activities associated with water tank construction, storage, treatment, or transmission are exempt from Humboldt County Planning Division permit requirements (California Government Code section 53091). However a permit from the Planning Division would be required if sensitive habitats were affected, such as if the access road required a stream crossing or work in wetlands.

An encroachment permit will need to be acquired from Humboldt County Department of Public Works, Land Use Division for work within the County's right-of-way.

These recommendations are preliminary, based upon the current project understanding. Permitting agencies should be contacted once a detailed project description and preliminary design have been developed, to ensure that all applicable permit requirements are met.

### **Projected Project Costs**

Planning and Environmental: .....	\$ 25,000
Property Acquisition & Permitting .....	\$ 5,000
Surveying .....	\$ 5,000
Geotechnical Investigation .....	\$ 10,000
Pre engineering .....	\$ 7,500
Engineering.....	\$ 45,000
Construction .....	\$310,000*
Construction Management .....	\$ 20,000
GSD Administration.....	\$ 8,500
<u>Subtotal.....</u>	<u>\$436,000</u>
<u>Contingency (15%).....</u>	<u>\$ 65,500</u>
Total .....	\$501,500

\* Based on cost proposal provided by Pacific Tank Solutions. See Attachment 1.

The project projected costs are based on 2013 dollars and should be escalated by 3.5 percent per year to the date of construction to account for the projected rate of inflation. The projected rate would increase the overall cost of the project by approximately \$17,000 per year beyond 2013.

Jennie Short  
Alderpoint Road Tank Supplemental Project Report, GSD, Garberville, CA  
February 14, 2013  
Page 6

Please call me if you have any questions or if I can be of further assistance.

Sincerely,

**SHN Consulting Engineers & Geologists, Inc.**



Michael C. Veach  
Project Engineer  
707-269-1047

MCV:lms

Attachment 1: Pacific Tank Solutions Cost Proposal

**Attachment 1**

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**Pacific Tank Solutions Cost Proposal**



## Budgetary Proposal

November 30, 2012

### Garberville Sanitary District

Attn: Mike Veach and Jenny Short

**Subject: Proposal #1211048– Alderpoint Tank**  
CST Storage 128,000 gallons Steel Bolted Tanks of Various Coatings and Floor Types.

Dear Mike & Jenny;

Pacific States Environmental Contractors Inc. and Pacific Tank Solutions (jointly referred to as Pacific) are pleased to respectfully submit this Budgetary Proposal for the installation of Steel Bolted Tank Options for the Alderpoint Tank Project. Options have been provided for Glass Fused to Steel and Epoxy Coated Tanks with Short Starter embedded concrete foundation (concrete floor) and steel floors. Additionally tank color options are provided for standard Cobalt Blue and optional Forrest Green for Glass Tanks, and standard Tan and optional Forrest Green on Epoxy Tanks.

These tanks have been designed based on the verbal preliminary design information provided by Garberville Sanitary District. Final tank design and price impacts will be completed based on final system design, detailed chemical and physical data on the tank contents, and a site specific geotechnical report.

It should be noted that these tanks will require significant freeboard because of the possibility of significant seismic activity in the proposed area. The freeboard recommended exceeds the calculated sloshing wave height.

### Scope of Work

- Provide Standard Engineered Drawings from the Tank Manufacturer CST, stamped by a California Registered Professional Civil Engineer for the foundation and tank designs.
- Furnish (US Manufactured) and install steel bolted storage tanks (see specifications at the end of this proposal); tank structures and appurtenances as listed.
- The price includes all required labor, materials, taxes and equipment.
- Demolition of existing Redwood Tank – tank materials to be removed by others (foundation not included).
- Options have been provided for ring wall (steel floor) and concrete slab (concrete floor) foundations. If foundations provided by others tank price can be installed for price as listed.
- Minor Site grading to accommodate foundation included.

### Tank #1 – Cobalt Blue Glass Fused to Steel with Steel Floor

*Pacific Tank Solutions*  
11555 Dublin Boulevard, Dublin CA 94568  
Phone (925) 803-4333, Fax (925) 803-4334  
Pacific States Environmental Contractors, Inc. License Number: #723241A-HAZ, C-21, ASB



1. **Installation of One (1) Tank of approximately 128,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. Steel Floor with ½" asphalt impregnated fiberboard.
3. Exterior & Interior Coating: Glass Fused to Steel
4. Exterior Tank Color: Cobalt Blue
5. Temcor Dome Roof
6. Full Height Mechanical Level Indicator
7. Tank Penetrations:
  - a. 1 -- 6" x 6" Inlet Nozzle, exterior, FxF, CS Epoxy
  - b. 1 -- 8" x 6" Outlet Nozzle, exterior, FxF, CS Epoxy
  - c. 1 -- 8" x 6" Overflow Nozzle, exterior FxF, CS Epoxy with 10 ft of 8" downcomer pipe including one 90 degree fitting and one 45 degree fitting all CS Epoxy.
  - d. 1 – 4" Drain in sump.

#### **Tank #2 – Forrest Green Glass Fused to Steel with Steel Floor**

1. **Installation of One (1) Tank of approximately 128,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. All other items from Tank #1 remain the same.

#### **Tank #3 – Cobalt Blue Glass Fused to Steel with Concrete Floor**

1. **Installation of One (1) Tank of approximately 121,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. Short Starter foundation ring embedded in concrete foundation.
3. All other items from Tank #1 remain the same.

#### **Tank #4 – Forrest Green Glass Fused to Steel with Concrete Floor**

1. **Installation of One (1) Tank of approximately 121,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. Short Starter foundation ring embedded in concrete foundation.
3. All other items from Tank #1 remain the same.

#### **Tank #5– Tan or Forrest Green Epoxy Steel with Steel Floor**

1. **Installation of One (1) Tank of approximately 128,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. Exterior & Interior Coating: Epoxy
3. Exterior Tank Color: Tan or Forrest Green
4. All other items from Tank #1 remain the same.

#### **Tank #6– Tan or Forrest Green Epoxy Steel with Concrete Floor**

1. **Installation of One (1) Tank of approximately 121,700 gallons with a diameter of 41.96 ft and height of 19.94 ft. with 90" of Freeboard.** This freeboard meets or exceeds the calculated seismic sloshing wave height.
2. Short Starter foundation ring embedded in concrete foundation.
3. Exterior & Interior Coating: Epoxy
4. Exterior Tank Color: Tan or Forrest Green
5. All other items from Tank #1 remain the same.

### **Budgetary Tank Proposal**

The proposed budgetary installed cost for the design, procurement and installation of the above tanks is:

<b><u>Tank #1 - One (1) Cobalt Blue Glass with Steel Floor -</u></b>	<b><u>\$ 262,000.00</u></b>
<b><u>Ring Foundation for Steel Floor -</u></b>	<b><u>\$ 35,700.00</u></b>
<b><u>Total One (1) Cobalt Blue Glass with Steel Floor -</u></b>	<b><u>\$ 297,700.00</u></b>
<b><u>Tank #2 - One (1) Forrest Green Glass with Steel Floor -</u></b>	<b><u>\$264,500.00</u></b>
<b><u>Ring Foundation for Steel Floor -</u></b>	<b><u>\$ 35,700.00</u></b>
<b><u>Total One (1) Forrest Green Glass with Steel Floor -</u></b>	<b><u>\$ 300,200.00</u></b>
<b><u>Tank #3 - One (1) Cobalt Blue Glass with Concrete Floor -</u></b>	<b><u>\$219,300.00</u></b>
<b><u>Concrete Slab Foundation for Concrete Floor -</u></b>	<b><u>\$ 69,500.00</u></b>
<b><u>Total One (1) Cobalt Blue Glass with Concrete Floor -</u></b>	<b><u>\$ 288,800.00</u></b>
<b><u>Tank #4 - One (1) Forrest Green Glass with Concrete Floor -</u></b>	<b><u>\$221,800.00</u></b>
<b><u>Concrete Slab Foundation for Concrete Floor -</u></b>	<b><u>\$ 69,500.00</u></b>
<b><u>Total One (1) Forrest Green Glass with Concrete Floor -</u></b>	<b><u>\$ 291,300.00</u></b>
<b><u>Tank #5 - One (1) Epoxy with Steel Floor -</u></b>	<b><u>\$238,300.00</u></b>
<b><u>Ring Foundation for Steel Floor -</u></b>	<b><u>\$ 35,700.00</u></b>
<b><u>Total One (1) Epoxy with Steel Floor -</u></b>	<b><u>\$ 274,000.00</u></b>
<b><u>Tank #6 - One (1) Epoxy with Concrete Floor -</u></b>	<b><u>\$ 204,600.00</u></b>
<b><u>Concrete Slab Foundation for Concrete Floor -</u></b>	<b><u>\$ 69,500.00</u></b>
<b><u>Total One (1) Epoxy with Concrete Floor -</u></b>	<b><u>\$ 274,100.00</u></b>

Pacific will furnish all labor, materials, equipment and incidentals required to design, fabricate and erect the above referenced factory coated bolted steel storage tank(s), and tank appurtenances as shown in this scope of



work. The steel tank would be erected on the concrete foundations designed by the steel tank manufacturer. The design, materials, fabrication and methods of construction shall conform to the requirements of the AWWA- D103-09 for Factory Coated Bolted Steel Tanks.

### Qualifications & Conditions

- CST provides a PDF submittal package that includes State of California PE stamped drawing for the tank and foundations including associated engineering calculations and appurtenances details. Pacific can provide non-engineer and unstamped CAD informational drawings that show a plan view, sectional views, and flat panel views that show proposed locations of connections and tank vertical and horizontal seams for the tank. Any additional drawings or stamps may be provided at an additional cost.
- This proposal is based on standard CST tank sizes and appurtenances as listed and is intended to comply with all project requirements. Any items or specifications not specifically mentioned are not part of this Proposal and the customer is responsible for verifying all tank specification & plan compliance.
- GC or Owner to provide unloading, site sanitary facilities, accessible job site access, staging area (50' from tank site sufficient in size for tank staging), and dumpster.
- Site is assumed to be reasonably flat and level without obstructions with unrestricted access.
- Freight is included FOB to Site.
- All materials included in this proposal to be shipped to site on same freight delivery.
- All tanks on this proposal to be built together in one construction and mobilization sequence.
- Safety – price is based on using standard tank jacks. We have not included a full time safety person and the Pacific Foreman will act as our on-site safety representative. It is Pacific's understanding that our tanks are a non-permit confined space as long as the wall panels allow access to the work area. Site specific safety training or Fire watch is not included.
- Pricing includes;
  - One (1) mobilization to the site for foundation support.
  - One (1) mobilization for tank erections.
  - One (1) mobilization for testing.
  - Any additional mobilizations to be billed at \$2,500.
- Schedule – Pacific will provide submittals within 2 – 3 weeks of receipt of executed tank order. Estimated Fabrication Schedule is;
  - 8 - 10 Weeks – Delivery of tank material to site following approval of submittals.
  - Tank Erections; Approximately 5 weeks - allow approximately 2 weeks for curing after foundation has been poured before tank erection.
  - 1 Week Testing/Service – Tank to be filled by others.
  - Schedule is based on a single crew working a standard M – F 40 hour work week.
  - Every effort will be made to meet schedule requirements. Pacific is not responsible for delays due to; adverse weather conditions, factory or shipping issues, building permits, or any other delay out of the control of Pacific.
- All nozzles #150 lb flange face with Grade 5 bolts and zero degree Hillside angle.
- Zinc bolts, nuts, washers and gaskets are standard. Interior plastic encapsulated head bolts for interior vertical and deck seams (steel floors) are included.
- Any and all appurtenances that are to be attached to the tank must be done by Pacific personnel or extra charges could possibly be incurred.
- Installation is by Pacific utilizes factory certified personnel. Erection will be performed in a workman like manner in accordance with the contract documents.
- All tank penetrations are field cut unless specifically noted as a factory cut.



- Ladders and manways are per CAL/OSHA Requirements, but do not include any local conditions that may apply.
- Governing Codes: CST Storage Company utilizes those standards, specifications and/or interpretations and recommendations of professionally recognized agencies and groups such as AWWA, API, ACI, AISI, AWS ASTM, Factory Mutual, U.S. Government, etc. as the basis in establishing its own design, fabrication and quality criteria, standards, practices, methods and tolerances.
- Project is priced with non-prevailing, non-union rates.
- Hydrostatic Testing is included with 72 hour notice. Owner is responsible to; blind and close all flanges and valves, fill the tank to level required for a continuous 24 hour period, and provide water sampling and testing. Once testing is complete owner is responsible for emptying and disposal of water (if required).
- Payment Terms:
  - 30% upon commencement of Engineering Submittals.
  - 30% upon shipment of materials.
  - 30% upon tank erection.
  - 10% retention due within 30 days following completion of tank and testing.
- Warranty is standard 10 year on materials and installation for Glass tanks with CST standard Cathodic Protection for storage of only municipal water or wastewater. Annual Cathodic Protection inspections and tank inspections at 1, 3, 6 & 9 years are required (inspections cost are not included). Copy of warranty can be provided on request.
- Warranty is standard 1 year on materials and workmanship for Epoxy tanks for storage of only municipal water or wastewater (a copy can be provided on request).
- The prices quoted in this document are valid for 30 days from the date of this document for Carbon Steel Tanks and associated fittings. After these expiration dates, tank and associated fitting prices must be re-quoted. Delivery must be accepted within 120 days, unless delayed by CST Storage.
- Indemnification in contract documents to be based on proportionate fault.
- Insurance rates based on PSEC standard insurance (a copy can be provided upon request) with no OCIP, Builders Risk or other unusual insurance requirements.
- Verification of Funds and Pre-Lien information will be required prior to mobilization.
- This proposal is based on the stated parameters as listed only. If any changes are made to these parameters, the proposal is subject to change.
- This proposal (or its entire specifications, terms, and conditions) will be made part of any subsequent contract.

#### **Foundation Information: Optional Foundation Pricing Included**

Steel Floor - Ring foundation - In the absence of a soils report, Pacific as assumed the foundation to be the following;

- 18" wide by 2' deep perimeter ring.
- #4 Rebar hoops at 12" O.C. with six #4 longitudinal bars in perimeter rings.
- 6" of Class II Aggregate Base inside of rings.
- All concrete to be 3,000 psi at 28 days.

Concrete Slab Floor foundation - In the absence of a soils report, Pacific as assumed the foundation to be the following;

- 18" wide by 2' deep perimeter ring.



- #4 Rebar hoops at 12" O.C. with six #4 longitudinal bars in perimeter rings.
- 6" of Class II Aggregate Base inside of rings.
- 6" thick slab with single mat of #4 bars at 12" on center each direction.
- Two #8 Rebar hoops around short starter rings.
- All concrete to be 3,000 psi at 28 days.

### Exclusions

- Bonding but can be provided for 1% Extra.
- Permits & Fees.
- Exterior Piping, Valves and Fittings – Nozzle installation is to the first outer flange connection from tank with the exception of the listed overflow downcomer pipe.
- Interior Piping and Fittings.
- Level Control Instrumentation or Transmitters.
- Cathodic Protection on Epoxy tanks.
- Obstruction Lighting or Beacon Equipment.
- Mechanical or electrical systems.
- Survey & Geotechnical Testing.
- Sub grade drains or piping.
- SWPP and erosion control plans, installation, monitoring or maintenance.
- Tank Insulation.
- Interior Ladders, Perimeter Railings on Roof, or Platforms except as listed.
- Mixers and accessories.
- Traffic Control other than for our own work.
- Any items not specifically listed in this quote.

Should you have any questions or would like to meet to discuss this proposal, please contact me at (925) 719-4958.

Sincerely,

**PACIFIC TANKS SOLUTIONS and  
PACIFIC STATES ENVIRONMENTAL CONTRACTORS, INC.**

**Bryant Grissette**  
Northern California Sales Manager  
[bgrissette@pacifictanksolutions.com](mailto:bgrissette@pacifictanksolutions.com)



## Tank #1 Specifications

**Quote No.** 7125120 **Revision:** 1 **Release:** 0  
**Date:** 11/30/2012 2:29:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Phone:**  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.94 ft / 6079 mm  
**Expandable Height:** N/A  
**Material/Coating:** Glass Fused to Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Steel Floor  
**Elevated Height:** N/A  
**Tank Design Code:** AWWA D-103  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12

**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sqr)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

1 - Standard Pipe connection 4in (102mm) Pipe Connection  
1 - Link Seal 4in (102mm)  
1 - 36 in (914 mm) Manway Thick  
1 - Standard Center Sump



Sealer - Manus (std) Black-115%

Glass Cathodic Protection based on: Water 5000 ohm-cm, Waste Water 1500 ohm-cm resistivity - Designed and supplied by ESPC # of Anodes - 3

Ladder Component Material - Standard

1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade

1 - Ladder Lockable Device

1 - Ladder Platform

Shell Sheet Hardware - Standard

Tank Exterior Color - Cobalt Blue

Tank Interior Coating - Vitrium

Construction Method - Jack Built

This structure includes 3 rings of web trusses

Web Trusses/Angles - Standard

1 - 1 in. Anchor Chairs - Standard

### **Dome Accessories**

1 Dome Walkway

1 30 Inch Square Access Hatch

1 24 Inch Gravity Vent

1 2-7 Foot Guard Rails at Hatch

25 ft Non-Skid added to Vent Panels

Silicone Gasket

### **Special Requirements**

**Weight:** 25,484 lbs 11,559 kg

**Capacity:** 128,674 U.S. gal. 487 cu-m (includes 90" freeboard)

**Temcor Dome Weight:** 3,062 lbs 1,389 kg

**NOTE:** Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.

## Tank #2 Specifications

**Quote No.** 7125120 **Revision:** 2 **Release:** 0  
**Date:** 11/30/2012 2:31:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.94 ft / 6079 mm  
**Expandable Height:** N/A  
**Material/Coating:** Glass Fused to Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Steel Floor  
**Elevated Height:** N/A  
**Tank Design Code:** **AWWA D-103**  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12  
**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sq)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

- 1 - Standard Pipe connection 4in (102mm) Pipe Connection
- 1 - Link Seal 4in (102mm)
- 1 - 36 in (914 mm) Manway Thick
- 1 - Standard Center Sump





Sealer - Manus (std) Black-115%

Glass Cathodic Protection based on: Water 5000 ohm-cm, Waste Water 1500 ohm-cm resistivity - Designed and supplied by ESPC # of Anodes - 3

Ladder Component Material - Standard

1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade

1 - Ladder Lockable Device

1 - Ladder Platform

Shell Sheet Hardware - Standard

Tank Exterior Color - Forest Green

Tank Interior Coating - Vitrium

Construction Method - Jack Built

This structure includes 3 rings of web trusses

Web Trusses/Angles - Standard

1 - 1 in. Anchor Chairs - Standard

### **Dome Accessories**

1 Dome Walkway

1 30 Inch Square Access Hatch

1 24 Inch Gravity Vent

1 2-7 Foot Guard Rails at Hatch

25 ft Non-Skid added to Vent Panels

Silicone Gasket

### **Special Requirements**

<b>Weight:</b>	<b>25,484 lbs</b>	<b>11,559 kg</b>
<b>Capacity:</b>	<b>128,674 U.S. gal.</b>	<b>487 cu-m (includes 90" freeboard)</b>
<b>Temcor Dome Weight:</b>	<b>3,062 lbs</b>	<b>1,389 kg</b>

**NOTE: Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.**

## Tank #3 Specifications

**Quote No.** 7125120 **Revision:** 3 **Release:** 0  
**Date:** 11/30/2012 2:33:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.26 ft / 5872 mm  
**Expandable Height:** N/A  
**Material/Coating:** Glass Fused to Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Short Starter  
**Elevated Height:** N/A  
**Tank Design Code:** **AWWA D-103**  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12  
**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sq)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

- 1 - Standard Pipe connection 4in (102mm) Pipe Connection
- 1 - Link Seal 4in (102mm)
- 1 - 36 in (914 mm) Manway Thick
- 1 - Standard Center Sump



Sealer - Manus (std) Black-115%

Glass Cathodic Protection based on: Water 5000 ohm-cm, Waste Water 1500 ohm-cm resistivity - Designed and supplied by ESPC # of Anodes - 8

Ladder Component Material - Standard

1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade

1 - Ladder Lockable Device

1 - Ladder Platform

Shell Sheet Hardware - Standard

Tank Exterior Color - Cobalt Blue

Tank Interior Coating - Vitrium

Construction Method - Jack Built

This structure includes 3 rings of web trusses

Web Trusses/Angles - Standard

### Dome Accessories

1 Dome Walkway

1 30 Inch Square Access Hatch

1 24 Inch Gravity Vent

1 2-7 Foot Guard Rails at Hatch

25 ft Non-Skid added to Vent Panels

Silicone Gasket

### Special Requirements

Weight:	18,745 lbs	8,503 kg
Capacity:	121,658 U.S. gal.	461 cu-m (includes 90" freeboard)
Temcor Dome Weight:	3,062 lbs	1,389 kg

**NOTE:** Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.

## Tank #4 Specifications

**Quote No.** 7125120 **Revision:** 4 **Release:** 0  
**Date:** 11/30/2012 2:34:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.26 ft / 5872 mm  
**Expandable Height:** N/A  
**Material/Coating:** Glass Fused to Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Short Starter  
**Elevated Height:** N/A  
**Tank Design Code:** AWWA D-103  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12  
**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sqr)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

- 1 - Standard Pipe connection 4in (102mm) Pipe Connection
- 1 - Link Seal 4in (102mm)
- 1 - 36 in (914 mm) Manway Thick
- 1 - Standard Center Sump



Sealer - Manus (std) Black-115%

Glass Cathodic Protection based on: Water 5000 ohm-cm, Waste Water 1500 ohm-cm resistivity - Designed and supplied by ESPC # of Anodes - 8

Ladder Component Material - Standard

1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade

1 - Ladder Lockable Device

1 - Ladder Platform

Shell Sheet Hardware - Standard

Tank Exterior Color - Forest Green

Tank Interior Coating - Vitrium

Construction Method - Jack Built

This structure includes 3 rings of web trusses

Web Trusses/Angles - Standard

### Dome Accessories

1 Dome Walkway

1 30 Inch Square Access Hatch

1 24 Inch Gravity Vent

1 2-7 Foot Guard Rails at Hatch

25 ft Non-Skid added to Vent Panels

Silicone Gasket

### Special Requirements

Weight:	18,745 lbs	8,503 kg
Capacity:	121,658 U.S. gal.	461 cu-m (includes 90" freeboard)
Temcor Dome Weight:	3,062 lbs	1,389 kg

**NOTE:** Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.

## Tank #5 Specifications

**Quote No.** 7125120 **Revision:** 5 **Release:** 0  
**Date:** 11/30/2012 3:03:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.94 ft / 6079 mm  
**Expandable Height:** N/A  
**Material/Coating:** Epoxy Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Steel Floor  
**Elevated Height:** N/A  
**Tank Design Code:** AWWA D-103  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12

**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sq)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

- 1 - Standard Pipe connection 4in (102mm) Pipe Connection
- 1 - Link Seal 4in (102mm)
- 1 - 36 in (914 mm) Manway Thick
- 1 - Standard Center Sump



Sealer - Manus Capital Tan-115%  
Ladder Component Material - Standard  
1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade  
1 - Ladder Lockable Device  
1 - Ladder Platform  
Shell Sheet Hardware - Standard  
Tank Exterior Color – Tan or Forrest Green  
Tank Interior Coating - Kuo-Ion™ 5 mils  
Tank Exterior Coating - Kuo-Ion™ w/urethane topcoat  
Construction Method - Jack Built  
This structure includes 3 rings of web trusses  
Web Trusses/Angles - Standard  
1 - 1 in. Anchor Chairs - Standard

#### **Dome Accessories**

1 Dome Walkway  
1 30 Inch Square Access Hatch  
1 24 Inch Gravity Vent  
1 2-7 Foot Guard Rails at Hatch  
25 ft Non-Skid added to Vent Panels  
Silicone Gasket

#### **Special Requirements**

**Weight:** 25,424 lbs 11,532 kg  
**Capacity:** 128,674 U.S. gal. 487 cu-m (includes 90" freeboard)  
**Temcor Dome Weight:** 3,062 lbs 1,389kg

**NOTE:** Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.

## Tank #6 Specifications

**Quote No.** 7125120 **Revision:** 7 **Release:** 0  
**Date:** 11/30/2012 3:06:00 PM

### Project Information

**Name:** 200,000 Gal Alderpoint Tank  
**Address:** Garberville, California 95542 USA  
**Owner Name:** Garberville Sanitation District  
**Tank Type:** Storage Tank  
**Project Type:** Municipal Water Supply  
**Product Stored:** Potable designed for range: 6 to 8pH for ambient temperature  
**Type of Business:** Water Supply

### Project Specifications

**Qty of Tanks in Bid:** 1  
**Tank Diameter:** 41.96 ft / 12790.03 mm  
**Tank Height:** 19.26 ft / 5872 mm  
**Expandable Height:** N/A  
**Material/Coating:** Epoxy Steel  
**Roof Type:** Temcor Dome  
**Foundation Type:** Short Starter  
**Elevated Height:** N/A  
**Tank Design Code:** AWWA D-103  
**Seismic Design:** AWWA D-103 09  
    **Seismic Site Class:** D  
    **Seismic Use Group:** III  
    **Ss:** 1.970  
    **S1:** .917  
    **TL:** 12  
**Wind Design:** AWWA D-103 09  
**Wind Importance Factor:** 1.15  
**Exposure Category:** C  
**Wind Speed:** 100 mph (44.7 m/s)  
**Roof Snow Load:** 25 psf (122 kg/m sq)  
**Freeboard:** 90 in (2286 mm)  
**Specific Gravity:** 1  
**Internal Tank Design**  
    **Pressure - water column:** 0 in (0mm)  
    **Vacuum - water column:** 0 in

### Project Accessories

1 - Standard Pipe connection 4in (102mm) Pipe Connection  
1 - Link Seal 4in (102mm)  
1 - 36 in (914 mm) Manway Thick  
1 - Standard Center Sump





Sealer - Manus Capital Tan-115%  
Ladder Component Material - Standard  
1 - Aluminum Ladder with Cage and Bracket Assembly  
Extension To Grade  
1 - Ladder Lockable Device  
1 - Ladder Platform  
Shell Sheet Hardware - Standard  
Tank Exterior Color - Tan or Forrest Green  
Tank Interior Coating - Kuo-Ion™ 5 mils  
Tank Exterior Coating - Kuo-Ion™ w/urethane topcoat  
Construction Method - Jack Built  
This structure includes 3 rings of web trusses  
Web Trusses/Angles - Standard

#### **Dome Accessories**

1 Dome Walkway  
1 30 Inch Square Access Hatch  
1 24 Inch Gravity Vent  
1 2-7 Foot Guard Rails at Hatch  
25 ft Non-Skid added to Vent Panels  
Silicone Gasket

#### **Special Requirements**

Weight:                               18,585 lbs    8,430 kg  
Capacity:                           121,658 U.S. gal.   461 cu-m (includes 90" freeboard)  
Temcor Dome Weight:   3,062 lbs    1,389 kg

**NOTE: Tank design and pricing are based on CST dome/knuckle roof loads.  
Design and price are subject to revision if actual loads are different.**

## APPENDIX B

### **California Department of Fish and Wildlife California Natural Diversity Database Occurrence Report**



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



**Map Index Number:** 63231

**EO Index:** 63323

**Key Quad:** Garberville (4012317)

**Element Code:** AAABH01050

**Occurrence Number:** 435

**Occurrence Last Updated:** 2005-11-28

**Scientific Name:** *Rana boylei*

**Common Name:** foothill yellow-legged frog

**Listing Status:**       **Federal:** None

**Rare Plant Rank:**

**State:** None

**Other Lists:**       BLM\_S-Sensitive  
                          DFG\_SSC-Species of Special Concern  
                          IUCN\_NT-Near Threatened  
                          USFS\_S-Sensitive

**CNDDDB Element Ranks:**   **Global:** G3

**State:** S2S3

**General Habitat:**

PARTLY-SHADED, SHALLOW STREAMS & RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS.

**Micro Habitat:**

NEED AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING. NEED AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.

**Last Date Observed:** 2005-10-07

**Occurrence Type:** Natural/Native occurrence

**Last Survey Date:** 2005-10-07

**Occurrence Rank:** Good

**Owner/Manager:** DPR-RICHARDSON GROVE SP

**Trend:** Unknown

**Presence:** Presumed Extant

**Location:**

NORTH CREEK, JUST UPSTREAM OF SOUTH FORK OF THE EEL RIVER, RICHARDSON GROVE STATE PARK.

**Detailed Location:**

**Ecological:**

HABITAT CONSISTS OF RIPARIAN/OLD GROWTH REDWOOD FOREST.

**Threats:**

**General:**

2 ADULTS OBSERVED ON 7 OCT 2005.

**PLSS:** T05S, R03E, Sec. 13 (H)

**Accuracy:** 80 meters

**Area (acres):** 0

**UTM:** Zone-10 N4430679 E432186

**Latitude/Longitude:** 40.02360 / -123.79471

**Elevation (feet):** 480

**County Summary:**

Humboldt

**Quad Summary:**

Garberville (4012317)

**Sources:**

REY05F0001 REYNOLDS, C. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR RANA BOYLII 2005-10-07



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



<b>Map Index Number:</b> 33529	<b>EO Index:</b> 29642
<b>Key Quad:</b> Garberville (4012317)	<b>Element Code:</b> ABNKC01010
<b>Occurrence Number:</b> 200	<b>Occurrence Last Updated:</b> 1996-10-29

<b>Scientific Name:</b> <i>Pandion haliaetus</i>	<b>Common Name:</b> osprey
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> None	<b>Other Lists:</b> CDF_S-Sensitive
<b>CNDDDB Element Ranks:</b>	DFG_WL-Watch List
<b>Global:</b> G5	IUCN_LC-Least Concern
<b>State:</b> S3	

<b>General Habitat:</b> OCEAN SHORE, BAYS, FRESH-WATER LAKES, AND LARGER STREAMS.	<b>Micro Habitat:</b> LARGE NESTS BUILT IN TREE-TOPS WITHIN 15 MILES OF A GOOD FISH-PRODUCING BODY OF WATER.
--	---

<b>Last Date Observed:</b> 1996-XX-XX	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1996-XX-XX	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
WEST SIDE OF THE SOUTH FORK EEL RIVER, BETWEEN RICHARDSON GROVE STATE PARK AND BENBOW LAKE SRA, SOUTH OF GARBERVILLE.

**Detailed Location:**

**Ecological:**

NEST TREE IS A LIVE DOUGLAS FIR (SEED TREE); NEST IS A PLATFORM STICK NEST. SITE LACKS PERCH TREES & SCREENING TREES OF ANY SIGNIFICANCE. NEST SITE IS LOCATED WITHIN 100 FEET OF A TRAVELED ROAD & 200FT NW OF THE BOUNDARY OF A THP.

**Threats:**

**General:**

ACTIVE NEST SITE IN 1995 AND 1996.

<b>PLSS:</b> T05S, R03E, Sec. 12 (H)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4432537 E433225	<b>Latitude/Longitude:</b> 40.04042 / -123.78273	<b>Elevation (feet):</b> 500

**County Summary:**

Humboldt

**Quad Summary:**

Garberville (4012317)

**Sources:**

DFG96U0002 DEPARTMENT OF FISH & GAME - EUREKA - EXCERPT FROM: THP 1-96-408 HUM REGARDING PANDION HALIAETUS (NEST SITE) 1996-XX-XX



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



<b>Map Index Number:</b> 39166	<b>EO Index:</b> 34168
<b>Key Quad:</b> Garberville (4012317)	<b>Element Code:</b> ABNKC01010
<b>Occurrence Number:</b> 224	<b>Occurrence Last Updated:</b> 1998-07-15

<b>Scientific Name:</b> <i>Pandion haliaetus</i>	<b>Common Name:</b> osprey
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> None	<b>Other Lists:</b> CDF_S-Sensitive
<b>CNDDDB Element Ranks:</b>	DFG_WL-Watch List
<b>Global:</b> G5	IUCN_LC-Least Concern
<b>State:</b> S3	

<b>General Habitat:</b> OCEAN SHORE, BAYS, FRESH-WATER LAKES, AND LARGER STREAMS.	<b>Micro Habitat:</b> LARGE NESTS BUILT IN TREE-TOPS WITHIN 15 MILES OF A GOOD FISH-PRODUCING BODY OF WATER.
--	---

<b>Last Date Observed:</b> 1998-06-09	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1998-06-09	<b>Occurrence Rank:</b> Excellent
<b>Owner/Manager:</b> DPR-BENBOW LAKE SRA	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
WEST SIDE OF BENBOW LAKE, NEAR THE DAM, 2.5 MILES SOUTH OF GARBERVILLE

**Detailed Location:**  
NEST IS VISIBLE FROM THE STONE BRIDGE.

**Ecological:**

**Threats:**

**General:**

NOT LOCATED DURING A SURVEY IN 1993. ACTIVE IN 1996 AND 1998; INACTIVE IN 1997.

<b>PLSS:</b> T04S, R03E, Sec. 36 (H)	<b>Accuracy:</b> 1/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4435275 E431964	<b>Latitude/Longitude:</b> 40.06499 / -123.79780	<b>Elevation (feet):</b> 450

<b>County Summary:</b> Humboldt	<b>Quad Summary:</b> Garberville (4012317)
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**Sources:**

COL97F0003	COLEMAN, L. (CALIFORNIA DEPARTMENT OF FISH AND GAME-REGION 1) - FIELD SURVEY FORM FOR PANDION HALIAETUS (NEST SITE) 1997-07-14
LOV98F0002	LOVERTI, V. (CALIFORNIA DEPARTMENT OF FISH AND GAME-REGION 1) - FIELD SURVEY FORM FOR PANDION HALIAETUS (NEST SITE) 1998-06-09



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



<b>Map Index Number:</b> 66495	<b>EO Index:</b> 66610
<b>Key Quad:</b> Garberville (4012317)	<b>Element Code:</b> AMACC10010
<b>Occurrence Number:</b> 151	<b>Occurrence Last Updated:</b> 2006-10-02

<b>Scientific Name:</b> <i>Antrozous pallidus</i>	<b>Common Name:</b> pallid bat
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> None	<b>Other Lists:</b>
<b>CNDDB Element Ranks:</b>	BLM_S-Sensitive
<b>Global:</b> G5	DFG_SSC-Species of Special Concern
<b>State:</b> S3	IUCN_LC-Least Concern
	USFS_S-Sensitive
	WBWG_H-High Priority

<b>General Habitat:</b> DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.	<b>Micro Habitat:</b> ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.
---	--

<b>Last Date Observed:</b> 1936-09-09	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1936-09-09	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> DPR-RICHARDSON GROVE SP, UNK	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
RICHARDSON GROVE.

**Detailed Location:**  
MAPPED ACCORDING TO LAT/LONG COORDINATES GIVEN IN MANIS, WITH UNCERTAINTY OF 2105.022M.

**Ecological:**

**Threats:**

**General:**

1 MALE SPECIMEN COLLECTED BY WARD C. RUSSELL AND EMANUEL FRITZ ET AL. ON 9 SEP 1936, MVZ #72100.

<b>PLSS:</b> T05S, R03E, Sec. 13 (H)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4429876 E432250	<b>Latitude/Longitude:</b> 40.01637 / -123.79387	<b>Elevation (feet):</b> 700

<b>County Summary:</b>	<b>Quad Summary:</b>
Humboldt	Garberville (4012317)

**Sources:**  
MAN04S0028 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF ANTROZOUS PALLIDUS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM MVZ, CAS, KU, UWBM, UMNH, LACM, MSB, FMNH, TTU, MSU. 2004-12-09



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



<b>Map Index Number:</b> 70690	<b>EO Index:</b> 71598
<b>Key Quad:</b> Garberville (4012317)	<b>Element Code:</b> ARAAD02030
<b>Occurrence Number:</b> 748	<b>Occurrence Last Updated:</b> 2008-01-10

<b>Scientific Name:</b> <i>Emys marmorata</i>	<b>Common Name:</b> western pond turtle
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> None	<b>Other Lists:</b>
<b>CNDDDB Element Ranks:</b>	BLM_S-Sensitive
<b>Global:</b> G3G4	DFG_SSC-Species of Special Concern
<b>State:</b> S3	IUCN_VU-Vulnerable
	USFS_S-Sensitive

<b>General Habitat:</b> A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.	<b>Micro Habitat:</b> NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.
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<b>Last Date Observed:</b> 2006-09-09	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2006-09-09	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> DPR-RICHARDSON GROVE SP	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
SOUTH FORK EEL RIVER, S OF BENBOW DRIVE, 0.60 MILES NE OF KAUFFMAN SPRING.

**Detailed Location:**  
**Ecological:**  
WATER LEVEL LOW AND SLOW MOVING WITH ABUNDANT EMERGENT BOULDERS, GRAVEL BAR AND DOWNED WOODY DEBRIS.

**Threats:**  
**General:**  
1ADULT (CL ~6") OBSERVED BASKING ON A LOG IN ABUNDANT EMERGENT WOODY DEBRIS.

<b>PLSS:</b> T05S, R03E, Sec. 12 (H)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4431400 E433299	<b>Latitude/Longitude:</b> 40.03018 / -123.78174	<b>Elevation (feet):</b> 400

<b>County Summary:</b> Humboldt	<b>Quad Summary:</b> Garberville (4012317)
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**Sources:**  
DFG07D0001 DEPARTMENT OF FISH & GAME - REGION 1 - WESTERN POND TURTLE OBSERVATIONS IN REGION 1. BIOS DATASET 313. 2007-04-13



**Occurrence Report**  
**California Department of Fish and Game**  
**California Natural Diversity Database**



**Map Index Number:** 70691

**EO Index:** 71599

**Key Quad:** Garberville (4012317)

**Element Code:** ARAAD02030

**Occurrence Number:** 749

**Occurrence Last Updated:** 2008-01-10

**Scientific Name:** *Emys marmorata*

**Common Name:** western pond turtle

**Listing Status:** **Federal:** None

**Rare Plant Rank:**

**State:** None

**Other Lists:** BLM\_S-Sensitive  
DFG\_SSC-Species of Special Concern  
IUCN\_VU-Vulnerable  
USFS\_S-Sensitive

**CNDDB Element Ranks:** **Global:** G3G4

**State:** S3

**General Habitat:**

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

**Micro Habitat:**

NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

**Last Date Observed:** 2006-09-08

**Occurrence Type:** Natural/Native occurrence

**Last Survey Date:** 2006-09-08

**Occurrence Rank:** Unknown

**Owner/Manager:** DPR-RICHARDSON GROVE SP

**Trend:** Unknown

**Presence:** Presumed Extant

**Location:**

SOUTH FORK EEL RIVER, 0.31 MILES N OF INTERSECTION OF INTERSECTION OF TWIN TREES ROAD & BENBOW DRIVE.

**Detailed Location:**

**Ecological:**

RIVER IS SLOW MOVING AND WATER LEVEL IS LOW. ABUNDANT GRAVEL BAR, EXPOSED BOULDERS, EMERGENT WOODY DEBRIS AND VEGETATION EXIST.

**Threats:**

**General:**

1 ADULT (CL ~6") OBSERVED BASKING ON A LOG PRESENT IN SLOW MOVING , SHALLOW WATER.

**PLSS:** T05S, R03E, Sec. 12 (H)

**Accuracy:** 80 meters

**Area (acres):** 0

**UTM:** Zone-10 N4432235 E433610

**Latitude/Longitude:** 40.03773 / -123.77819

**Elevation (feet):** 400

**County Summary:**

**Quad Summary:**

Humboldt

Garberville (4012317)

**Sources:**

DFG07D0001 DEPARTMENT OF FISH & GAME - REGION 1 - WESTERN POND TURTLE OBSERVATIONS IN REGION 1. BIOS DATASET 313. 2007-04-13





**Occurrence Report**  
**California Department of Fish and Game**  
**California Natural Diversity Database**



<b>Map Index Number:</b>	70692	<b>EO Index:</b>	71600
<b>Key Quad:</b>	Garberville (4012317)	<b>Element Code:</b>	ARAAD02030
<b>Occurrence Number:</b>	750	<b>Occurrence Last Updated:</b>	2008-01-10

<b>Scientific Name:</b>	<i>Emys marmorata</i>	<b>Common Name:</b>	western pond turtle
<b>Listing Status:</b>	<b>Federal:</b> None <b>State:</b> None	<b>Rare Plant Rank:</b>	
<b>CNDDB Element Ranks:</b>	<b>Global:</b> G3G4 <b>State:</b> S3	<b>Other Lists:</b>	BLM_S-Sensitive DFG_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive

**General Habitat:**  
 A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

**Micro Habitat:**  
 NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

<b>Last Date Observed:</b>	2006-09-16	<b>Occurrence Type:</b>	Natural/Native occurrence
<b>Last Survey Date:</b>	2006-09-16	<b>Occurrence Rank:</b>	Unknown
<b>Owner/Manager:</b>	DPR-RICHARDSON GROVE SP	<b>Trend:</b>	Unknown
<b>Presence:</b>	Presumed Extant		

**Location:**  
 SOUTH FORK EEL RIVER, E OF HUCKLEBERRY CAMPGROUND, RICHARDSON GROVE STATE PARK.

**Detailed Location:**  
**Ecological:**  
 HABITAT WITH ABUNDANT EXPOSED ROCK, LOGS AND GRAVEL BAR. WATER FLOW VERY LOW AND SLOW MOVING.

**Threats:**  
**General:**  
 1 ADULT (CL ~6.5") OBSERVED BASKING ON A LOG PRESENT IN SLOW MOVING POOL. TURTLE ESCAPED INTO THE WATER AND EMERGED AGAIN A FEW MINUTES LATER.

<b>PLSS:</b>	T05S, R03E, Sec. 13 (H)	<b>Accuracy:</b>	80 meters	<b>Area (acres):</b>	0
<b>UTM:</b>	Zone-10 N4430470 E432528	<b>Latitude/Longitude:</b>	40.02174 / -123.79068	<b>Elevation (feet):</b>	425

<b>County Summary:</b>	<b>Quad Summary:</b>
Humboldt	Garberville (4012317)

**Sources:**  
 DFG07D0001 DEPARTMENT OF FISH & GAME - REGION 1 - WESTERN POND TURTLE OBSERVATIONS IN REGION 1. BIOS DATASET 313. 2007-04-13



# Occurrence Report

## California Department of Fish and Game

### California Natural Diversity Database



<b>Map Index Number:</b> 47178	<b>EO Index:</b> 47178
<b>Key Quad:</b> Garberville (4012317)	<b>Element Code:</b> PMLILOU0F0
<b>Occurrence Number:</b> 6	<b>Occurrence Last Updated:</b> 2002-02-05

<b>Scientific Name:</b> <i>Erythronium revolutum</i>	<b>Common Name:</b> coast fawn lily
<b>Listing Status:</b>	<b>Rare Plant Rank:</b> 2.2
<b>Federal:</b> None	<b>Other Lists:</b>
<b>State:</b> None	
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G4	
<b>State:</b> S2S3	

<b>General Habitat:</b> BOGS AND FENS, BROADLEAFED UPLAND FOREST, NORTH COAST CONIFEROUS FOREST.	<b>Micro Habitat:</b> 0-1065M.
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<b>Last Date Observed:</b> 1929-04-14	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1929-04-14	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
SOUTH FORK EEL RIVER, NORTHERN COAST RANGES.

**Detailed Location:**  
HILLSIDE NEAR HUMBOLDT/MENDOCINO COUNTY LINE.

**Ecological:**  
ON HILLSIDE IN SHADE.

**Threats:**

**General:**  
NEEDS FIELDWORK.

<b>PLSS:</b> T05S, R03E, Sec. 24 (H)	<b>Accuracy:</b> nonspecific area	<b>Area (acres):</b> 137
<b>UTM:</b> Zone-10 N4428251 E433140	<b>Latitude/Longitude:</b> 40.00180 / -123.78329	<b>Elevation (feet):</b> 500

<b>County Summary:</b> Humboldt, Mendocino	<b>Quad Summary:</b> Piercy (3912387), Garberville (4012317)
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**Sources:**  
TRA29S0002 TRACY, J. - TRACY #8534 UC #1197652 1929-04-14

## APPENDIX C

### **California Native Plant Society Sensitive Plant Species Database Search**

California Native Plant Society's (CNPS) Sensitive Plant Species Database Search (Garberville Quad and the 8 adjacent quads)

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank	CESA	FESA	Elevation High (meters)	Elevation Low (meters)	CA Endemic
<i>Arabis mcdonaldiana</i>	McDonald's rockcress	Brassicaceae	perennial herb	1B.1	S2	G2	CE	FE	1800	135	F
<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>	Sonoma canescent manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2.1	G3G4T2	None	None	1675	180	T
<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	Ericaceae	perennial evergreen shrub	1B.1	S2?	G3T2?	None	None	1000	450	T
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	Fabaceae	perennial herb	1B.1	S3	G3	CE	None	800	180	T
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	Fabaceae	perennial herb	4.3	S3.3	G4T3	None	None	825	30	T
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	4.2	S3.2	G3	None	None	455	0	T
<i>Calamagrostis foliosa</i>	leafy reed grass	Poaceae	perennial herb	4.2	S3.2	G3	CR	None	1220	0	T
<i>Cardamine pachystigma</i> var. <i>dissectifolia</i>	dissected-leaved toothwort	Brassicaceae	perennial rhizomatous herb	1B.2	S3	G3G5T3Q	None	None	2100	255	T
<i>Castilleja affinis</i> ssp. <i>litoralis</i>	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	2.2	S2.2	G4G5T4	None	None	100	15	F
<i>Castilleja mendocinensis</i>	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	1B.2	S2.2	G2	None	None	160	0	F
<i>Coptis laciniata</i>	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	2.2	S3	G4G5	None	None	1000	0	F
<i>Didymodon norrisii</i>	Norris' beard moss	Pottiaceae	moss	2.2	S3S4	G3G4	None	None	1973	600	F
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	Onagraceae	perennial herb	4.3	S3.3	G3	None	None	1800	45	T
<i>Erigeron biolettii</i>	streamside daisy	Asteraceae	perennial herb	3	S3?	G3?	None	None	1100	30	T
<i>Eriogonum kelloggii</i>	Kellogg's buckwheat	Polygonaceae	perennial herb	1B.2	S2	G2	CE	FC	1250	579	T
<i>Erythronium revolutum</i>	coast fawn lily	Liliaceae	perennial bulbiferous herb	2.2	S2S3	G4	None	None	1600	0	F
<i>Gentiana setigera</i>	Mendocino gentian	Gentianaceae	perennial herb	1B.2	S1	G2	None	None	1065	490	F
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	Polemoniaceae	annual herb	1B.2	S2.2?	G5T3T4	None	None	950	5	F
<i>Kopsiopsis hookeri</i>	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2.3	S1S2	G5	None	None	885	90	F
<i>Lilium rubescens</i>	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	S3.2	G3	None	None	1910	30	T
<i>Listera cordata</i>	heart-leaved twayblade	Orchidaceae	perennial herb	4.2	S3.2	G5	None	None	1370	5	F
<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	S4.2	G5	None	None	1700	5	F
<i>Montia howellii</i>	Howell's montia	Montiaceae	annual herb	2.2	S3	G3G4	None	None	835	0	F
<i>Piperia candida</i>	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	S2	G3?	None	None	1310	30	F
<i>Pityopus californica</i>	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	S3.2	G4G5	None	None	2225	15	F
<i>Sedum laxum</i> ssp. <i>eastwoodiae</i>	Red Mountain stonecrop	Crassulaceae	perennial herb	1B.2	S1.2	G5T1	None	FC	1200	600	T
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	S3S4.2	G3G4	None	None	730	0	F
<i>Silene campanulata</i> ssp. <i>campanulata</i>	Red Mountain catchfly	Caryophyllaceae	perennial herb	4.2	S3	G5T3Q	CE	None	2085	425	T
<i>Tracyina rostrata</i>	beaked tracyina	Asteraceae	annual herb	1B.2	S1S2.2	G1G2	None	None	790	90	T
<i>Viburnum ellipticum</i>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2.3	S2.3	G5	None	None	1400	215	F

## APPENDIX D

### **United States Fish and Wildlife Service Listed/Proposed Threatened and Endangered Species for the Garberville Quad**

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## Listed/Proposed Threatened and Endangered Species for the GARBERVILLE Quad (Candidates Included)

January 23, 2013

Document number: 34518056-135640

=====

**KEY:**

(PE) Proposed Endangered Proposed in the Federal Register as being in danger of extinction

(PT) Proposed Threatened Proposed as likely to become endangered within the foreseeable future

(E) Endangered Listed in the Federal Register as being in danger of extinction

(T) Threatened Listed as likely to become endangered within the foreseeable future

(C) Candidate Candidate which may become a proposed species Habitat Y = Designated, P = Proposed, N = None Designated

\* Denotes a species Listed by the National Marine Fisheries Service

Type	Scientific Name	Common Name	Category	Critical Habitat
<b>Fish</b>				
*	<i>Acipenser medirostris</i>	green sturgeon	T	Y
*	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
*	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	Y
*	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	Y
<b>Birds</b>				
	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y

## APPENDIX E

### **Northwest Information Center (NWIC), Request for Information**



January 14, 2013

7714.00

North Coastal Information Center  
Yurok Tribe  
15900 Highway 101 N  
Klamath, California 95548

Attention: Ms. Vicky Bates

Subject: Request for File Search, Garberville Sanitary District Water Tank Replacement

Dear Ms. Bates:

On behalf of Garberville Sanitary District, we ask that you conduct a non-confidential records search for the Garberville Sanitary District's Water Tank Replacement Project located in Garberville, California.

The project site is limited to one 2.07 acre parcel (APN 223-181-009) located on the north side of Alderpoint Road. The new tank will connect to an existing on-site water line which is currently serving the existing tank. No off-site improvements are anticipated.

The following documents are included for your review:

- Subdivision map showing the proposed "Water Tank Site" parcel (APN 223-181-009)
- USGS Quad Map showing project location.

Please contact Nicole West at westn@lacoassociates.com or (707) 443-5054 if you have any questions or if you require additional information.

Sincerely,  
LACO Associates

Nicole West, AICP  
Planner / Landscape Designer

NAW:gg

cc: Garberville Sanitary District  
Randy Rouda, AICP, Senior Planner, LACO Associates

Enclosures

P:\7700\7714 Garberville Sanitary District\7714.00 Garberville Sanitary District - Alderpoint Road Tank Replacement\04 Correspondence\7714 GSD 20130114 Request for File Search.docx

21 W. 4th Street, Eureka, California 95501 707 443-5054 Fax 707 443-0553  
311 S. Main Street, Ukiah, California 95482 707 462-0222 Fax 707 462-0223  
3450 Regional Parkway, Suite B2, Santa Rosa, California 95403 707 525-1222

Toll Free 800 515-5054 www.lacoassociates.com



## APPENDIX F

### **Northwest Information Center (NWIC), Response Letter**

CALIFORNIA  
HISTORICAL  
RESOURCES  
INFORMATION  
SYSTEM



ALAMEDA  
COLUSA  
CONTRA COSTA  
LAKE

MARIN  
MENDOCINO  
MONTEREY  
NAPA  
SAN BENITO  
SAN FRANCISCO

SAN MATEO  
SANTA CLARA  
SANTA CRUZ  
SOLANO  
SONOMA  
YOLO

**Northwest Information Center**  
Sonoma State University  
150 Professional Center Drive, Suite E  
Rohnert Park, California 94928-3609  
Tel: 707.588.8455  
nwic@sonoma.edu  
<http://www.sonoma.edu/nwic>

18 March 2013

File No.: 12-0999

Nicole West  
LACO  
21 W. 4<sup>th</sup> Street  
Eureka, CA 95501

re: Garberville Sanitary District Water Tank Replacement Project

Dear Ms. West

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

**Previous Studies:**

XX This office has no record of any previous cultural resource studies for the proposed project area.

**Archaeological and Native American Resources Recommendations:**

XX We recommend you contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/653-4082.

XX The proposed project area has a low possibility of containing unrecorded archaeological site(s). Therefore, no further study for archaeological resources is recommended.

**Built Environment Recommendations:**

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of Humboldt County conduct a formal CEQA evaluation.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at <http://www.chrisinfo.org>. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,

  
Leigh Jordan, Coordinator

Cc: Jennie Short, Capital Improvement Projects Coordinator, P.O. Box, Garberville, CA 95542

## APPENDIX G

### **Native American Heritage Commission (NAHC), Request for Information**

**From:** Nicole A. West  
**To:** ["lw\\_nahc@pacbell.net"](mailto:lw_nahc@pacbell.net)  
**Subject:** FW: Information Request - Attention: Rob Wood  
**Date:** Monday, March 25, 2013 4:42:00 PM

---

I have filled in the missing information below.  
Please let me know if you need anything else.

Nicole West, AICP  
Planner / Landscape Designer  
LACO Associates

---

**From:** Nicole A. West  
**Sent:** Monday, March 25, 2013 10:00 AM  
**To:** 'nahc@pacbell.net'  
**Subject:** Information Request - Attention: Rob Wood

Dear Mr. Wood,  
Thank you for processing our request. Please let me know if you have any questions.

**Sacred Lands File & Native American Contacts List Request**  
**NATIVE AMERICAN HERITAGE COMMISSION**

915 Capitol Mall, RM 364  
Sacramento, CA 95814  
(916) 653-4082  
(916) 657-5390 – Fax  
[nahc@pacbell.net](mailto:nahc@pacbell.net)

*Information Below is Required for a Sacred Lands File Search*

Project: Garberville Sanitary District Alderpoint Road Water Tank  
Replacement Project

County Humboldt

USGS Quadrangle Garberville

Name Nicole West

Township 4S Range 4E Section(s) 18

Company/Firm/Agency:

LACO Associates

Contact Person: Nicole West

Street Address: 21 W. 4<sup>th</sup> Street

City: Eureka Zip: 95501

Phone: 707-443-5054

Fax: 707-443-0553

Email: [westn@lacoassociates.com](mailto:westn@lacoassociates.com)

Project Description: The project site is limited to one 2.07 acre parcel (APN 223-181-009) located on the north side of Alderpoint Road. The project consists of

removing an existing water tank and replacing it with a larger water tank on the same location. The new tank will connect to an existing on-site water line which is currently serving the existing tank. No off-site improvements are anticipated.

Thank you,

Nicole West, AICP  
Planner / Landscape Designer  
LACO Associates  
Eureka | Ukiah | Santa Rosa  
*Advancing the quality of life for generations to come*  
707 443 5054 | 800 515 5054  
<http://www.lacoassociates.com>

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## APPENDIX H

### **Native American Heritage Commission (NAHC), Response Letter**

STATE OF CALIFORNIA

Edmund G. Brown, Jr. Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390



April 12, 2013

Nicole A. West  
LACO Associates,  
21 W. 4<sup>th</sup> Street  
Eureka, CA 95501

Sent by Fax: 707-443-0553

Number of Pages 2

RE: Garberville Sanitary District Alderpoint Road Water Tank Replacement, Humboldt County

Dear Ms. West:

A search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact.

The NAHC makes no recommendation or preference of any single individual, or group over another. All of those on the list should be contacted, 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 or group. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: [rw\\_nahc@pacbell.net](mailto:rw_nahc@pacbell.net)

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Wood".

Rob Wood

Associate Government Program Analyst

**Native American Contact List**  
Humboldt County  
April 12, 2013

Bear River Band of Rohnerville Rancheria  
Leonard Bowman, Jr., Chairperson  
27 Bear River Drive                      Wiyot  
Loleta                      , CA 95551      Mattole  
lbowman@bearriver.com  
(707) 733-1900  
(707) 733-1972 Fax

InterTribal Sinkyone Wilderness Council  
Hawk Rosales, Executive Director  
PO Box 1523                      Mattole Sinkyone  
Ukiah                      , CA 95482  
(707) 463-6745

Bear River Band of Rohnerville Rancheria  
Erika Collins, THPO  
27 Bear River Drive                      Wiyot  
Loleta                      , CA 95551      Mattole  
thpo@bearrivertribe.com  
(707) 733-1900 ext 233  
  
(707) 733-1972 (FAX)

Bear River Band of Rohnerville Rancheria  
Edwin Smith, Environmental Coordinator/Cultural  
27 Bear River Drive                      Wiyot  
Loleta                      , CA 95551      Mattole  
(707) 733-1900  
(707) 733-1972 (FAX)

**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 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 proposed Garberville Sanitary District Alderpoint Road Water Tank Replacement, Garberville USGS Quadrangle, Humboldt County**



## APPENDIX I

### **UC Museum of Paleontology Specimens for Humboldt County**

Number of matches: 676

- [Download your results](#) (tab-delimited text file with .xls file extension, 676 lines, file size =109.2 K)
- [Map specimens with a US county](#)

Click on the Spec # to see the full specimen record

Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">BCL15</a>	Plants	Magnoliopsida	Berberis aquifolium	Mahonia aquifolium				<a href="#">CL18</a>	Humboldt Co.	Humboldt County	California	United States
<a href="#">BCL28</a>	Plants	Magnoliopsida	Mahonia nervosa					<a href="#">CL18</a>	Humboldt Co.	Humboldt County	California	United States
<a href="#">BCL42</a>	Plants	Magnoliopsida	Acer glabrum					<a href="#">CL19</a>	Trinity Summit	Humboldt County	California	United States
<a href="#">BCL516</a>	Plants	Equisetopsida	Thuja plicata					<a href="#">CL18</a>	Humboldt Co.	Humboldt County	California	United States
<a href="#">BCL61</a>	Plants	Magnoliopsida	Acer macrophyllum					<a href="#">CL18</a>	Humboldt Co.	Humboldt County	California	United States
<a href="#">BCL833</a>	Plants	Equisetopsida	Chamaecyparis lawsoniana					<a href="#">CL17</a>	Berry Summit	Humboldt County	California	United States
<a href="#">BCL878</a>	Plants	Magnoliopsida	Holodiscus discolor					<a href="#">CL18</a>	Humboldt Co.	Humboldt County	California	United States
<a href="#">315</a>	Plants	Equisetopsida	Pseudotsuga sonomensis			Tertiary	Pliocene	<a href="#">157</a>	Eel River I	Humboldt County	California	United States
<a href="#">320</a>	Plants	Equisetopsida	Sequoia langsdorffii			Tertiary	Pliocene	<a href="#">157</a>	Eel River I	Humboldt County	California	United States
<a href="#">326</a>	Plants	Magnoliopsida	Populus alexanderi		cotype	Tertiary	Pliocene	<a href="#">155</a>	Redwood Highway	Humboldt County	California	United States
<a href="#">327</a>	Plants	Magnoliopsida	Populus alexanderi		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">337</a>	Plants	Magnoliopsida	Salix coalingensis		plesiotype	Tertiary	Pliocene	<a href="#">155</a>	Redwood Highway	Humboldt County	California	United States
<a href="#">338</a>	Plants	Magnoliopsida	Salix coalingensis		plesiotype	Tertiary	Pliocene	<a href="#">155</a>	Redwood Highway	Humboldt County	California	United States
<a href="#">340</a>	Plants	Magnoliopsida	Alnus merriami		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">341</a>	Plants	Magnoliopsida	Alnus merriami		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">342</a>	Plants	Magnoliopsida	Alnus merriami		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">375</a>	Plants	Magnoliopsida	Platanus paucidentata		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">376</a>	Plants	Magnoliopsida	Platanus paucidentata		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">408</a>	Plants	Magnoliopsida	Fraxinus caudata		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">409</a>	Plants	Magnoliopsida	Fraxinus caudata		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">410</a>	Plants	Magnoliopsida	Fraxinus caudata		cotype	Tertiary	Pliocene	<a href="#">156</a>	Bear Canyon Creek	Humboldt County	California	United States
<a href="#">1589</a>	Vertebrates	Mammalia	Mammuthus columbi			Quaternary	Pleistocene	<a href="#">V6542</a>	Humboldt Point	Humboldt County	California	United States
<a href="#">10577</a>	Invertebrates	Gastropoda	Fusitriton scotiaensis		Hypotype	Tertiary	Pliocene	<a href="#">A4556</a>		Humboldt County	California	United States
<a href="#">10578</a>	Invertebrates	Gastropoda	Fusitriton scotiaensis		Hypotype	Tertiary	Pliocene	<a href="#">A6857</a>		Humboldt County	California	United States
<a href="#">10585</a>	Invertebrates	Gastropoda	"Beringius" arnoldi		Hypotype	Tertiary	Pliocene	<a href="#">A6855</a>		Humboldt County	California	United States
<a href="#">10743</a>	Invertebrates	Malacostraca	Cancer garthi		Holotype	Quaternary	Pleistocene	<a href="#">B7880</a>		Humboldt County	California	United States
<a href="#">11019</a>	Invertebrates	Echinoidea	Schizaster stalderi		Holotype	Tertiary	Pliocene	<a href="#">D9876</a>	Cape Mendocino	Humboldt County	California	United States
<a href="#">11044</a>	Invertebrates	Echinoidea	Dendraster oregonensis major		Cotype	Tertiary	Pliocene	<a href="#">1876-</a>		Humboldt County	California	United States
<a href="#">11385</a>	Invertebrates	Echinoidea	Dendraster oregonensis gibbosus		Cotype	Tertiary	Pliocene	<a href="#">1881-</a>		Humboldt County	California	United States
<a href="#">11386</a>	Invertebrates	Echinoidea	Dendraster oregonensis gibbosus		Cotype	Tertiary	Pliocene	<a href="#">1881-</a>		Humboldt County	California	United States
<a href="#">11463</a>	Invertebrates	Bivalvia	Spisula voyi		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">11489</a>	Invertebrates	Bivalvia	Spisula brevirostrata		Holotype	Tertiary, Quaternary	Pliocene, Pleistocene	<a href="#">1875-</a>		Humboldt County	California	United States
<a href="#">11490</a>	Invertebrates	Bivalvia	Spisula brevirostrata		Paratype	Tertiary, Quaternary	Pliocene, Pleistocene	<a href="#">1875-</a>		Humboldt County	California	United States

<a href="#">11491</a>	Invertebrates	Bivalvia	<i>Spisula voyi</i>		Hypotype	Tertiary	Pliocene	<a href="#">IP12066</a>		Humboldt County	California	United States
<a href="#">11858</a>	Invertebrates	Gastropoda	<i>Exiloida rectirostris hertleini</i>		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12041</a>	Invertebrates	Bivalvia	<i>Callista voyi</i>		Holotype	Tertiary	Pliocene	<a href="#">IP12993</a>		Humboldt County	California	United States
<a href="#">12336</a>	Invertebrates	Gastropoda	<i>Chrysodomus andersoni</i>		Holotype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12337</a>	Invertebrates	Gastropoda	<i>Argobuccinum scotiaensis</i>		Holotype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12340</a>	Invertebrates	Gastropoda	<i>Argobuccinum arnoldi</i>		Holotype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">12341</a>	Invertebrates	Gastropoda	<i>Argobuccinum arnoldi</i>		Paratype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">12344</a>	Invertebrates	Gastropoda	<i>Chrysodomus scotiaensis</i>		Holotype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12345</a>	Invertebrates	Gastropoda	<i>Chrysodomus scotiaensis</i>		Paratype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12347</a>	Invertebrates	Gastropoda	<i>Buccinum saundersi</i>		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12348</a>	Invertebrates	Gastropoda	<i>Chrysodomus eurekaensis</i>		Holotype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12349</a>	Invertebrates	Gastropoda	<i>Chrysodomus eurekaensis</i>		Paratype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12350</a>	Invertebrates	Gastropoda	<i>Chrysodomus lawsoni</i>		Holotype	Tertiary	Pliocene	<a href="#">1878-</a>		Humboldt County	California	United States
<a href="#">12351</a>	Invertebrates	Gastropoda	<i>Volutopsius eurekaensis</i>		Holotype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">12353</a>	Invertebrates	Gastropoda	<i>Drillia fleenerensis</i>		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1860-</a>		Humboldt County	California	United States
<a href="#">12354</a>	Invertebrates	Bivalvia	<i>Modiolus stalderi</i>		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12355</a>	Invertebrates	Bivalvia	<i>Modiolus stalderi</i>		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12356</a>	Invertebrates	Gastropoda	<i>Tritonofusus fortunensis</i>		Holotype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">12357</a>	Invertebrates	Gastropoda	<i>Tritonofusus fortunensis</i>		Paratype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">12358</a>	Invertebrates	Gastropoda	<i>Boreotrophon fleenerensis</i>		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12359</a>	Invertebrates	Gastropoda	<i>Boreotrophon fleenerensis</i>		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">1859-</a>		Humboldt County	California	United States
<a href="#">12506</a>	Invertebrates	Bivalvia	<i>Mytilus highoochiaie</i>		Holotype	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">12802</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1224</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">12803</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1225</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">12804</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1236</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12805</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1235</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12806</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12807</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1238</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12808</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1239</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12809</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12810</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">12811</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">A1192</a>	Bear River	Humboldt County	California	United States
<a href="#">13432</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1344</a>	Price Creek	Humboldt County	California	United States
<a href="#">13433</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1345</a>	Price Creek	Humboldt County	California	United States
<a href="#">13434</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1346</a>	Price Creek	Humboldt County	California	United States
<a href="#">13435</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1347</a>	Price Creek	Humboldt County	California	United States
<a href="#">13554</a>	Invertebrates	Insecta	<i>Lepidocyrtus sp.</i>		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7944</a>		Humboldt County	California	United States
<a href="#">14098</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1285</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14099</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14100</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14101</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1289</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14102</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1291</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14103</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1291</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14104</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1352</a>	Price Creek	Humboldt County	California	United States
<a href="#">14105</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1355</a>	Price Creek	Humboldt County	California	United States

<a href="#">14106</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">14107</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1361</a>	Price Creek	Humboldt County	California	United States
<a href="#">14108</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1381</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14109</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1382</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14110</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14111</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14112</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14113</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14114</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1439</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14115</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1440</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14181</a>	Invertebrates	Echinoidea	Brisaster stalderi		Paratype	Tertiary	Pliocene	<a href="#">A3138</a>		Humboldt County	California	United States
<a href="#">14182</a>	Invertebrates	Echinoidea	Brisaster stalderi		Paratype	Tertiary	Pliocene	<a href="#">A3138</a>		Humboldt County	California	United States
<a href="#">14183</a>	Invertebrates	Echinoidea	Brisaster stalderi		Paratype	Tertiary	Pliocene	<a href="#">A3138</a>		Humboldt County	California	United States
<a href="#">14205</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1226</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">14206</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Miocene	<a href="#">D1228</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">14207</a>	Microfossils	Polythalamia		FORAMINIFERA, OD = Uvigerina asperula var. ampullacea Brady.		Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">14208</a>	Microfossils	Polythalamia		FORAMINIFERA, OD = Uvigerina asperula var. ampullacea Brady.		Tertiary	Pliocene	<a href="#">D1295</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14209</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1297</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14210</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14211</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">14212</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1349</a>	Price Creek	Humboldt County	California	United States
<a href="#">14213</a>	Microfossils	Polythalamia		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1378</a>	Scotia-Eel River	Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">159518</a>	Invertebrates	Gastropoda	Tegula funebris			Quaternary	Recent	<a href="#">RS1518</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">160412</a>	Invertebrates	Anthozoa				Quaternary	Recent	<a href="#">B6877</a>	Trinidad	Humboldt County	California	United States
<a href="#">160424</a>	Invertebrates	Anthozoa				Quaternary	Recent	<a href="#">B6890</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">160431</a>	Invertebrates	Anthozoa	Balanophyllia elegans			Quaternary	Recent	<a href="#">B6866</a>		Humboldt County	California	United States
<a href="#">161437</a>	Invertebrates	Hydrozoa	Millepora dichotoma			Quaternary	Recent	<a href="#">A7178</a>	Trinidad Head	Humboldt County	California	United States
<a href="#">163482</a>	Invertebrates	Bivalvia	Macoma calcarea			Quaternary	Recent	<a href="#">RS2482</a>	Clam Beach	Humboldt County	California	United States
<a href="#">163483</a>	Invertebrates	Bivalvia	Macoma calcarea			Quaternary	Recent	<a href="#">RS2483</a>	Humboldt Bay, South Spit	Humboldt County	California	United States
<a href="#">164019</a>	Invertebrates	Gastropoda	Olivella biplicata			Quaternary	Recent	<a href="#">RS3019</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">164444</a>	Invertebrates	Bivalvia	Saxidomus nuttalli			Quaternary	Recent	<a href="#">RS3444</a>	Humboldt Bay, South Spit	Humboldt County	California	United States
<a href="#">164446</a>	Invertebrates	Bivalvia	Saxidomus nuttalli			Quaternary	Recent	<a href="#">RS3446</a>	Humboldt Bay, South Spit	Humboldt County	California	United States
<a href="#">164459</a>	Invertebrates	Bivalvia	Protothaca staminea			Quaternary	Recent	<a href="#">RS3459</a>	Humboldt Bay, South Spit	Humboldt County	California	United States
<a href="#">164485</a>	Invertebrates	Bivalvia	Tresus capax			Quaternary	Recent	<a href="#">RS3485</a>	Humboldt Bay, South Spit	Humboldt County	California	United States
<a href="#">165766</a>	Invertebrates	Bivalvia	Siliqua patula			Quaternary	Recent	<a href="#">RS4766</a>	Eureka	Humboldt County	California	United States
<a href="#">165769</a>	Invertebrates	Bivalvia	Siliqua patula			Quaternary	Recent	<a href="#">RS4769</a>	Clam Beach	Humboldt County	California	United States
<a href="#">166864</a>	Invertebrates	Bivalvia	Clinocardium nuttalli			Quaternary	Recent	<a href="#">RS5864</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">168352</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7352</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">168356</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7356</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">168357</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7357</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">168358</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7358</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">168359</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7359</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">168360</a>	Invertebrates	Gastropoda	Nucella emarginata			Quaternary	Recent	<a href="#">RS7360</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">170321</a>	Invertebrates	Bivalvia	Zirfaea pilsbryi			Quaternary	Recent	<a href="#">RS9321</a>	near Eureka(?)	Humboldt County	California	United States
<a href="#">170931</a>	Invertebrates	Gastropoda	Juga silicula			Quaternary	Recent	<a href="#">RS9931</a>	Klamath River	Humboldt County	California	United States
<a href="#">171934</a>	Invertebrates	Bivalvia	Lucina sp.			Quaternary	Recent	<a href="#">RS10934</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">192615</a>	Vertebrates	Aves				Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7342</a>		Humboldt County	California	United States
<a href="#">219519</a>	Vertebrates	Mammalia				Quaternary	Pleistocene	<a href="#">V99881</a>	Moonstone Beach 2	Humboldt County	California	United States
<a href="#">219520</a>	Vertebrates	Aves				Quaternary	Pleistocene	<a href="#">V99881</a>	Moonstone Beach 2	Humboldt County	California	United States
<a href="#">219521</a>	Vertebrates	Aves				Quaternary	Pleistocene	<a href="#">V99881</a>	Moonstone Beach 2	Humboldt County	California	United States
<a href="#">219522</a>	Vertebrates	Mammalia	Enhydra macrodonta			Tertiary	Pliocene	<a href="#">V6723</a>	Moonstone Beach 1	Humboldt County	California	United States
<a href="#">219999</a>	Vertebrates	Mammalia	Callorhinus gilmorei		FIG	Tertiary	Pliocene	<a href="#">V99861</a>	Eel River gravel bar	Humboldt County	California	United States
<a href="#">398562</a>	Invertebrates		Bathysiphonid pits			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398563</a>	Invertebrates		Belorhaphe zickzack			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398564</a>	Invertebrates		Chondrites intricatus			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398565</a>	Invertebrates		Chondrites			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States

			intricatus							County		States
<a href="#">398566</a>	Invertebrates		Chondrites cf. recurvus			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398567</a>	Invertebrates		Cladichnus sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398568</a>	Invertebrates		Cladichnus sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398569</a>	Invertebrates		?Conostichus sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398570</a>	Invertebrates		?Cosmoraphe sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398571</a>	Invertebrates		Escape Structures			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398572</a>	Invertebrates		Glockerichnus cf. glockeri			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398573</a>	Invertebrates		Gordia arcuata			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398574</a>	Invertebrates		Gordia molassica			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398575</a>	Invertebrates		Helminthopsis abeli			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398576</a>	Invertebrates		Helminthopsis sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398577</a>	Invertebrates		?Helminthopsis sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398578</a>	Invertebrates		?Helminthoida sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398579</a>	Invertebrates		?Lophoctenium sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398580</a>	Invertebrates		Lorenzina apenninica			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398581</a>	Invertebrates		Lorenzina cf. moreae			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398582</a>	Invertebrates		Megagraption irregulare			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398583</a>	Invertebrates		?Micatuba sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398584</a>	Invertebrates		Palaeophycus sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398585</a>	Invertebrates		Palaeophycus sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398586</a>	Invertebrates		Phycosiphon sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398587</a>	Invertebrates		Phycosiphon sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398588</a>	Invertebrates		Phycosiphon sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398589</a>	Invertebrates		Planolites sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398590</a>	Invertebrates		Planolites sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398591</a>	Invertebrates		Planolites sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398592</a>	Invertebrates		?Planolites sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398593</a>	Invertebrates		Hypichnial bumps			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398594</a>	Invertebrates		Spirophycus cf. caprinus			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398595</a>	Invertebrates		Squamodictyon squamosum			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398596</a>	Invertebrates		Strobiloraophe cf. elevata			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398597</a>	Invertebrates		Taphrhelminthoida plana			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398598</a>	Invertebrates		Taphrhelminthopsis auricularis			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398599</a>	Invertebrates		Phycosiphon sp.			Cretaceous		<a href="#">IP14458</a>		Humboldt County	California	United States
<a href="#">398608</a>	Invertebrates		Schaubcylichnus freyi		Holotype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">398609</a>	Invertebrates		Schaubcylichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">398610</a>	Invertebrates		Schaubcylichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">398611</a>	Invertebrates		Schaubcylichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">398612</a>	Invertebrates		Schaubcylichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">398613</a>	Invertebrates		Schaubcylichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States

<a href="#">398614</a>	Invertebrates		Schaubcylichtrichnus freyi		Paratype	Quaternary	Pleistocene	<a href="#">IP14646</a>	S. of Centerville Beach	Humboldt County	California	United States
<a href="#">557392</a>	Vertebrates	Mammalia	Mammut			Quaternary	Pleistocene	<a href="#">V90057</a>	Mad River Mouth	Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">47737</a>	Microfossils	Polythalamaea	Lenticulina	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47738</a>	Microfossils	Polythalamaea	Liebusella pliocenica	FORAMINIFERA, OD = Goesella pliocenica Natland.	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">47739</a>	Microfossils	Polythalamaea	Liebusella pliocenica	FORAMINIFERA, OD = Goesella pliocenica Natland.	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">47740</a>	Microfossils	Polythalamaea	Martinottiella communis	FORAMINIFERA, OD = Clavulina communis Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1350</a>	Price Creek	Humboldt County	California	United States
<a href="#">47742</a>	Microfossils	Polythalamaea	Melonis barleeanus	FORAMINIFERA, OD = Nonionina barleeana Williamson.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47743</a>	Microfossils	Polythalamaea	Melonis pompiliodes	FORAMINIFERA, OD = Nautilus pompilioides Fichtel & Moll.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47744</a>	Microfossils	Polythalamaea	Melonis	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47745</a>	Microfossils	Polythalamaea	Nodosaria arundinea	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47746</a>	Microfossils	Polythalamaea	Nodosaria moniliformis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47747</a>	Microfossils	Polythalamaea	Nodosaria raphanistrum	FORAMINIFERA, OD = Nautilus raphanistrum Linne.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47748</a>	Microfossils	Polythalamaea	Nodosaria spinosa	FORAMINIFERA, OD = Dentalina spinosa Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47749</a>	Microfossils	Polythalamaea	Nodosaria tosta	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47750</a>	Microfossils	Polythalamaea	Nodosaria tornata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47751</a>	Microfossils	Polythalamaea	Nodosaria tympanipectriformis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47752</a>	Microfossils	Polythalamaea	Nonion costiferum	FORAMINIFERA, OD = Nonionina costifera.	hypotype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47753</a>	Microfossils	Polythalamaea	Nonionella cushmani	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1405</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47754</a>	Microfossils	Polythalamaea	Nonionella cushmani	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47755</a>	Microfossils	Polythalamaea	Nonionella miocenica	FORAMINIFERA, OD = Nautilus umbilicatus.	hypotype	Quaternary	Pleistocene	<a href="#">D1243</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47756</a>	Microfossils	Polythalamaea	Orbulina universa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47757</a>	Microfossils	Polythalamaea	Oridorsalis umbonatus	FORAMINIFERA, OD = Rotalina umbonata Reuss.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47758</a>	Microfossils	Polythalamaea	Oridorsalis umbonatus	FORAMINIFERA, OD = Rotalina umbonata Reuss.	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47759</a>	Microfossils	Polythalamaea	Planulina ariminensis	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1379</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47760</a>	Microfossils	Polythalamaea	Planulina mexicana	FORAMINIFERA, OD = Planulina? mexicana Cushman	hypotype	Tertiary	Pliocene	<a href="#">D1266</a>	Centerville Beach	Humboldt County	California	United States
			Plectofrondicularia	FORAMINIFERA, OD =					Centerville	Humboldt		United



<a href="#">47762</a>	Microfossils	Polythalamia	advena	Frondicularia advena Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1266</a>	Beach	County	California	States
<a href="#">47763</a>	Microfossils	Polythalamia	Plectofrondicularia advena	FORAMINIFERA. OD = Frondicularia advena Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47764</a>	Microfossils	Polythalamia	Plectofrondicularia advena	FORAMINIFERA. OD = Frondicularia advena Cushman. Variant.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47765</a>	Microfossils	Polythalamia	Plectofrondicularia californica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47766</a>	Microfossils	Polythalamia	Plectofrondicularia californica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47767</a>	Microfossils	Polythalamia	Plectofrondicularia miocenica	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1238</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47768</a>	Microfossils	Polythalamia	Plectofrondicularia	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1238</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47769</a>	Microfossils	Polythalamia	Polymorphina charlottensis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1391</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47770</a>	Microfossils	Polythalamia	Pseudopolymorphina ovalis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47772</a>	Microfossils	Polythalamia	Pullenia miocenica	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47773</a>	Microfossils	Polythalamia	Pullenia salisburyi	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47774</a>	Microfossils	Polythalamia	Pullenia subcarinata	FORAMINIFERA. OD = Nonionina subcarinata Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47775</a>	Microfossils	Polythalamia	Pyrgo oblonga	FORAMINIFERA. OD = Biloculina oblonga Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47776</a>	Microfossils	Polythalamia	Pyrgo rotalaria	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47777</a>	Microfossils	Polythalamia	Pyrgo vespertilio	FORAMINIFERA. OD = Biloculina vespertilio Schlumberger.	hypotype	Quaternary	Pleistocene	<a href="#">D1254</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47778</a>	Microfossils	Polythalamia	Pyrgo	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47779</a>	Microfossils	Polythalamia	Quinqueloculina akeriana	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47780</a>	Microfossils	Polythalamia	Quinqueloculina elongata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1379</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47781</a>	Microfossils	Polythalamia	Quinqueloculina vulgaris	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1254</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47782</a>	Microfossils	Polythalamia	Rhabdammina abyssorum	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47783</a>	Microfossils	Polythalamia	Rosalina columbiensis	FORAMINIFERA. OD = Discorbis columbiensis Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47784</a>	Microfossils	Polythalamia	Rosalina columbiensis	FORAMINIFERA. OD = Discorbis columbiensis Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47785</a>	Microfossils	Polythalamia	Rotalia beccarii	FORAMINIFERA. OD = Nautilus beccarii.	hypotype	Quaternary	Pleistocene	<a href="#">D1329</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47786</a>	Microfossils	Polythalamia	Saccammina sphaerica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47787</a>	Microfossils	Polythalamia	Sigmoilina celata	FORAMINIFERA. OD = Spiroloculina celata Costa.	hypotype	Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47788</a>	Microfossils	Polythalamia	Sigmoilina tenuis	FORAMINIFERA. OD = Quinqueloculina tenuis Czjzek.	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47789</a>	Microfossils	Polythalamia	Siphonodosaria insecta	FORAMINIFERA. OD = Nodosaria insecta Schwager.	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">47790</a>	Microfossils	Polythalamia	Siphonodosaria insecta	FORAMINIFERA. OD = Nodosaria insecta Schwager.	hypotype	Tertiary	Pliocene	<a href="#">D1295</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47791</a>	Microfossils	Polythalamia	Sphaeroidina bulloides	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47792</a>	Microfossils	Polythalamia	Spiroloculina depressa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States

<a href="#">47793</a>	Microfossils	Polythalamaea	Stilostomella advena	FORAMINIFERA. OD = Nodogenerina advena Cushman & Laiming.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47794</a>	Microfossils	Polythalamaea	Stilostomella advena	FORAMINIFERA. OD = Nodogenerina advena Cushman & Laiming.	hypotype	Tertiary	Pliocene	<a href="#">D1266</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47795</a>	Microfossils	Polythalamaea	Stilostomella lepidula	FORAMINIFERA. OD = Nodosaria lepidula Schwager.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47796</a>	Microfossils	Polythalamaea	Stilostomella lepidula	FORAMINIFERA. OD = Nodosaria lepidula Schwager.	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47797</a>	Microfossils	Polythalamaea	Textularia flintii	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47798</a>	Microfossils	Polythalamaea	Trochammina	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Pice Creek	Humboldt County	California	United States
<a href="#">47799</a>	Microfossils	Polythalamaea	Uvigerina hispida	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47800</a>	Microfossils	Polythalamaea	Uvigerina hootsi	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1228</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47803</a>	Microfossils	Polythalamaea	Uvigerina peregrina foxenensis	FORAMINIFERA. OD = Uvigerina foxenensis Bramlette.	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47804</a>	Microfossils	Polythalamaea	Uvigerina peregrina hollicki	FORAMINIFERA. OD = Uvigerina hollicki Thalman.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47805</a>	Microfossils	Polythalamaea	Uvigerina peregrina hollicki	FORAMINIFERA. OD = Uvigerina hollicki Thalman.	hypotype	Quaternary	Pleistocene	<a href="#">D1248</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47806</a>	Microfossils	Polythalamaea	Uvigerina subperegrina	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1228</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47807</a>	Microfossils	Polythalamaea	Uvigerinella californica ornata	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47808</a>	Microfossils	Polythalamaea	Valvulinera araucana	FORAMINIFERA. OD = Rosalina araucana Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47809</a>	Microfossils	Polythalamaea	Valvulinera araucana	FORAMINIFERA. OD = Rosalina araucana Orbigny.	hypotype	Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47811</a>	Microfossils	Polythalamaea	Elphidium	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1236</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">53176</a>	Invertebrates	Gastropoda	Lottia digitalis			Quaternary	Recent	<a href="#">E223</a>	S of Cape Mendocino	Humboldt County	California	United States
<a href="#">53317</a>	Invertebrates	Gastropoda	Lottia pelta			Quaternary	Recent	<a href="#">IP448</a>		Humboldt County	California	United States
<a href="#">59890</a>	Vertebrates	Mammalia	Megalonyx		PUBL	Tertiary	Pliocene	<a href="#">V6723</a>	Moonstone Beach 1	Humboldt County	California	United States
<a href="#">77634</a>	Vertebrates	Mammalia	Phoca		FIG	Tertiary	Pliocene	<a href="#">V6724</a>	Little River Beach State Park N	Humboldt County	California	United States
<a href="#">81801</a>	Vertebrates	Mammalia	Bison latifrons			Quaternary	Pleistocene	<a href="#">V68155</a>	Buhne's Point	Humboldt County	California	United States
<a href="#">115968</a>	Vertebrates	Chondrichthyes	Squalus acanthias			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115969</a>	Vertebrates	Chondrichthyes	Raja binoculata			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115970</a>	Vertebrates	Chondrichthyes	Cetorhinus maximus			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115971</a>	Vertebrates	Osteichthyes	Atheresthes stomias			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115972</a>	Vertebrates	Osteichthyes	Ammodytes hexapterus			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115973</a>	Vertebrates	Osteichthyes	Hypomesus			Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115974</a>	Vertebrates	Aves				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115975</a>	Vertebrates	Reptilia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115976</a>	Vertebrates	Mammalia	Pitymys menowni		FIG	Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115977</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115978</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville	Humboldt	California	United

									Beach 1	County		States
<a href="#">115979</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115980</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115981</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115982</a>	Vertebrates	Mammalia	Pitymys menowni		FIG	Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115983</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115984</a>	Vertebrates	Mammalia				Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">115985</a>	Vertebrates	Mammalia	Pitymys mcnowni		FIG	Tertiary	Pliocene	<a href="#">V76178</a>	Centerville Beach 1	Humboldt County	California	United States
<a href="#">158665</a>	Invertebrates	Gastropoda	Nassarius fossatus			Quaternary	Recent	<a href="#">RS665</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">158831</a>	Invertebrates	Gastropoda	Acmaea mitra			Quaternary	Recent	<a href="#">RS831</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">158846</a>	Invertebrates	Gastropoda	Acmaea digitalis			Quaternary	Recent	<a href="#">RS846</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">158864</a>	Invertebrates	Gastropoda	Acmaea persona			Quaternary	Recent	<a href="#">RS864</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">158866</a>	Invertebrates	Gastropoda	Acmaea seabra			Quaternary	Recent	<a href="#">RS866</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">158871</a>	Invertebrates	Gastropoda	Testudinalis scutum			Quaternary	Recent	<a href="#">RS871</a>	Humboldt Bay	Humboldt County	California	United States
<a href="#">159483</a>	Invertebrates	Gastropoda	Diodora aspera			Quaternary	Recent	<a href="#">RS1483</a>	Shelter Cove	Humboldt County	California	United States
<a href="#">159508</a>	Invertebrates	Gastropoda	Tegula brunnea			Quaternary	Recent	<a href="#">RS1508</a>	Shelter Cove	Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">47631</a>	Microfossils	Polythalamaea	Bulimina subacuminata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1284</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47632</a>	Microfossils	Polythalamaea	Bulimina subacuminata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47633</a>	Microfossils	Polythalamaea	Bulimina subacuminata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47634</a>	Microfossils	Polythalamaea	Bulimina	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1332</a>	Fields Landing	Humboldt County	California	United States
<a href="#">47635</a>	Microfossils	Polythalamaea	Buliminella elegantissima	FORAMINIFERA. OD = Bulimina elegantissima Orbigny.	hypotype	Quaternary	Pleistocene	<a href="#">D1406</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47636</a>	Microfossils	Polythalamaea	Buliminella subfusiformis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1388</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47637</a>	Microfossils	Polythalamaea	Buliminella subfusiformis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1266</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47638</a>	Microfossils	Polythalamaea	Cassidulina californica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">47639</a>	Microfossils	Polythalamaea	Cassidulina californica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47640</a>	Microfossils	Polythalamaea	Cassidulina carinata	FORAMINIFERA. OD = Cassidulina laevigata var. carinata.	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47641</a>	Microfossils	Polythalamaea	Cassidulina crassa	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47643</a>	Microfossils	Polythalamaea	Cassidulina limbata	FORAMINIFERA.	hypotype	Quaternary	Pleistocene	<a href="#">D1262</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47644</a>	Microfossils	Polythalamaea	Cassidulina limbata	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47646</a>	Microfossils	Polythalamaea	Cassidulina tortuosa	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1337</a>	Freshwater Creek	Humboldt County	California	United States
<a href="#">47647</a>	Microfossils	Polythalamaea	Cassidulina translucens	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47648</a>	Microfossils	Polythalamaea	Cassidulina translucens	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47649</a>	Microfossils	Polythalamaea	Cassidulina translucens natlandi	FORAMINIFERA	holotype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47650</a>	Microfossils	Polythalamaea	Cassidulina translucens natlandi	FORAMINIFERA	paratype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47651</a>	Microfossils	Polythalamaea	Cassidulina translucens natlandi	FORAMINIFERA	paratype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47652</a>	Microfossils	Polythalamaea	Cassidulina	FORAMINIFERA	unfigured	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47653</a>	Microfossils	Polythalamaea	Cassidulinoides bradyi	FORAMINIFERA. OD = Cassidulina bradyi Norman	hypotype	Tertiary	Pliocene	<a href="#">D1283</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47656</a>	Microfossils	Polythalamaea	Cibicides floridanus	FORAMINIFERA. OD = Truncatulina floridana Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47657</a>	Microfossils	Polythalamaea	Cibicides floridanus	FORAMINIFERA. OD = Truncatulina floridana Cushman.	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47658</a>	Microfossils	Polythalamaea	Cibicides lobatulus	FORAMINIFERA. OD = Nautilus lobatulus Walker & Jacob.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47659</a>	Microfossils	Polythalamaea	Cibicides lobatulus	FORAMINIFERA. OD = Nautilus lobatulus	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States

<a href="#">47660</a>	Microfossils	Polythalamaea	Cibicides lobatulus	FORAMINIFERA. OD = Nautilus lobatulus Walker & Jacob.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47661</a>	Microfossils	Polythalamaea	Cibicides mckannai	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">47662</a>	Microfossils	Polythalamaea	Cibicides mckannai spiralis	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">47663</a>	Microfossils	Polythalamaea	Cibicidina washingtonensis	FORAMINIFERA. OD = Cibicides concentricus var. washingtonensis Cushman, Stewart & Stewart.	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47664</a>	Microfossils	Polythalamaea	Cibicidina washingtonensis	FORAMINIFERA. OD = Cibicides concentricus var. washingtonensis Cushman, Stewart & Stewart.	hypotype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47665</a>	Microfossils	Polythalamaea	Cribragoesella pacifica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47666</a>	Microfossils	Polythalamaea	Cyclammina cancellata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">47667</a>	Microfossils	Polythalamaea	Cyclammina cancellata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47668</a>	Microfossils	Polythalamaea	Cyclammina	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47669</a>	Microfossils	Polythalamaea	Dentalina quadrulata	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47670</a>	Microfossils	Polythalamaea	Dentalina soluta	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47671</a>	Microfossils	Polythalamaea	Dentalina soluta	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1262</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47672</a>	Microfossils	Polythalamaea	Discorbis campanulata	FORAMINIFERA. OD = Globorotalia campanulata Galloway & Wissler.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47673</a>	Microfossils	Polythalamaea	Eggerella bradyi	FORAMINIFERA. OD = Vermeulina bradyi Cushman	hypotype	Tertiary	Pliocene	<a href="#">D1355</a>	Price Creek	Humboldt County	California	United States
<a href="#">47674</a>	Microfossils	Polythalamaea	Ehrenbergina compressa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47675</a>	Microfossils	Polythalamaea	Elphidium acutum	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47676</a>	Microfossils	Polythalamaea	Elphidium acutum	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1276</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47677</a>	Microfossils	Polythalamaea	Elphidium foraminosum	FORAMINIFERA. OD = Elphidium hughesi var. foraminosum Cushman.	hypotype	Quaternary	Pleistocene	<a href="#">D1405</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47678</a>	Microfossils	Polythalamaea	Elphidium foraminosum	FORAMINIFERA. OD = Elphidium hughesi var. foraminosum Cushman.	hypotype	Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47679</a>	Microfossils	Polythalamaea	Elphidium granti	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1236</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47680</a>	Microfossils	Polythalamaea	Elphidium humboldtensis	FORAMINIFERA	holotype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47681</a>	Microfossils	Polythalamaea	Elphidium humboldtensis	FORAMINIFERA	paratype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47682</a>	Microfossils	Polythalamaea	Elphidium humboldtensis	FORAMINIFERA	paratype	Tertiary	Miocene	<a href="#">D1240</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47684</a>	Microfossils	Polythalamaea	Elphidiella hannai	FORAMINIFERA. OD = Elphidium hannai Cushman & Grant.	hypotype	Quaternary	Pleistocene	<a href="#">D1256</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47685</a>	Microfossils	Polythalamaea	Elphidiella hannai	FORAMINIFERA. OD = Elphidium hannai Cushman & Grant.	hypotype	Quaternary	Pleistocene	<a href="#">D1329</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47686</a>	Microfossils	Polythalamaea	Elphidiella	FORAMINIFERA. OD = Elphidium hannai	hypotype	Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel	Humboldt	California	United

			hannai	Cushman & Grant.					River	County		States
<a href="#">47687</a>	Microfossils	Polythalamia	Elphidiella oregonensis	FORAMINIFERA. OD = Elphidium oregonense Cushman & Grant.	hypotype	Quaternary	Pleistocene	<a href="#">D1256</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47688</a>	Microfossils	Polythalamia	Elphidiella oregonensis	FORAMINIFERA. OD = Elphidium oregonense Cushman & Grant.	hypotype	Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47689</a>	Microfossils	Polythalamia	Epistominella exigua	FORAMINIFERA. OD = Pulvinulina exigua Brady.	hypotype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47690</a>	Microfossils	Polythalamia	Epistominella pacifica	FORAMINIFERA. OD = Pulvinulinella pacifica Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47691</a>	Microfossils	Polythalamia	Epistominella pacifica	FORAMINIFERA. OD = Pulvinulinella pacifica Cushman.	hypotype	Quaternary	Pleistocene	<a href="#">D1332</a>	Fields Landing	Humboldt County	California	United States
<a href="#">47692</a>	Microfossils	Polythalamia	Epistominella subperuviana	FORAMINIFERA. OD = Pulvinulinella subperuviana Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47694</a>	Microfossils	Polythalamia	Eponides healdi	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1228</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47695</a>	Microfossils	Polythalamia	Eponides repandus	FORAMINIFERA. OD = Nautilus repandus Fichtel & Moll.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47696</a>	Microfossils	Polythalamia	Fissurina lucida	FORAMINIFERA. OD = Lagena lucida Hermann.	hypotype	Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47697</a>	Microfossils	Polythalamia	Fissurina semimarginata	FORAMINIFERA. OD = Lagena marginata var. semimarginata Reuss.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47698</a>	Microfossils	Polythalamia	Gaudryina pliocenica	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1248</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47699</a>	Microfossils	Polythalamia	Gaudryina atlantica	FORAMINIFERA. OD = Textularia atlantica Bailey. Variant.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47700</a>	Microfossils	Polythalamia	Gaudryina atlantica	FORAMINIFERA. OD = Textularia atlantica Bailey. Variant.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47701</a>	Microfossils	Polythalamia	Glandulina comatula	FORAMINIFERA. OD = Nodosaria comatula Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47702</a>	Microfossils	Polythalamia	Glandulina comatula	FORAMINIFERA. OD = Nodosaria comatula Cushman.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47703</a>	Microfossils	Polythalamia	Glandulina laevigata	FORAMINIFERA. OD = Nodosaria (Glanduline) laevigata Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47704</a>	Microfossils	Polythalamia	Glandulina laevigata	FORAMINIFERA. OD = Nodosaria (Glanduline) laevigata Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47705</a>	Microfossils	Polythalamia	Globigerina bulloides	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1388</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47706</a>	Microfossils	Polythalamia	Globigerina pachyderma	FORAMINIFERA. OD = Aristerospira pachyderma Ehrenberg.	hypotype	Tertiary	Pliocene	<a href="#">D1393</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47707</a>	Microfossils	Polythalamia	Globigerina	FORAMINIFERA	hypotype	Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47708</a>	Microfossils	Polythalamia	Globobulimina affinis	FORAMINIFERA. OD = Bulimina affinis Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1278</a>	Centerville Beach	Humboldt County	California	United States
			Globobulimina	FORAMINIFERA. OD = Bulimina					Centerville	Humboldt		United



<a href="#">47709</a>	Microfossils	Polythalamaea	auriculata	auriculata Bailey.	hypotype	Tertiary	Pliocene	<a href="#">D1278</a>	Beach	County	California	States
<a href="#">47710</a>	Microfossils	Polythalamaea	Globobulimina pacifica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1278</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47711</a>	Microfossils	Polythalamaea	Globorotalia crassaformis	FORAMINIFERA. OD = Globigerina crassaformis Galloway & Wissler.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47712</a>	Microfossils	Polythalamaea	Globorotalia crassaformis	FORAMINIFERA. OD = Globigerina crassaformis Galloway & Wissler.	hypotype	Quaternary	Pleistocene	<a href="#">D1402</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47713</a>	Microfossils	Polythalamaea	Globorotalia inflata	FORAMINIFERA. OD = Globigerina inflata Orbigny.	hypotype	Quaternary	Pleistocene	<a href="#">D1332</a>	Fields Landing	Humboldt County	California	United States
<a href="#">47714</a>	Microfossils	Polythalamaea	Globorotalia scitula	FORAMINIFERA. OD = Pulvinulina scitula Brady.	hypotype	Tertiary	Pliocene	<a href="#">D1287</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47715</a>	Microfossils	Polythalamaea	Gyroidina soldanii altiformis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1386</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47716</a>	Microfossils	Polythalamaea	Gyroidina soldanii rotundimargo	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47717</a>	Microfossils	Polythalamaea	Hoeglundina elegans	FORAMINIFERA. OD = Rotalia (Turbuline) elegans Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47718</a>	Microfossils	Polythalamaea	Hormosina globulifera	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47719</a>	Microfossils	Polythalamaea	Karriella milleri	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">47720</a>	Microfossils	Polythalamaea	Karriella milleri	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47721</a>	Microfossils	Polythalamaea	Lagena alcocki	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47722</a>	Microfossils	Polythalamaea	Lagena amphora	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47723</a>	Microfossils	Polythalamaea	Lagena dypeata	FORAMINIFERA. OD = Lagena auriculata var. dypeata Sidebottom.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47724</a>	Microfossils	Polythalamaea	Lagena foveolata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47725</a>	Microfossils	Polythalamaea	Lagena melo	FORAMINIFERA. OD = Oolina melo Orbigny.	hypotype	Tertiary	Pliocene	<a href="#">D1383</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47726</a>	Microfossils	Polythalamaea	Lagena plicenica	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47727</a>	Microfossils	Polythalamaea	Lagena striata	FORAMINIFERA. OD = Oolina striata.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47728</a>	Microfossils	Polythalamaea	Lagena striata haidingeri	FORAMINIFERA. OD = Oolina haidingeri Czjzek.	hypotype	Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47729</a>	Microfossils	Polythalamaea	Lagena striata strumosa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47730</a>	Microfossils	Polythalamaea	Lagena sulcata	FORAMINIFERA. OD = Serpula (Lagena) sulcata Walker & Jacob.	hypotype	Tertiary	Pliocene	<a href="#">D1388</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47731</a>	Microfossils	Polythalamaea	Lagena	FORAMINIFERA.	hypotype	Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47732</a>	Microfossils	Polythalamaea	Laticarinina halophora	FORAMINIFERA. OD = Cristellaria (Robuina) halophora Stache.	hypotype	Tertiary	Pliocene	<a href="#">D1357</a>	Price Creek	Humboldt County	California	United States
<a href="#">47733</a>	Microfossils	Polythalamaea	Lenticulina calcar	FORAMINIFERA. OD = Nautilus calcar Linne.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States

<a href="#">47734</a>	Microfossils	Polythalamia	Lenticulina cushmani	FORAMINIFERA. OD = Robulus cushmani Galloway & Wissler.	hypotype	Tertiary	Pliocene	<a href="#">D1384</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47735</a>	Microfossils	Polythalamia	Lenticulina nikobarensis	FORAMINIFERA. OD = Cristellaria nikobarensis Schwager.	hypotype	Tertiary	Miocene	<a href="#">D1237</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47736</a>	Microfossils	Polythalamia	Lenticulina polita	FORAMINIFERA. OD = Cristellaria polita Schwager.	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">37790</a>	Invertebrates	Bivalvia	Spisula brevirostrata		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37791</a>	Invertebrates	Bivalvia	Spisula albaria		Hypotype	Tertiary	Pliocene	<a href="#">B7872</a>		Humboldt County	California	United States
<a href="#">37792</a>	Invertebrates	Bivalvia	Schizothaerus nuttallii		Hypotype	Quaternary	Pleistocene	<a href="#">B7880</a>		Humboldt County	California	United States
<a href="#">37793</a>	Invertebrates	Bivalvia	Panomya beringiana		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37794</a>	Invertebrates	Scaphopoda	Cadulus cf. C. californicus		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7929</a>		Humboldt County	California	United States
<a href="#">37795</a>	Invertebrates	Gastropoda	Scaphandrid sp.		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37796</a>	Invertebrates	Gastropoda	Lora viridula		Hypotype	Tertiary	Pliocene	<a href="#">B7872</a>		Humboldt County	California	United States
<a href="#">37797</a>	Invertebrates	Gastropoda	Lora turricula		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7950</a>		Humboldt County	California	United States
<a href="#">37798</a>	Invertebrates	Gastropoda	Lora harpularia		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37799</a>	Invertebrates	Gastropoda	Antiplanes perversa		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7950</a>		Humboldt County	California	United States
<a href="#">37800</a>	Invertebrates	Gastropoda	Antiplanes voyi		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37801</a>	Invertebrates	Gastropoda	Pseudomelatoma fleenerensis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37802</a>	Invertebrates	Gastropoda	Taranis strongi		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37803</a>	Invertebrates	Gastropoda	Volutopsius eurekaensis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37804</a>	Invertebrates	Gastropoda	Neptunea lirata altispira		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7936</a>		Humboldt County	California	United States
<a href="#">37805</a>	Invertebrates	Gastropoda	Neptunea andersoni		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7644</a>		Humboldt County	California	United States
<a href="#">37806</a>	Invertebrates	Gastropoda	Neptunea smimia		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7891</a>		Humboldt County	California	United States
<a href="#">37807</a>	Invertebrates	Gastropoda	Neptunea pribiloffensis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7944</a>		Humboldt County	California	United States
<a href="#">37808</a>	Invertebrates	Gastropoda	Neptunea tabulata		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37809</a>	Invertebrates	Gastropoda	Neptunea tabulata colmaensis		Hypotype	Tertiary	Pliocene	<a href="#">B7862</a>		Humboldt County	California	United States
<a href="#">37810</a>	Invertebrates	Gastropoda	Neptunea stocki		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">A4539</a>	Eel River	Humboldt County	California	United States
<a href="#">37811</a>	Invertebrates	Gastropoda	Neptunea lawsoni		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7644</a>		Humboldt County	California	United States
<a href="#">37812</a>	Invertebrates	Gastropoda	Neptunea scotiaensis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7644</a>		Humboldt County	California	United States
<a href="#">37813</a>	Invertebrates	Gastropoda	Colus jordani		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37814</a>	Invertebrates	Gastropoda	Exilioidea rectirostris		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7936</a>		Humboldt County	California	United States
<a href="#">37815</a>	Invertebrates	Gastropoda	Liomesus sulculatus		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37816</a>	Invertebrates	Gastropoda	Buccinum strigillatum		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7931</a>		Humboldt County	California	United States
<a href="#">37817</a>	Invertebrates	Gastropoda	Nassarius moranianus		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37818</a>	Invertebrates	Gastropoda	Mitrella gouldii		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7952</a>		Humboldt County	California	United States
<a href="#">37819</a>	Invertebrates	Gastropoda	Polytropa lamellosa		Hypotype	Quaternary	Pleistocene	<a href="#">B7880</a>		Humboldt County	California	United States
<a href="#">37820</a>	Invertebrates	Gastropoda	Polytropa cf. P. canaliculata		Hypotype	Quaternary	Pleistocene	<a href="#">B7908</a>		Humboldt County	California	United States
<a href="#">37821</a>	Invertebrates	Gastropoda	Boreotrophon fleenerensis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7941</a>		Humboldt County	California	United States
<a href="#">37822</a>	Invertebrates	Gastropoda	Boreotrophon cf. B. rotundatus		Hypotype	Tertiary	Pliocene	<a href="#">B7872</a>		Humboldt County	California	United States
<a href="#">37823</a>	Invertebrates	Gastropoda	Boreotrophon pacificus		Hypotype	Quaternary	Pleistocene	<a href="#">B7908</a>		Humboldt County	California	United States
<a href="#">37824</a>	Invertebrates	Gastropoda	Boreotrophon durhami		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37825</a>	Invertebrates	Gastropoda	Boreotrophon durhami		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7950</a>		Humboldt County	California	United States
<a href="#">37827</a>	Invertebrates	Gastropoda	Argobuccinum coosense		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37828</a>	Invertebrates	Gastropoda	Argobuccinum cf. A. oregonense		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7947</a>		Humboldt County	California	United States

<a href="#">37829</a>	Invertebrates	Gastropoda	Argobuccinum arnoldi		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">A4539</a>	Eel River	Humboldt County	California	United States
<a href="#">37830</a>	Invertebrates	Gastropoda	Bittium frankeli		Holotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7952</a>		Humboldt County	California	United States
<a href="#">37831</a>	Invertebrates	Gastropoda	Bittium frankeli		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7952</a>		Humboldt County	California	United States
<a href="#">37832</a>	Invertebrates	Gastropoda	Bittium frankeli		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7952</a>		Humboldt County	California	United States
<a href="#">37833</a>	Invertebrates	Gastropoda	Crepidula? sp.		Hypotype	Tertiary	Pliocene	<a href="#">B7919</a>		Humboldt County	California	United States
<a href="#">37834</a>	Invertebrates	Gastropoda	Natica clausa		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7944</a>		Humboldt County	California	United States
<a href="#">37835</a>	Invertebrates	Gastropoda	Natica russa		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7891</a>		Humboldt County	California	United States
<a href="#">37836</a>	Invertebrates	Gastropoda	Natica russa		Hypotype	Quaternary	Pleistocene	<a href="#">B7908</a>		Humboldt County	California	United States
<a href="#">37837</a>	Invertebrates	Gastropoda	Polinices reclusiana		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37838</a>	Invertebrates	Gastropoda	Polinices lewisii		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37839</a>	Invertebrates	Gastropoda	Margarites condoni		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7921</a>		Humboldt County	California	United States
<a href="#">37840</a>	Invertebrates	Gastropoda	Epitonium indianorum		Hypotype	Tertiary	Pliocene	<a href="#">B7645</a>		Humboldt County	California	United States
<a href="#">37841</a>	Invertebrates	Gastropoda	Turbonilla sp.		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37842</a>	Invertebrates	Maxillopoda	Balanus hespericus		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7939</a>		Humboldt County	California	United States
<a href="#">37843</a>	Invertebrates	Maxillopoda	Coronula sp. indet.		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7640</a>		Humboldt County	California	United States
<a href="#">38067</a>	Invertebrates	Gastropoda	Olivella buplicata		Hypotype	Quaternary	Recent	<a href="#">6228-</a>	Crannell Junction	Humboldt County	California	United States
<a href="#">38597</a>	Invertebrates		Melaterichnus burkei		Holotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38598</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38599</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38600</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38601</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38602</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38603</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38604</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38605</a>	Invertebrates		Melaterichnus burkei		Paratype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38606</a>	Invertebrates		Cosmoraphe tremens		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38607</a>	Invertebrates		Giordia sp.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38608</a>	Invertebrates		Helminthoida crassa		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38609</a>	Invertebrates		Palaeophycus tubularis		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38610</a>	Invertebrates		?Palaeophycus sp.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38611</a>	Invertebrates		Clay/Fecal stuffed burrows		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38612</a>	Invertebrates		Taenidium sp.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38613</a>	Invertebrates		Alcyonidiopsis sp.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38614</a>	Invertebrates		Phycosiphon sp.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">38615</a>	Invertebrates		"Peg-in-sole" struc.		Hypotype	Cretaceous		<a href="#">IP11193</a>		Humboldt County	California	United States
<a href="#">47601</a>	Microfossils	Polythalamaea	Alveolophragmium scitulum	FORAMINIFERA, OD = Lituola (Haplophragmium) scitulum Brady.	hypotype	Tertiary	Pliocene	<a href="#">D1349</a>	Price Creek	Humboldt County	California	United States
<a href="#">47602</a>	Microfossils	Polythalamaea	Alveolophragmium scitulum	FORAMINIFERA, OD = Lituola (Haplophragmium) scitulum Brady.	hypotype	Tertiary	Pliocene	<a href="#">D1381</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47603</a>	Microfossils	Polythalamaea	Ammobaculites americanus	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1342</a>	Larabee Ranch	Humboldt County	California	United States
<a href="#">47605</a>	Microfossils	Polythalamaea	Angulogerina angulosa	FORAMINIFERA, OD = Uvigerina angulosa Williamson.	hypotype	Quaternary	Pleistocene	<a href="#">D1244</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47606</a>	Microfossils	Polythalamaea	Angulogerina angulosa	FORAMINIFERA, OD = Uvigerina angulosa Williamson.	hypotype	Quaternary	Pleistocene	<a href="#">D1244</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47607</a>	Microfossils	Polythalamaea	Angulogerina hughesi	FORAMINIFERA, OD = Uvigerina hughesi Galloway & Wissler.	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
	Microfossils	Polythalamaea	Anomalina	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1224</a>	Bear River	Humboldt County	California	United States

<a href="#">47608</a>			salinasensis						Coast	County		States
<a href="#">47609</a>	Microfossils	Polythalamaea	Baggina californica	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1224</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47610</a>	Microfossils	Polythalamaea	Haplophragmoides scitulum	FORAMINIFERA. OD = Lituola (Haplophragmium) scitulum Brady.	hypotype	Tertiary	Pliocene	<a href="#">D1301</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47611</a>	Microfossils	Polythalamaea	Bolivina advena striatella	FORAMINIFERA.	hypotype	Tertiary	Miocene	<a href="#">D1224</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47612</a>	Microfossils	Polythalamaea	Bolivina cochei	FORAMINIFERA	hypotype	Tertiary	Miocene	<a href="#">D1231</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">47613</a>	Microfossils	Polythalamaea	Bolivina cochei	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47614a</a>	Microfossils	Polythalamaea	Bolivina decussata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47614b</a>	Microfossils	Polythalamaea	Ammodiscus	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1348</a>	Price Creek	Humboldt County	California	United States
<a href="#">47615</a>	Microfossils	Polythalamaea	Bolivina interjuncta	FORAMINIFERA. OD = Bolivina costata var. interjuncta Cushman.	hypotype	Quaternary	Pleistocene	<a href="#">D1248</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47617</a>	Microfossils	Polythalamaea	Bolivina pseudobeyrichi	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47618</a>	Microfossils	Polythalamaea	Bolivina sinuata alisoensis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1379</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47619</a>	Microfossils	Polythalamaea	Bolivina subadvena acuminata	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1335</a>	Freshwater Creek	Humboldt County	California	United States
<a href="#">47620</a>	Microfossils	Polythalamaea	Bolivina subadvena spissa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1379</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47621</a>	Microfossils	Polythalamaea	Bolivina subadvena spissa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47622</a>	Microfossils	Polythalamaea	Bolivina subadvena spissa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47623</a>	Microfossils	Polythalamaea	Bolivina sulphurensis	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1303</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">47624</a>	Microfossils	Polythalamaea	Bolivinita quadrilatera	FORAMINIFERA. OD = Textularia quadrilatera Schwager.	hypotype	Tertiary	Pliocene	<a href="#">D1361</a>	Price Creek	Humboldt County	California	United States
<a href="#">47625</a>	Microfossils	Polythalamaea	Buccella oregonensis	FORAMINIFERA. OD = Eponides mansfieldi var. oregonensis Cushman, Stewart & Stewart.	hypotype	Tertiary	Miocene	<a href="#">D1238</a>	Bear River Valley	Humboldt County	California	United States
<a href="#">47627</a>	Microfossils	Polythalamaea	Buccella tenerrima	FORAMINIFERA. OD = Rotalia tenerrima Bandy.	hypotype	Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">47628</a>	Microfossils	Polythalamaea	Bulimina deformata	FORAMINIFERA. OD = Bulimina pagoda var. deformata Cushman & Parker.	hypotype	Tertiary	Pliocene	<a href="#">D1391</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">47630</a>	Microfossils	Polythalamaea	Bulimina fossa	FORAMINIFERA	hypotype	Tertiary	Pliocene	<a href="#">D1385</a>	Scotia-Eel River	Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">15148</a>	Invertebrates	Echinoidea	Scutellaster quaylei		Paratype	Tertiary	Pliocene	<a href="#">1881-</a>		Humboldt County	California	United States
<a href="#">15150</a>	Invertebrates	Echinoidea	Scutellaster quaylei		Paratype	Tertiary	Pliocene	<a href="#">1881-</a>		Humboldt County	California	United States
<a href="#">15176</a>	Invertebrates	Echinoidea	Strongylocentrotus purpuratus		Hypotype	Tertiary	Pliocene	<a href="#">B7345</a>		Humboldt County	California	United States
<a href="#">20942</a>	Plants		Actiniscus talmadgei		holotype	Tertiary	Late Miocene	<a href="#">PA520</a>	UCD-M309	Humboldt County	California	United States
<a href="#">20943</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20944</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20945</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20946</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20947</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20948</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20949</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20950</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20951</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20952</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20953</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20954</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20955</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20956</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20957</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20958</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20959</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20960</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20961</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20962</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20963</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20964</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20965</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20966</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20967</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20968</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20969</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20970</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20971</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20972</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20973</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20974</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States
<a href="#">20975</a>	Plants		Actiniscus talmadgei		paratype	Tertiary	Late Miocene	<a href="#">PA521</a>	UCD-M305	Humboldt County	California	United States

<a href="#">24014</a>	Microfossils	Polythalamaea	Elphidiella hannai	FORAMINIFERA, OD = Elphidium hannai Cushman & Grant.		Quaternary	Recent	<a href="#">MF8140</a>	Eureka	Humboldt County	California	United States
<a href="#">24528</a>	Vertebrates	Mammalia	Mammut americanum			Quaternary	Pleistocene	<a href="#">V65218</a>	Humboldt Day	Humboldt County	California	United States
<a href="#">30026</a>	Invertebrates	Gastropoda	Buccinum? stocki		Holotype	Tertiary	Pliocene	<a href="#">1863-</a>		Humboldt County	California	United States
<a href="#">30107</a>	Invertebrates	Anthozoa	Dendrophyllia oldroydi		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">A3770</a>		Humboldt County	California	United States
<a href="#">30115</a>	Invertebrates	Anthozoa	Dendrophyllia oldroydi		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">A3770</a>		Humboldt County	California	United States
<a href="#">30147</a>	Invertebrates	Gastropoda	Epitonium eelense		Holotype	Tertiary	Pliocene	<a href="#">IP11239</a>		Humboldt County	California	United States
<a href="#">30740</a>	Invertebrates	Bivalvia	Patinopecten falorensis		Paratype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">31333</a>	Invertebrates	Bivalvia	Patinopecten falorensis		Paratype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">31961</a>	Invertebrates	Bivalvia	Chione securis		Hypotype	Tertiary	Pliocene	<a href="#">IP12822</a>		Humboldt County	California	United States
<a href="#">32943</a>	Invertebrates	Echinoidea	Anorthoscutum oregonense quaylei		Hypotype	Tertiary	Pliocene	<a href="#">1881-</a>		Humboldt County	California	United States
<a href="#">32944</a>	Invertebrates	Echinoidea	Scutellaster oregonense quaylei		Hypotype	Tertiary	Pliocene	<a href="#">1883-</a>		Humboldt County	California	United States
<a href="#">34170</a>	Invertebrates	Bivalvia	Chione securis		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34171</a>	Invertebrates	Bivalvia	Pecten oregonensis		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34172</a>	Invertebrates	Bivalvia	Pecten oregonensis		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34173</a>	Invertebrates	Gastropoda	Nassarius moranianus		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34174</a>	Invertebrates	Gastropoda	Nassarius moranianus		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34175</a>	Invertebrates	Gastropoda	Gyrineum lewisii		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34176</a>	Invertebrates	Bivalvia	Mytilus edulis		Hypotype	Tertiary	Pliocene	<a href="#">A4233</a>	Boulder Creek	Humboldt County	California	United States
<a href="#">34177</a>	Invertebrates	Bivalvia	Cardium meekianum		Hypotypes	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">35520</a>	Invertebrates	Bivalvia	Mytilus higooohiae		Paratype	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">35521</a>	Invertebrates	Bivalvia	Mytilus higooohiae		Paratype	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">35522</a>	Invertebrates	Bivalvia	Mytilus higooohiae		Paratype	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">35523</a>	Invertebrates	Bivalvia	Mytilus higooohiae		Paratype	Tertiary	Pliocene	<a href="#">A4234</a>	Canon Creek	Humboldt County	California	United States
<a href="#">36408</a>	Invertebrates	Bivalvia	Securella securis		Hypotype	Tertiary	Pliocene	<a href="#">IP279</a>		Humboldt County	California	United States
<a href="#">37751</a>	Invertebrates	Echinoidea	Scutellaster major		Hypotype	Tertiary	Pliocene	<a href="#">B7918</a>		Humboldt County	California	United States
<a href="#">37752</a>	Invertebrates	Echinoidea	Scutellaster sp.		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37753</a>	Invertebrates	Bivalvia	Acila castrensis		Hypotype	Tertiary	Pliocene	<a href="#">B7925</a>		Humboldt County	California	United States
<a href="#">37754</a>	Invertebrates	Bivalvia	Nuculana fossa		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7954</a>		Humboldt County	California	United States
<a href="#">37755</a>	Invertebrates	Bivalvia	Yoldia scissurata strigata		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37756</a>	Invertebrates	Bivalvia	Glycymeris sp. indet.		Hypotype	Tertiary	Pliocene	<a href="#">B7919</a>		Humboldt County	California	United States
<a href="#">37757</a>	Invertebrates	Bivalvia	Anadara trilineata		Hypotype	Tertiary	Pliocene	<a href="#">B7919</a>		Humboldt County	California	United States
<a href="#">37758</a>	Invertebrates	Bivalvia	Cydopecten cf. C. randolphi		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7947</a>		Humboldt County	California	United States
<a href="#">37759</a>	Invertebrates	Bivalvia	Chlamys rubida jordani		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7950</a>		Humboldt County	California	United States
<a href="#">37760</a>	Invertebrates	Bivalvia	Pecten dilleri		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7644</a>		Humboldt County	California	United States
<a href="#">37761</a>	Invertebrates	Bivalvia	Pecten caurinus		Hypotype	Tertiary	Pliocene	<a href="#">B7925</a>		Humboldt County	California	United States
<a href="#">37762</a>	Invertebrates	Bivalvia	Pecten ethegoini wattsi		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37763</a>	Invertebrates	Bivalvia	Pecten sp. indet.		Hypotype	Tertiary	Pliocene	<a href="#">B7919</a>		Humboldt County	California	United States
<a href="#">37764</a>	Invertebrates	Bivalvia	Mytilus californianus		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37765</a>	Invertebrates	Bivalvia	Thracia trapezoides		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7954</a>		Humboldt County	California	United States
<a href="#">37766</a>	Invertebrates	Bivalvia	Pandora bilirata		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37767</a>	Invertebrates	Bivalvia	Pandora grandis		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7950</a>		Humboldt County	California	United States
<a href="#">37768</a>	Invertebrates	Bivalvia	Cardita ventricosa		Hypotype	Quaternary,Tertiary	Pleistocene,Pliocene	<a href="#">B7936</a>		Humboldt County	California	United States
										Humboldt		United



<a href="#">37769</a>	Invertebrates	Bivalvia	Thyasira bisecta		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7640</a>		County	California	States
<a href="#">37770</a>	Invertebrates	Bivalvia	Lucina acutilineata		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7640</a>		Humboldt County	California	United States
<a href="#">37771</a>	Invertebrates	Bivalvia	Clinocardium blandum		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37772</a>	Invertebrates	Bivalvia	Clinocardium comokense		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7931</a>		Humboldt County	California	United States
<a href="#">37773</a>	Invertebrates	Bivalvia	Clinocardium meekianum		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37774</a>	Invertebrates	Bivalvia	Clinocardium aff. C. pristinum		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37775</a>	Invertebrates	Bivalvia	Securella staley hannibali		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">37776</a>	Invertebrates	Bivalvia	Compsomyx subdiaphana gibbosus		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37777</a>	Invertebrates	Bivalvia	Psephidia lordi ovalis		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7891</a>		Humboldt County	California	United States
<a href="#">37778</a>	Invertebrates	Bivalvia	Tellina sp.		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37779</a>	Invertebrates	Bivalvia	Macoma cf. M. nasuta		Hypotype	Quaternary	Pleistocene	<a href="#">B7880</a>		Humboldt County	California	United States
<a href="#">37780</a>	Invertebrates	Bivalvia	Macoma inquinata arnheimi		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37781</a>	Invertebrates	Bivalvia	Macoma astori		Hypotype	Tertiary	Pliocene	<a href="#">B7925</a>		Humboldt County	California	United States
<a href="#">37782</a>	Invertebrates	Bivalvia	Macoma calcarea		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7875</a>		Humboldt County	California	United States
<a href="#">37783</a>	Invertebrates	Bivalvia	Macoma yoldiformis		Hypotype	Tertiary	Pliocene	<a href="#">B7643</a>		Humboldt County	California	United States
<a href="#">37784</a>	Invertebrates	Bivalvia	Macoma indentata tenuirostris		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">A4539</a>	Eel River	Humboldt County	California	United States
<a href="#">37785</a>	Invertebrates	Bivalvia	Macoma? sp.		Hypotype	Tertiary	Pliocene	<a href="#">B7942</a>		Humboldt County	California	United States
<a href="#">37786</a>	Invertebrates	Bivalvia	Solen sicarius		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37787</a>	Invertebrates	Bivalvia	Siliqua patula		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">37788</a>	Invertebrates	Bivalvia	Siliqua oregonia		Hypotype	Quaternary	Pleistocene	<a href="#">B7908</a>		Humboldt County	California	United States
<a href="#">37789</a>	Invertebrates	Bivalvia	Spisula voyi		Hypotype	Tertiary	Pliocene	<a href="#">B7871</a>		Humboldt County	California	United States

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Spec #	Collection	Class	Genus species ssp	Other Name	Type Status	Period	Epoch	Loc ID#	Locality Name	County	State/Prov	Country
<a href="#">14214</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1379</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14215</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1380</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14225</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1264</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14226</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1265</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14227</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1266</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14228</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1269</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14229</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1271</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14230</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1272</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14231</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1275</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14232</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1276</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14233</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1280</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14234</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1283</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14235</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1284</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14236</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1386</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14237</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1387</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14238</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1388</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14239</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1389</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14240</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1390</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14241</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1391</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14242</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1393</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14251</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1334</a>	Freshwater Creek	Humboldt County	California	United States
<a href="#">14252</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1372</a>	Salmon Creek	Humboldt County	California	United States
<a href="#">14253</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1376</a>	Salmon Creek	Humboldt County	California	United States
<a href="#">14254</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1234</a>	Bear River Coast	Humboldt County	California	United States
<a href="#">14255</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1302</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14256</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1308</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14257</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1313</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14258</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1315</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14259</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1317</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14260</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1320</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14261</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1321</a>	Elk River Valley Area	Humboldt County	California	United States
<a href="#">14262</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1323</a>	Elk River Valley Area	Humboldt County	California	United States
									Freshwater	Humboldt		United

<a href="#">14263</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1335</a>	Creek	County	California	States
<a href="#">14264</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1337</a>	Freshwater Creek	Humboldt County	California	United States
<a href="#">14265</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1338</a>	Freshwater Creek	Humboldt County	California	United States
<a href="#">14266</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1340</a>	Larabee Ranch	Humboldt County	California	United States
<a href="#">14267</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1342</a>	Larabee Ranch	Humboldt County	California	United States
<a href="#">14268</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1343</a>	Larabee Ranch	Humboldt County	California	United States
<a href="#">14269</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1365</a>	Salmon Creek	Humboldt County	California	United States
<a href="#">14270</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1366</a>	Salmon Creek	Humboldt County	California	United States
<a href="#">14271</a>	Microfossils	Polythalamaea		FORAMINIFERA		Tertiary	Pliocene	<a href="#">D1369</a>	Salmon Creek	Humboldt County	California	United States
<a href="#">14423</a>	Microfossils	Polythalamaea	Cassidulina	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14424</a>	Microfossils	Polythalamaea	Chilostomella oolina	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14425</a>	Microfossils	Polythalamaea	Eponides	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14426</a>	Microfossils	Polythalamaea	Nonion	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14427</a>	Microfossils	Polythalamaea	Pullenia	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14428</a>	Microfossils	Polythalamaea	Pulvinulinella	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14429</a>	Microfossils	Polythalamaea	Pyrgo	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7146</a>	Cape Fortunas	Humboldt County	California	United States
<a href="#">14430</a>	Microfossils	Polythalamaea	Uvigerina	FORAMINIFERA		Tertiary	Pliocene	<a href="#">MF7147</a>	Homita	Humboldt County	California	United States
<a href="#">14532</a>	Invertebrates	Gastropoda	Neptunea lyrata altispira		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7879</a>		Humboldt County	California	United States
<a href="#">14555</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1331</a>	Fields Landing	Humboldt County	California	United States
<a href="#">14556</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1332</a>	Fields Landing	Humboldt County	California	United States
<a href="#">14557</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1243</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14558</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1243</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14559</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1246</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14560</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1248</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14561</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14562</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1249</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14563</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1250</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14564</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1251</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14565</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1256</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14566</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1258</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14570</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1263</a>	Centerville Beach	Humboldt County	California	United States
<a href="#">14571</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1394</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14572</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1395</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14573</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1396</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14574</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1397</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14575</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1398</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14576</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1399</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14577</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1402</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14578</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1405</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14579</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1406</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14580</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1407</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14581</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1409</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14582</a>	Microfossils	Polythalamaea		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1410</a>	Scotia-Eel River	Humboldt County	California	United States



<a href="#">14583</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1415</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14584</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1417</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14585</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1418</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14586</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1419</a>	Scotia-Eel River	Humboldt County	California	United States
<a href="#">14587</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1426</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14588</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1427</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14589</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1430</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14590</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1431</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">14591</a>	Microfossils	Polythalamia		FORAMINIFERA		Quaternary	Pleistocene	<a href="#">D1436</a>	Texaco-Eureka No.2	Humboldt County	California	United States
<a href="#">15074</a>	Invertebrates	Gastropoda	Nassarius grammatus		Hypotype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7642</a>		Humboldt County	California	United States
<a href="#">15109</a>	Invertebrates	Echinoidea	Scutellaster major		Hypotype	Tertiary	Pliocene	<a href="#">1876-</a>		Humboldt County	California	United States
<a href="#">15110</a>	Invertebrates	Echinoidea	Scutellaster major		Hypotype	Tertiary	Pliocene	<a href="#">1876-</a>		Humboldt County	California	United States
<a href="#">15112</a>	Invertebrates	Echinoidea	Scutellaster major		Hypotype	Tertiary	Pliocene	<a href="#">1876-</a>		Humboldt County	California	United States
<a href="#">15119</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15120</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15121</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15122</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15124</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15125</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15126</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15128</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15129</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15130</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15131</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States
<a href="#">15132</a>	Invertebrates	Echinoidea	Scutellaster hertleini		Paratype	Quaternary, Tertiary	Pleistocene, Pliocene	<a href="#">B7346</a>		Humboldt County	California	United States

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## APPENDIX J

### **Mitigation Monitoring Plan and Reporting Program**

**MITIGATION MEASURES, MONITORING and REPORTING PROGRAM**  
**Garberville Sanitary District – Lead Agency**  
**Alderpoint Road Tank Replacement Project**  
**May, 2013**

This Mitigation Monitoring/Reporting Program (MMRP) has been prepared for the project described below in conformance with California Environmental Quality Act (CEQA) Section 21081.6 and CEQA Guidelines Section 15097.

**SCH #:** TBD

**PROJECT TITLE:** Garberville Sanitary District - Alderpoint Road Tank Replacement Project

**PROJECT APPLICANT:** Garberville Sanitary District

**PROJECT LOCATION:** Garberville, Humboldt County, California

**ZONING:** AE-B-6 (Agriculture Exclusive and Special Building Site Combining Zone).

**GENERAL PLAN DESIGNATION:** AR (GRBAP) (Agricultural Rural-1987 Garberville-Benbow-Redway-Alderpoint Community Plan).

**PROJECT DESCRIPTION:**

Garberville Sanitary District is located in the community of Garberville, a census-designated place in unincorporated Humboldt County, California. Garberville is approximately 65 miles south of Eureka, California and approximately 200 miles north of San Francisco. The project site is approximately 1.7 miles northeast of the center of Garberville, on the north side of Alderpoint Road. The project consists of the replacement of an existing water tank with a new water tank in the same location (on the footprint of the existing tank). The existing, 30,000 gallon-capacity tank leaks at the rate of approximately 6 gallons per minute. The District proposes to construct a new 200,000-gallon tank made of coated, painted steel.

The existing tank sits on an 18 foot by 18 foot concrete pad, which will be removed. The site is currently unfenced. After the existing tank and the concrete pad are removed, the site will be excavated approximately 4 feet and graded to create a flat base. A new, 40 foot by 40 foot concrete pad will be poured on-site and the new tank will be installed. A new, 8-foot high, green or black, cyclone security fence and gate will be installed around the tank. The wider footprint of the new tank, as well as the need for access during construction, will necessitate removal of several trees. Improvements to a roadside pull-out and unpaved access drive will be completed to facilitate better access during construction and long-term operations.

The replacement of the tank will prevent the continued loss of water resources caused by the leak, as well as increase reliability and redundancy for the water supplied to customers. The project is not motivated by anticipated population growth. The primary upper constraint to the District's water system capacity is the limited water diversion permit from the State Water Resources Control Board for appropriation of water from the South Fork Eel River. The permit will remain in place and appropriation rights will not increase.

**LEAD AGENCY:** Garberville Sanitary District

**CONTACT PERSON:** Jennie Short, Capital Projects Manager

**INTRODUCTION:** On \_\_\_\_\_, 2013 the subject Mitigated Negative Declaration was approved by the Board of Directors of the Garberville Sanitary District (GSD). The purpose of this MMRP is to ensure that the mitigation measures adopted in connection with the Negative Declaration are effectively

implemented. This MMRP establishes the framework that GSD and others will use to implement the adopted mitigation measures and the monitoring and/or reporting of such implementation.

CEQA provides that Garberville Sanitary District may choose whether the MMRP will monitor mitigation, report on mitigation, or both. "Reporting" generally consists of a written compliance review that is presented to the decision making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. "Monitoring" is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both. The choice of program may be guided by the following:

- (1) Reporting is suited to projects which have readily measurable or quantitative mitigation measures or which already involve regular review. For example, a report may be required upon issuance of final occupancy to a project whose mitigation measures were confirmed by building inspection.
- (2) Monitoring is suited to projects with complex mitigation measures, such as wetlands restoration or archeological protection, which may exceed the ability of the Garberville Sanitary District to oversee; are expected to be implemented over a period of time; or, require careful implementation to assure compliance.
- (3) Reporting and monitoring are suited to all but the simplest projects. Monitoring ensures that project compliance is checked on a regular basis during and, if necessary after, implementation. Reporting ensures that Garberville Sanitary District is informed of compliance with mitigation requirements.

**ENFORCEMENT:** In accordance with CEQA, the primary responsibility for making a determination with respect to potential environmental effects rests with Garberville Sanitary District rather than the monitor or preparer of the CEQA documents. As such, Garberville Sanitary District is identified as the primary enforcement agency for this MMRP.

**PROGRAM MODIFICATION:** After adoption of this MMRP, minor changes to this MMRP are permitted but can only be made by Garberville Sanitary District. The Board of Directors, after consultation with affected Agencies, may make minor modifications to this MMRP. If, for any reason, any mitigation measure specified in this MMRP cannot be implemented due to factors beyond the control of the Garberville Sanitary District, substitution of another mitigation measure may be approved, but only at a noticed public hearing before the Board of Directors. Deviations from this MMRP are allowed only if they continue to satisfy the CEQA Section 21081.6 requirements as determined by Garberville Sanitary District.

Note: The Project Contractor will be responsible for hiring and directing Project Construction Staff, including the Cultural/Archaeological Support Staff or other required Staff and for consultations with Public Agency Staff as required in this Mitigation Monitoring and Reporting Program.

**SUMMARY OF POTENTIAL PROJECT IMPACTS:** Below is a table that summarizes the impact potential for each category of impact as identified and analyzed in the Initial Study.

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. Aesthetics		✓		
II. Agricultural and Forestry Resources				✓
III. Air Quality		✓		
IV. Biological		✓		
V. Cultural		✓		
VI. Geology and Soils		✓		
VII. Greenhouse Gas Emissions			✓	
VIII. Hazards and Hazardous Materials				✓
IX. Hydrology and Water Quality		✓		
X. Land Use and Planning				✓
XI. Mineral Resources			✓	
XII. Noise		✓		
XII. Population and Housing			✓	
XIII. Public Services				✓
XIV. Recreation				✓
XV. Transportation and Traffic		✓		
XVI. Utilities & Service Systems		✓		
XVII. Mandatory Findings of Significance			✓	

**MMRP IMPLEMENTATION TABLE:** To assure that this MMRP is effectively implemented, the table on the following pages establishes a framework that GSD and others will use to implement the adopted mitigation measures and the monitoring and/or reporting of such implementation. The following abbreviations will be used in the MMRP table:

- BMP..... Best Management Practice(s)
- CCR..... California Code of Regulations
- CDFW..... California Department of Fish & Wildlife
- CEQA ..... California Environmental Quality Act
- GSD ..... Garberville Sanitary District
- HCPWD..... Humboldt County Public Works Department
- NAHC ..... Native American Heritage Commission
- QSD ..... Qualified Stormwater Developer
- QSP ..... Qualified Stormwater Practitioner
- SWPPP ..... Storm Water Pollution Prevention Plan

Mitigation Measure	Responsible Agency and/or Party	Action Required	Monitoring Phase/ Reporting Requirements	Enforcement	Compliance Verification	Notes/ Comments
<p><b>AESTH-1:</b> The new tank will be painted in earth tone or forest green color to blend visually with the background.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Project Engineer</li> </ul>	<p>The Project Engineer shall include the appropriate paint color in the tank specifications and submission of the tank specifications to GSD for approval.</p>	<p>The tank specifications shall be approved by GSD prior to construction of the water tank.</p>	<p>During tank installation, GSD and the Project Engineer shall conduct field observations to assure compliance, and shall be empowered to direct the contractor to temporarily suspend construction activities for noncompliance.</p>		
<p><b>AESTH-2:</b> Trees that are removed will be replaced on-site at a 2-to-1 ratio. The replaced trees will be planted adjacent to the new fence to enhance visual screening.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Project Engineer</li> </ul>	<p>Preparation of tree replacement plan by the Project Engineer showing planting detail, and submission of the plan to GSD for approval.</p>	<p>The tree replacement plan shall be approved by GSD prior to construction of the water tank.</p>	<p>During the plantings installation, GSD and the Project Engineer shall conduct field observations to assure compliance, and shall be empowered to direct the contractor to temporarily suspend construction activities for noncompliance.</p>		
<p><b>AIR-1:</b> At all times, the project shall be constructed in compliance with Air Quality Regulation 1– Air Quality Control Rules, Rule 104, Section 4.0 – Fugitive Dust Emissions. The project contractor will be required to do the following:</p> <ol style="list-style-type: none"> <li>1. Cover open-bodied trucks when used for transporting materials likely to give rise to airborne dust.</li> <li>2. Conduct trench digging, backfill, and paving of water pipe trenches in such a manner as to minimize the creation of airborne dust. Use water for control of dust during construction operations.</li> <li>3. Apply asphalt, water, or suitable chemicals on exposed earth surfaces, materials stockpiles, and other surfaces which can give rise to airborne dust.</li> <li>4. Pave the backfilled trenches as soon as practicable after backfill of the trenches.</li> <li>5. Promptly remove earth or other track-out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment.</li> <li>6. Maintain construction equipment in good condition to minimize excessive exhaust emissions.</li> </ol>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Contractor</li> <li>▶ Project Engineer</li> </ul>	<p>Implementation of the required control measures by GSD and its contractors during construction.</p>	<p>Throughout the duration of project construction.</p>	<p>The Project Engineer shall, on the basis of their observations or reports to GSD regarding excessive construction-related dust, fumes, exhaust, or other particulate matter, be empowered to direct the contractor to modify the implementation of the required control measures, as required, to maximize their effectiveness.</p>		

Mitigation Measure	Responsible Agency and/or Party	Action Required	Monitoring Phase/ Reporting Requirements	Enforcement	Compliance Verification	Notes/ Comments
<p><b>BIO-1:</b> For any project-related tree removal or construction activities proposed during the raptor nesting season (March 1 to August 15), a pre-construction survey of the project site for nesting raptors and other migratory birds shall be conducted by a qualified biologist and provided to the DFW and The District for review and approval. The active bird nest survey shall be conducted no more than 15 days prior to construction and/or tree removal. If nesting raptors or other migratory birds are found during the survey, either: (1) the proposed tree removal and construction activities shall be delayed until after the nesting season; or (2) a 500-foot buffer shall be established between the nest and any proposed tree removal and construction activities. Such a buffer shall be maintained until August 15 or until a subsequent study verifies that the nest is no longer in use.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ CDFW</li> <li>▶ Project Biologist</li> </ul>	<p>A pre-construction active bird nest survey shall be completed by a qualified biologist (funded by GSD).</p> <p>If active bird nests are found to be present, implementation by GSD the protective measures set forth in the mitigation.</p>	<p>The pre-construction survey for active bird nests shall be completed and approved by the Project Biologist prior to any construction activities.</p> <p>If active bird nests are found to be present, implementation of the protective measures set forth in the mitigation shall be followed by GSD.</p>	<p>If active bird nests, nesting raptors or other migratory birds are found during the survey, either: (1) the proposed tree removal and construction activities shall be delayed until after the nesting season; or (2) a 500-foot buffer shall be established between the nest and any proposed tree removal and construction activities. Such a buffer shall be maintained until August 15 or until a subsequent study verifies that the nest is no longer in use.</p>		
<p><b>CULT-1:</b> If potential archaeological or paleontological resources are encountered during project subsurface construction activities, all work within 50 feet per the requirements of CEQA (January 1999 Revised Guidelines, Title 14 CCR 15064.5 (f)) and 36 CFR § 800.13 (a-b), shall stop. Work near the archaeological finds shall not resume until a qualified archaeologist, funded by the applicant and who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action. The applicant shall be responsible for implementing the mitigation prior to construction activities being re-started at the discovery site.</p>	<ul style="list-style-type: none"> <li>▶ GSD Contractor</li> </ul>	<p>Monitoring of subsurface construction activities by the applicant's contractors, and stopping of subsurface construction activities if resources are discovered.</p> <p>If archaeological or paleontological resources are discovered: (1) hiring of a qualified archaeologist by GSD and/or Project Engineer; and (2) implementation of any mitigation identified by the archaeologist prior to resumption of construction activities at the location.</p>	<p>Throughout the duration of project construction.</p>	<p>The Project Contractor shall observe all ground disturbing activities, and shall suspend construction activities as described within the subject mitigation measure.</p>		
<p><b>CULT-2:</b> In accordance with California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.94 and 5097.98, if human remains are uncovered during project construction work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie human remains. The Humboldt County Coroner shall be immediately notified. If the remains are determined by the Coroner to be Native American in origin, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Contractor</li> </ul>	<p>Monitoring of subsurface construction activities by the applicant's construction contractors.</p> <p>Adherence by the applicant to NAHC guidelines with respect to the treatment and disposition of any remains.</p>	<p>Throughout the duration of project construction.</p> <p>Notification by the GSD to the County Coroner, relevant Native American representative, and NAHC if human remains are found.</p>	<p>The Project Contractor and/or Engineer shall observe all ground disturbing activities, and shall suspend construction activities as described within the subject mitigation measure.</p>		

Mitigation Measure	Responsible Agency and/or Party	Action Required	Monitoring Phase/ Reporting Requirements	Enforcement	Compliance Verification	Notes/ Comments
<p><b>GEO-1:</b> Erosion and Sediment Control Plan  Prior to earth moving activities, an Erosion and Sediment Control Plan (ESCP) will be prepared by a Qualified Stormwater Developer (QSD) or a Qualified Stormwater Practitioner (QSP). The ESCP will include BMPs (Best Management Practices) that shall be implemented by the Project Contractor during any ground disturbance that may occur as a part of project construction. BMPs will be implemented to ensure no erosion or sediment transport impacts existing drainage channels or the South Fork Eel River.</p> <p>The BMPs shall include, but not be limited to, the following measures described below.</p> <ol style="list-style-type: none"> <li>1. Silt fencing shall be installed in areas where work occurs near waterways. The utilization of erosion control techniques, such as sterile straw bales, matting, and/or brush mats, will decrease water runoff velocities and retard surface soil erosion.</li> <li>2. Additional BMP strategies may be identified for work conducted near sensitive habitat areas. These alternate BMP strategies shall include the use of fiber rolls, silt fencing, and/or other methodologies as applicable to specific sensitive areas identified in the Biological Study.</li> <li>3. BMPs for construction staging and materials stockpiling areas shall be determined by the QSD or QSP and implemented by the project engineer. These measures may include the use of silt fencing, fiber rolls, sterile straw bales, matting, brush mats, or other site-specific methods for prevention of sediment and contaminants from entering sensitive habitats.</li> <li>4. Disturbed areas will be fully re-vegetated before BMPs are removed ensuring no erosion or sedimentation after project completion.</li> <li>5. Disturbed areas outside the limits of placed gravel will be fully re-vegetated before BMPs are removed ensuring no erosion or sedimentation after project completion</li> </ol>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Contractor</li> <li>▶ Project Engineer</li> <li>▶ Qualified Stormwater Developer (QSD) or a Qualified Stormwater Practitioner (QSP)</li> </ul>	<p>Preparation of an ESCP to be approved by the GSD.</p> <p>Implementation of the approved ESCP and included BMPs.</p>	<p>Preparation and approval required prior to project activities OR prior to issuance of grading permit</p> <p>Project Engineer to monitor implementation throughout the duration of construction.</p>	<p>GSD shall postpone construction until ESCP has been approved and implemented.</p> <p>GSD and the Project Engineer to monitor implementation of the ESCP during construction.</p>		
<p><b>HYDRO-1</b>  See GEO-1</p>						



Mitigation Measure	Responsible Agency and/or Party	Action Required	Monitoring Phase/ Reporting Requirements	Enforcement	Compliance Verification	Notes/ Comments
<p><b>NOISE-1</b> To minimize noise disturbance, construction activities will be limited to the hours of 7:00 AM to 7:00 PM. To minimize impacts related to noise, the contractor will be required to utilize equipment that is in good working condition and that is properly muffled to reduce noise generated by equipment.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ Contractor</li> </ul>	<p>Limit construction activities to the hours of 7:00 AM to 7:00 PM</p> <p>Contractor shall keep equipment in good working condition.</p>	<p>GSD to monitor implementation throughout the duration of construction.</p>	<p>GSD and the Project Engineer may stop construction begun before 7:00 AM or continued after 7:00 PM.</p>		
<p><b>TRAFFIC-1:</b> TRAFFIC-1: The Project Contractor must prepare a Traffic Management Plan to the satisfaction of the Humboldt County Department of Public Works prior to issuance of encroachment permits. The plan will include strategies for signage, traffic control, flagging, and maintenance of access through construction areas.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> <li>▶ HCPWD</li> </ul>	<p>Prepare Traffic Management Plan</p>	<p>Required prior to issuance of encroachment permits.</p>	<p>GSD and HCPWD has the right to suspend/hold issuance of encroachment permit.</p>		
<p><b>UTILITIES-1:</b> Temporary water provision for approximately seven houses. The District will implement measures for the temporary provision of water for houses that ordinarily receive their water directly from the line that provides water to the existing tank. Measures will be implemented prior to any disruption of existing services. Such measures may include temporary water tanks, delivery of bottled water, or similar means to ensure the continued provision of domestic water service.</p>	<ul style="list-style-type: none"> <li>▶ GSD</li> </ul>	<p>Temporary water provision for approximately seven houses.</p>	<p>The District will implement measures for the temporary provision of water for houses that ordinarily receive their water directly from the line that provides water to the existing tank. Measures will be implemented prior to any disruption of existing services.</p>	<p>GSD shall postpone construction until temporary water provision has been approved and implemented.</p> <p>GSD and the Project Engineer to monitor implementation of the temporary water provision during construction.</p>		