



FEMA

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

**North Lane, Orinda
Storm Water Improvement Project**
City of Orinda, California
FEMA-1810-DR-CA
HMGP 1810-0021-16

U.S. Department of Homeland Security
Federal Emergency Management Agency

April 2013

**CDM
Smith**

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Acronyms

APE	Area of Potential Effect
AWS	Alameda Whipsnake
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEMA	California Emergency Management Agency
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMP	corrugated metal pipe
CO	carbon monoxide
CRLF	California red-legged frog
CWA	Clean Water Act
EBMUD	East Bay Municipal Utility District
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GCR	General Conformity Rule
HMGP	Hazard Mitigation Grant Program
JARPA	Joint Aquatic Resources Permits Application
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
O ₃	ozone
PA	Programmatic Agreement
PCE	Primary Constituent Element
PEA	Programmatic Environmental Assessment
PM _{2.5}	particulate matter less than or equal to 2.5 micrometers in diameter
PM ₁₀	particulate matter less than or equal to 10 micrometers in diameter
ppt	parts per thousand
RCP	reinforced concrete pipe
RWQCB	Regional Water Quality Control Board

SIP	State Implementation Plan
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Officer
SO2	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
TMDL	total maximum daily load
URBEMIS	urban emissions model
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VOCs	volatile organic compounds

Supplemental Environmental Assessment to the Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting from Flood, Earthquake, Fire, Rain, and Wind Disasters in California

**City of Orinda
North Lane, Orinda – Storm Water Improvement Project
HMGP-1810-DR-CA
April 2013**

1. Introduction

The City of Orinda has applied, through the California Emergency Management Agency (CalEMA), for funds under Federal Emergency Management Agency's (FEMA) the Hazard Mitigation Grant Program (HMGP) to implement upgrades to a storm water drainage system in the City of Orinda, Contra Costa County, California. To qualify for FEMA funding, the proposed project requires environmental review by FEMA.

1.1 Scope of Document

In 2003, FEMA prepared a Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting from Flood, Earthquake, Fire, Rain, and Wind Disasters in California (PEA), which assesses the common impacts of action alternatives that are under consideration at the proposed project site. The PEA adequately assesses the impacts of the action alternatives in some resource areas, but does not fully assess the impacts of the action alternatives in all resource areas. The PEA can be viewed at the following web address: http://www.fema.gov/pdf/plan/ehp/cal_pea.pdf.

Therefore, for FEMA funding of this project to comply with the National Environmental Policy Act (NEPA), FEMA has prepared this Supplemental Environmental Assessment (SEA) to tier from the PEA and fully assess impacts to resources that are not adequately addressed in the PEA. This SEA hereby incorporates the PEA by reference, in accordance with Title 40 of the Code of Federal Regulations (CFR) Section 1508.28.

1.2 Purpose and Need for Action

Under authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 USC 5121 et seq.) and CFR Title 44, FEMA's HMGP provides grants to state and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the proposed project is to provide HMGP funding to the City of Orinda to reduce the risk of flooding in the vicinity of North Lane in the City of Orinda.

Storm events in 2004 and 2005 resulted in residential property damage as well as a substantial amount of damage to the East Bay Municipal Utility District (EBMUD) water treatment plant at North Lane, nearly resulting in the closure of the plant. It has been determined that the existing 48-inch storm drain, which collects runoff from the 341-acre watershed above North Lane, only has the capacity to drain a 2-year storm event. The existing storm water drainage system is unable to capture and drain stormwater flows during major storms. Therefore, action is needed to correct existing flood control problems, including the vulnerability of the EBMUD treatment plant to damage from flooding, and to prevent flooding hazards in the future.

2. Description of Proposed Project and Alternatives

2.1 No Action Alternative

NEPA requires inclusion of a No Action Alternative in environmental analysis and documentation. The No Action Alternative is defined as maintaining the status quo with no FEMA funding for any of the alternatives. The No Action Alternative is used to evaluate the effects of not providing assistance for which the project is

eligible. It provides a benchmark against which alternatives can be evaluated. Consistent with Section 2.1 of the PEA, evaluation of this alternative to the proposed project assumes that the City of Orinda would be unable to implement the project for lack of federal assistance, and the risk of flooding would persist.

The No Action Alternative is in conflict with FEMA's mission and the purpose of the HMGP, which is to implement long-term hazard mitigation measures to reduce losses and protect life and property from natural disasters. Under the No Action Alternative, the existing flood control infrastructure would not be improved. Adverse impacts would continue to occur within the existing neighborhood. Floodwaters would continue to periodically inundate the North Lane area and the EBMUD water treatment plant during periods of heavy rainfall. Flooding events can seriously disrupt EBMUD operations and delay service to 800,000 customers.

2.2 Proposed Project Alternative

Under 44 CFR 206, the proposed project is eligible for FEMA funding and is a covered activity as described in Section 2.3.5 of the PEA, Constructing New Facilities or Relocating Existing Facilities. The City of Orinda proposes to construct a bypass storm drain to correct an existing flooding problem in the North Lane area of Orinda. The vicinity is shown in Figure 1. The project area is shown in Figure 2. The area potentially impacted by the proposed construction is shown in Figure 3. The project plans are depicted in Figures 4, 5 and 6.

The proposed project would install approximately 1,300 feet of 60-inch storm sewer pipe and create an outfall structure at San Pablo Creek. The proposed storm drain bypass project would include approximately 900 feet of 60-inch reinforced concrete pipe (RCP) under the length of North Lane. From the foot of North Lane, 320 linear feet of 60-inch RCP would be jacked and bored under Camino Pablo. An additional 80 feet of 60-inch concrete jacking pipe would connect to a new outfall structure upstream from the existing outfall on San Pablo Creek. The proposed storm drain system would also include construction of a debris rack, headwall, and three inlet structures at the upstream end; five or six manholes; connection to existing lateral storm drain pipes; fence reinstallation; and pavement repair.

With the exception of the last segment between Camino Pablo and San Pablo Creek, the new storm drain would be constructed within the right-of-way of existing streets, parallel to the existing corrugated metal pipe (CMP) and ditch system on North Lane, which would remain in place. Manholes would be constructed to connect to or to avoid existing pipelines and drains.

The project would be constructed by the City of Orinda with a Right of Entry and Storm Drainage Easement from EBMUD. Additionally, the City of Orinda would apply for permits from the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers, and San Francisco Bay Regional Water Quality Control Board. Project construction is expected to take two to three months to complete.

The purpose of the project is to increase the stormwater drainage capacity to meet local and flood control standards by constructing a parallel drainage system. The 60-inch pipe would reduce reliance on above ground v-ditches that historically have been clogged by mud and debris carried by stormwater.

Implementation of the project would reduce the following:

- Residential claims for damages;
- Road closures during storms;
- Debris cleanup costs to the City of Orinda;
- Flooding of the EBMUD Water Treatment Plant located opposite the foot of North Lane;

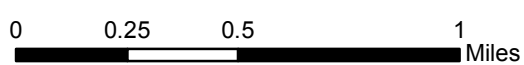
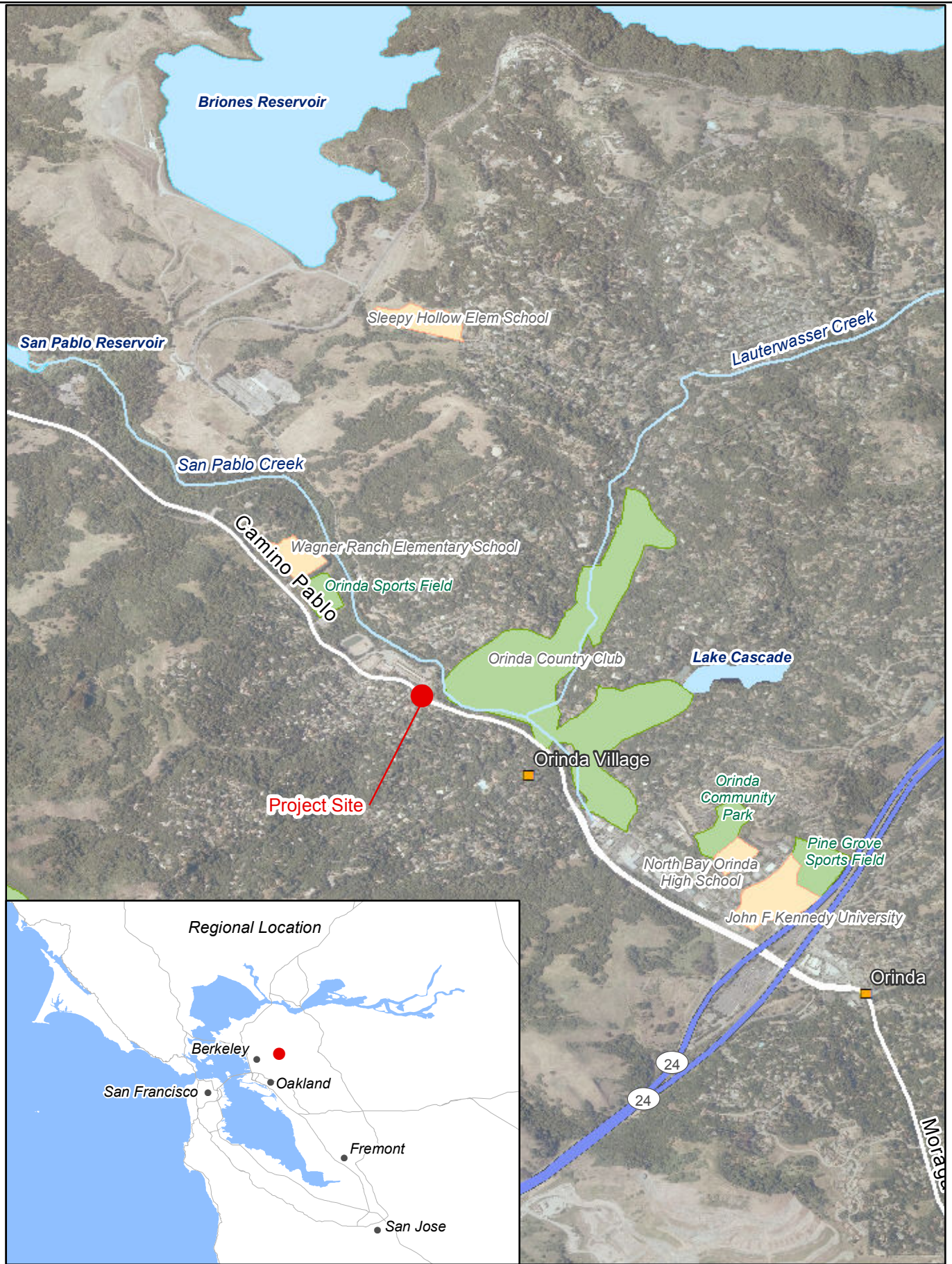
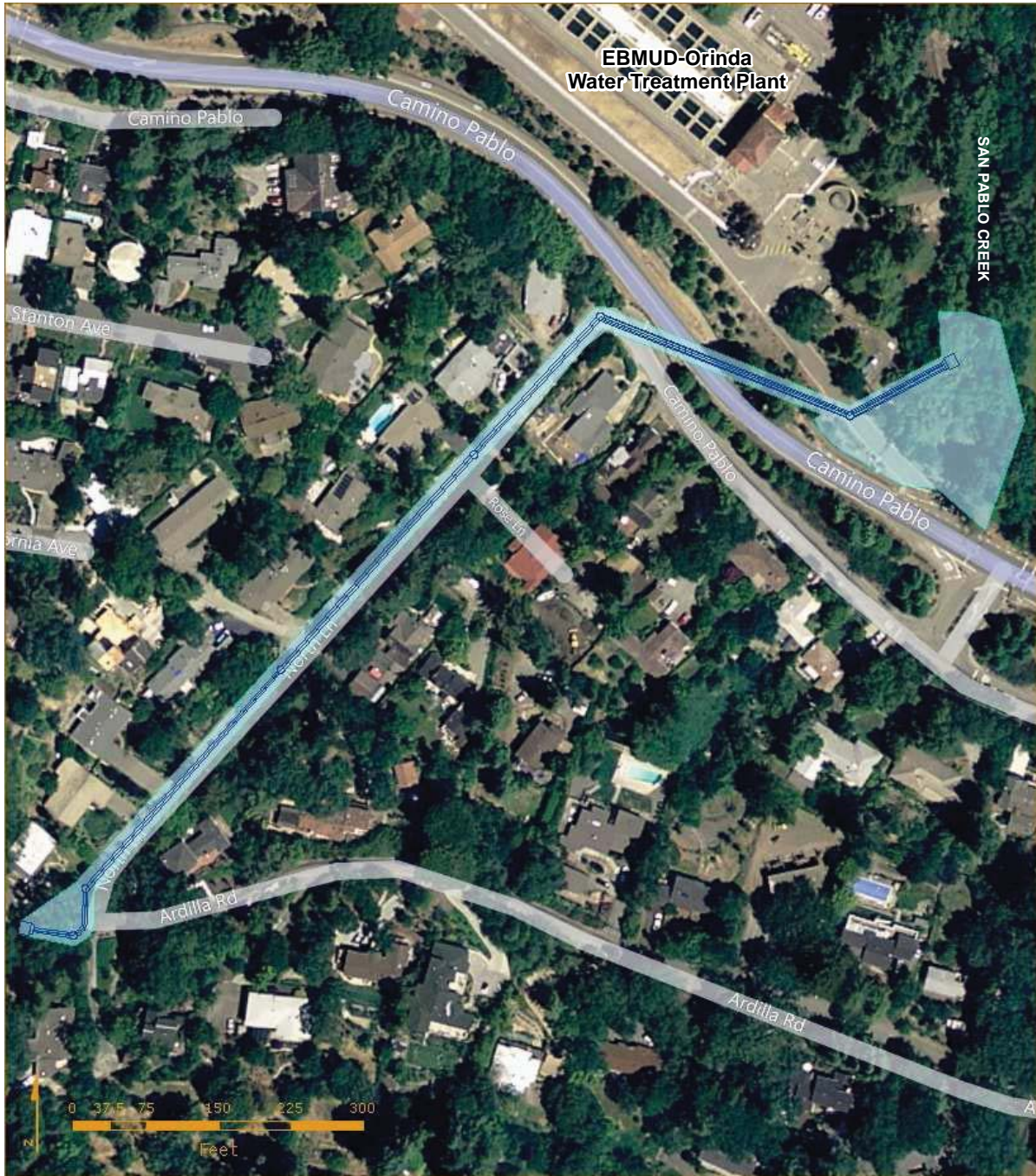


Figure 1
Vicinity Map

North Lane, Orinda – Stormwater Improvement Project

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Project Limits

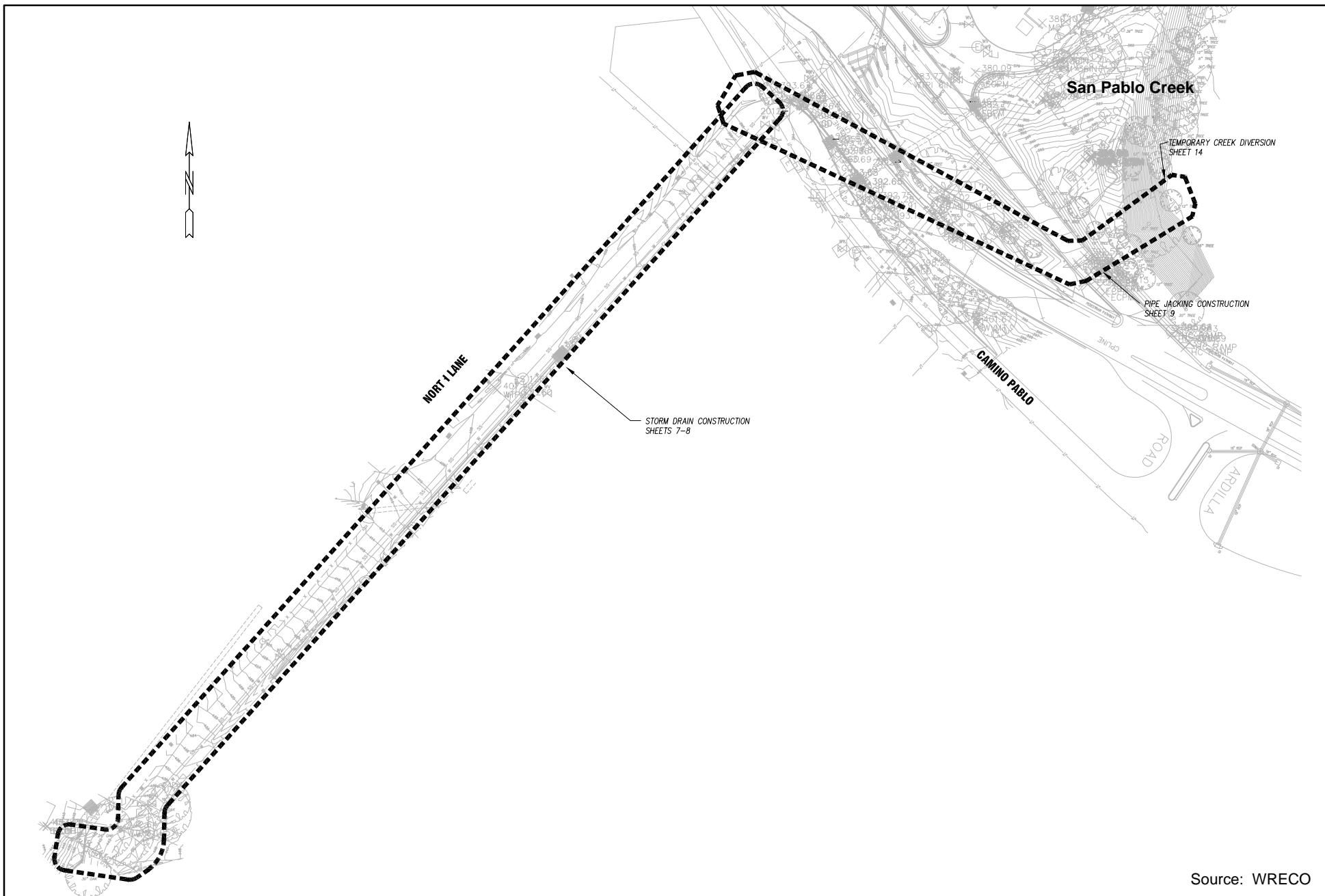
North Lane Stormwater Mitigation Project

— Proposed Stormwater Drainage Project Limits



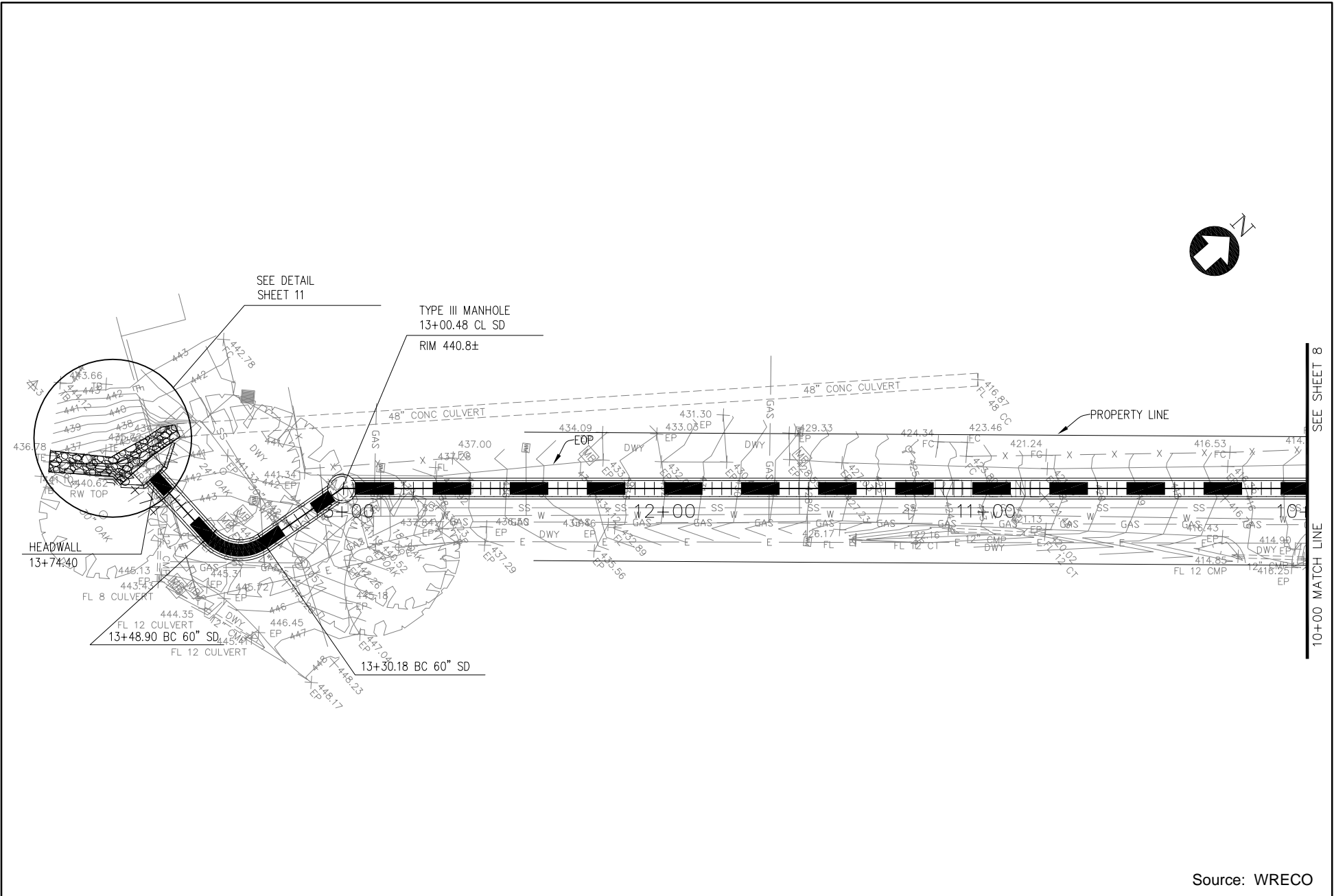
Data Sources: Basemap (c) 2010 Microsoft Corporation and its data suppliers, <http://www.bing.com/maps>. Additional data from Cal-Atlas Geospatial Clearinghouse, <http://atlas.ca.gov>. Prepared by Robert Atanasio (WRECO) November 1, 2011.

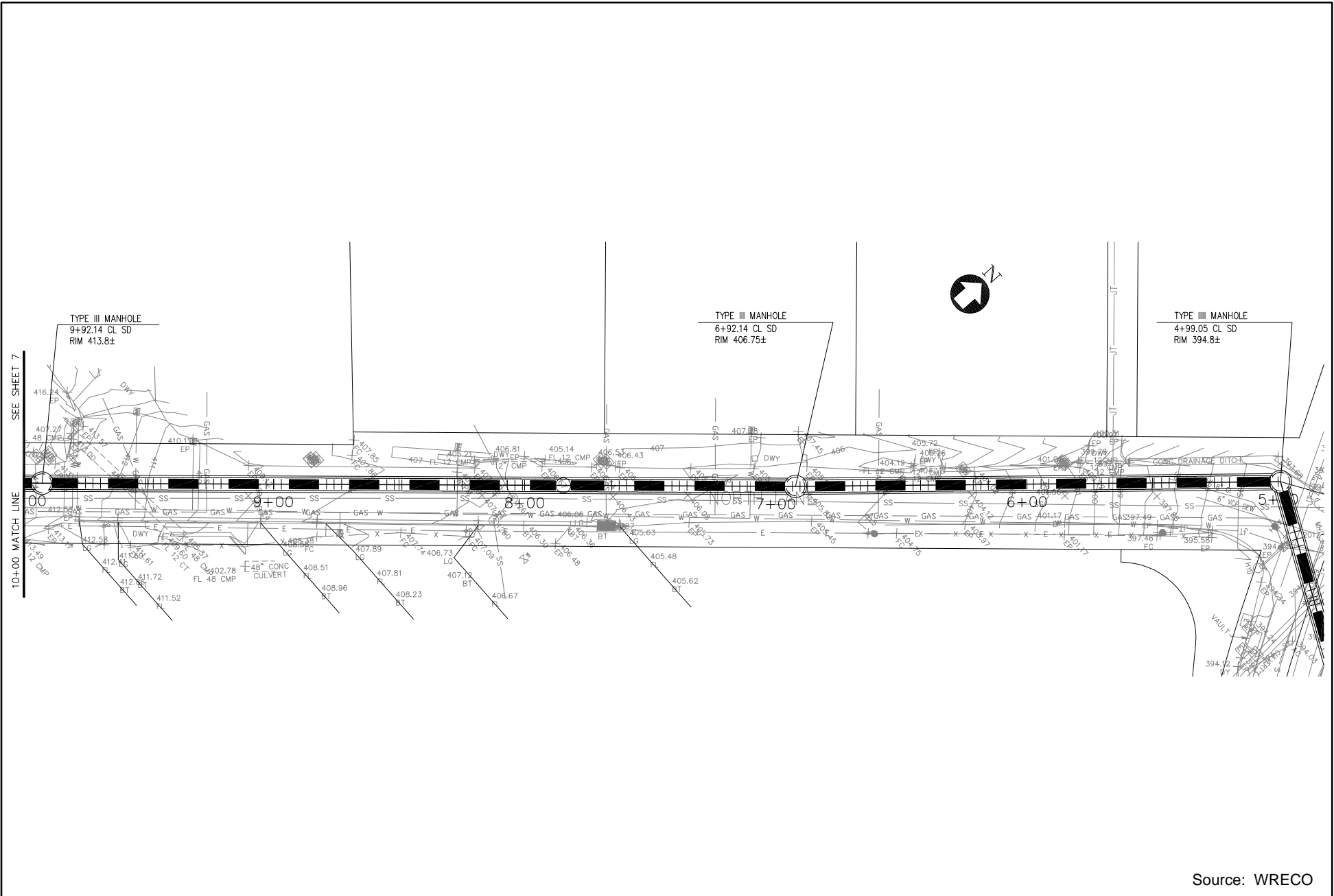
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Source: WRECO

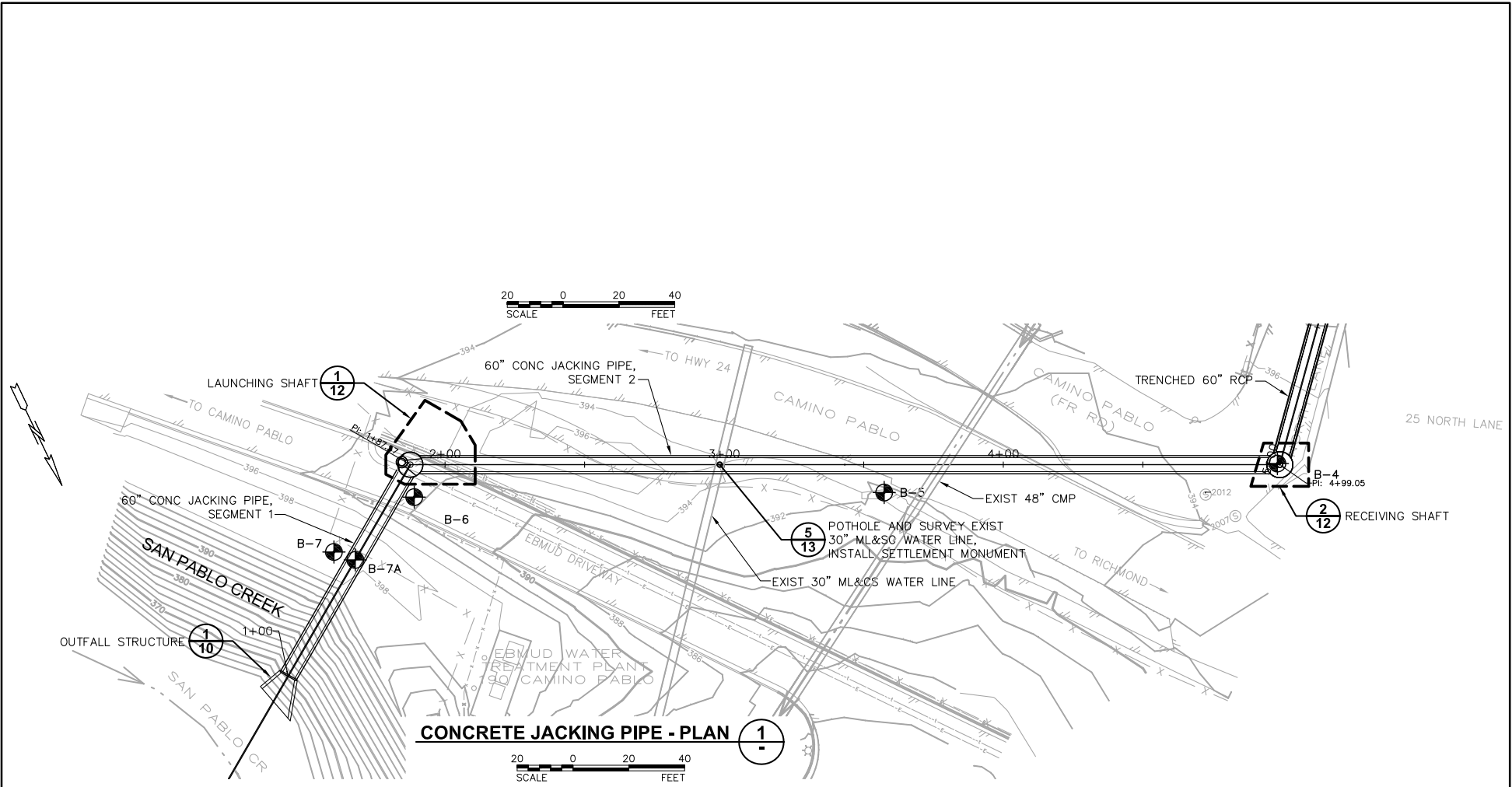
Figure 3
Area of Potential Direct Impact
North Lane, Orinda – Stormwater Improvement Project





Source: WRECO

Figure 5
 Plan and Profile
 North Lane, Orinda – Stormwater Improvement Project



Source: Cal Engineering & Geology



Figure 6
Jacking Pipe Plan and Profile
 North Lane, Orinda – Stormwater Improvement Project

- Shutdown of EBMUD's below ground pumping plant that supplies drinking water to the cities of Orinda, Moraga, and Lafayette.

Years of development in the upstream watershed have caused the existing drainage system of public and private storm drain pipes and ditches to no longer have the capacity to convey flow during storm events.

2.3 Project Alternatives Considered and Dismissed

The following alternative to the proposed action was considered and dismissed:

Alternative 1: Construction of detention basins. Due to limited space near the confluence area and downstream areas, there is no available site large enough for installing a detention basin.

For the reasons stated above, this alternative was eliminated from further consideration.

3. Affected Environment and Environmental Consequences

FEMA has prepared a PEA to address typical recurring actions within California related to flood, earthquake, fire, rain, and wind disasters. The purpose of the PEA is to provide a framework to address the impacts of these typical actions with the overall goal of preventing future disasters resulting from these types of events.

The PEA discusses 12 environmental topic areas related to these typical actions. The discussion provided in the PEA is broad and regional in nature and has the intent of providing relevant information to characterize each resource area. The 12 resource areas covered in the PEA are as follows:

- Geology, Seismicity, and Soils
- Air Quality
- Water Resources
- Biological Resources
- Cultural Resources
- Socioeconomics and Public Safety
- Land Use and Planning
- Public Services and Recreation
- Transportation
- Noise
- Hazardous Materials and Wastes
- Visual Resources

The PEA adequately describes the affected environment and environmental consequences of the proposed project in the areas of land use and planning and hazardous materials and wastes. The affected environment and environmental consequences for the other listed resources are described in this section, which supplements the PEA. Appropriate avoidance and minimization measures, either stipulated in the PEA or based on the results of the impact analysis in this SEA, are discussed in Section 4. The No Action Alternative is adequately described in the PEA for all resource areas.

3.1 Geology, Seismicity, and Soils

The City of Orinda is located within the Coast Range. The Coast Range is a geomorphic province that extends from Santa Barbara County north to the Oregon border. The area surrounding the City of Orinda is characterized by hilly regions east of the Hayward Fault. The Hayward Fault is part of the San Andreas Fault System, which includes the San Andreas Fault, the San Gregorio-Seal Cove Fault, the Hayward Fault, and the Calaveras Fault. Overall, the San Francisco Bay Area is situated between two major tectonic plates, the Pacific Plate to the southwest and the North American Plate to the northeast (EBMUD 2009).

The major geographic features within the San Francisco East Bay area include the Diablo Range and the Santa Cruz Mountains. The region consists primarily of northwest trending mountain ranges, broad basins, and elongated valleys generally parallel to the Santa Andreas Fault system (USGS 2008).

The City of Orinda, including the action area, is located near the Hayward Fault Zone. The Hayward Fault Zone runs southeast through the cities of San Pablo, El Cerrito, and Berkeley, ending in the vicinity of the City of Fremont. The Hayward Fault is approximately two miles west of the project site.

The action area contains no active faults. As a result, both direct and indirect impacts related to seismic shaking would not be adverse.

Construction of the proposed project would temporarily impact soils within the action area during removal of vegetation, excavation of trenches, and the use of heavy equipment. Potential impacts to soils would include compaction and a temporary increase in susceptibility to water and wind erosion. Best management practices (BMPs) would be implemented to minimize erosion, as described in Section 4.1.

The storm drain pipeline empties into San Pablo Creek upstream of the EBMUD water treatment plant. The outfall of the bypass line would be designed with adequate discharge angle and an appropriate energy dissipation system, such as rock slope protection, to prevent erosion and scour of the San Pablo Creek river bed.

With the implementation of BMPs (see Section 4.1), construction of the proposed project would not result in adverse, long-term impacts to soils.

3.2 Air Quality

The action area is located within the Diablo Valley-San Ramon Valley subregion of the San Francisco Bay Area Air Basin. The Berkeley hills block much of the marine airflow from the bay, so the project area experiences greater temperature variation than western Contra Costa County. Summers in Orinda are typically warm and dry, with little to no rainfall from June to August and temperatures ranging from highs around 80°F to lows in the low fifties. Winters are typically cool and wet, with approximately three to six inches of rain per month and temperatures ranging from highs in the mid fifties and low sixties to lows in the mid thirties. Although western Contra Costa County experiences strong prevailing winds from the Golden Gate that serve to dilute and transport pollutants away from the area, the terrain in the inland areas of the Diablo-San Ramon Valley subregion restricts wind and ventilation.

The action area is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD is designated as a nonattainment area for the California Ambient Air Quality Standards (CAAQS) for ozone (O₃), particulate matter less than or equal to 10 micrometers in diameter (PM₁₀), and particulate matter less than or equal to 2.5 micrometers in diameter (PM_{2.5}), but is in attainment or unclassified for all other California criteria pollutants.

The general conformity regulations (40 CFR 93 Subpart B) apply to federal actions (any activity that a federal agency supports, licenses, permits, or approves) that occur in nonattainment or maintenance areas. A nonattainment area is an area that has not met one or more National Ambient Air Quality Standards (NAAQS) established in 40 CFR Part 50. A maintenance area is an area that was formerly designated as a nonattainment area, but has since met the NAAQS and the jurisdictional authority has established a maintenance plan to stay within the applicable standards. For FEMA to comply with the General Conformity Rule (GCR) and determine whether the Proposed Action Alternative conforms to the State Implementation Plan (SIP) and thus not have adverse effects on air quality, a comparison must be made to demonstrate that the Proposed Action Alternative emissions would be below the applicable de minimis threshold rates listed in the GCR. The project site is in an area designated as nonattainment for O₃ (marginal) and PM_{2.5}, maintenance for CO, and attainment or unclassified for lead, NO₂, PM₁₀ and sulfur dioxides (SO₂). A summary of applicable GCR de minimis threshold rates for Contra Costa County is presented in Table 1 below.

**Table 1
GCR Emission Threshold Rates in Contra Costa County**

Pollutant	GCR Threshold (tons/yr) ¹
Carbon monoxide (CO)	100
Nitrogen oxides (NOx)	100 ²
Volatile organic compounds (VOC)	100 ³
Fine particulate matter (PM _{2.5})	100
Sulfur dioxide (SO ₂)	100 ⁴

Source: 40CFR93 Subpart B

¹GCR determinations are based on federal attainment designations, not state attainment designations.

²As a precursor to both NO₂ and PM_{2.5}, NOx also has a threshold of 100 tons per year.

³As a precursor to O₃ and PM_{2.5}, VOC has a threshold of 100 tons per year.

⁴Although the area is in attainment of SO₂, any precursors to nonattainment pollutants are also subject to de minimis thresholds. Since SO₂ is a precursor to PM_{2.5}, which is in nonattainment, it is subject to the given de minimis threshold.

It is anticipated that the following equipment would be used during construction:

Track mounted excavator (8 hours a day for 40 days)

Dozer (4 hours a day for 42 days)

Work truck (4 hours a day for 40 days)

Tamper (8 hours a day for 40 days)

Dump Truck (2) (4 hours a day for 20 days)

Paver (8 hours a day for 5 days)

Forklift (4 hours a day for 20 days)

Horizontal boring machine (8 hours a day for 30 days)

During project construction, it is estimated that approximately 22 truck trips associated with delivery of materials would occur per day. In addition, approximately 22 trips associated with hauling away of soil and other construction debris would occur per day. These trips would occur over a period of 42 working days. The trips would create a minor temporary air quality impact within the neighborhood immediately surrounding the project area.

Implementation of the proposed project would not result in permanent impacts to air quality. However, implementation of the proposed project would result in temporary increases of fugitive dust (PM₁₀ and PM_{2.5}) and combustion emissions (CO, NO_x, PM₁₀, PM_{2.5}, SO₂, and VOC). Fugitive dust emissions would be generated by vehicle movement over paved and unpaved roads, dirt tracked onto paved surfaces from unpaved areas at access points, and particulate matter that is suspended during construction activities. Combustion emissions would be generated from the operation of construction equipment, haul vehicles, and worker vehicles during the construction process.

It is important to note that there are no NAAQS or CAAQS for VOCs. Along with NO_x, VOCs are a precursor to O₃, which has both a federal and state ambient air quality standard. The formation of O₃ occurs in the troposphere as precursor pollutants react in the presence of sunlight. Therefore, the only way to regulate/reduce O₃ is through the control of its reactive precursors.

To determine conformance with the GCR, construction-related emissions were analyzed to determine if emissions threshold rates would be exceeded. Construction-related emissions include emissions from diesel powered construction equipment, such as dozers and excavators, fugitive dust from site grading, and vehicle trips for construction workers and hauling of construction materials. Unmitigated emission estimates were determined using an urban emissions model (URBEMIS2007). Emission rates and meteorological conditions for Contra Costa County were selected. Emissions estimates reflect the number of workers, project schedule, updated load factors, and URBEMIS defaults (CARB 2010).

Disturbance of soil at the project site during trenching, boring, and earthmoving would contribute to project dust emissions. Project construction would require trucks to remove excess materials to a disposal site and to deliver RCP and fill materials to the project site. Based on the trench and bore specifications, it is anticipated that the project would require removal of up to 4,780 cubic yards of sediment, delivery of up to 3,421 cubic yards of fill materials, and delivery of 1,320 feet of pipe and additional materials. Assuming use of 12-cubic yard dump trucks, the movement of materials associated with project construction would result in over 900 delivery truck trips over the duration of construction at an average of 22 truck trips daily. It was assumed that pipe delivery trucks would travel 50 miles round trip and that all other dump trucks would travel 35 miles round trip, which are more conservative than the URBEMIS default of 20 miles. In addition to truck delivery trips, six to twelve workers would travel to and from the project each day, generating 12 to 24 daily commute trips.

Based on the above assumptions, the following unmitigated emissions are expected for this project:

**Table 2
Estimated Emission Rates of Proposed Project**

Pollutant	Project Emissions (ton/yr)
Carbon monoxide (CO)	0.3
Nitrogen oxides (NO _x)	0.6
Volatile organic compounds (VOC)	0.1
Fine particulate matter (PM _{2.5})	<0.01
Inhalable particulate matter (PM ₁₀)	0.1
Sulfur dioxide (SO ₂)	<0.01

The emissions calculated for the Proposed Action Alternative would be below the applicable GCR *de minimis* thresholds. Therefore, the Proposed Action Alternative is assumed to conform to the SIP and a general conformity determination is not required.

Because the proposed project would follow all rules and standards of the BAAQMD, per the mitigation measure included in Section 4.2, emissions would be minimized using BMPs.

3.3 Water Resources

The action area is located within the North Lane watershed, which is 369 acres (0.58 square miles) in size.

The North Lane watershed is a part of the larger San Pablo Creek watershed. The San Pablo Creek watershed drains approximately 41 square miles beginning in a natural woodland area and stretching through the urbanized east San Francisco Bay Area, where it ultimately drains to the San Francisco Bay (Contra Costa Watershed Forum 2012).

San Pablo Creek is the predominant surface water feature within the watershed, with over 30 named tributaries and numerous additional unnamed tributaries. It is a perennial stream that stretches for 18.7-miles, running from the southeast to the northwest. The creek originates from Moraga Creek and ultimately drains into San Francisco Bay. The upstream end of San Pablo Reservoir is located approximately one mile downstream from the project site. An unnamed tributary that parallels North Lane runs into San Pablo Creek (WRECO 2011).

San Pablo Creek downstream of the EBMUD treatment plant is being used as a conveyance system for the EBMUD San Pablo Reservoir system. The regulated flow between the treatment plant and San Pablo Reservoir is controlled by the release of treated water from the plant. The flow is regulated to ensure water levels in the reservoir stay within the desired range.

The project site is on the eastern slope of the Berkeley Hills, which descend toward the Livermore Valley to the east. The action area is in a small valley extending into the floodplain of San Pablo Creek and includes a short reach of the creek bed, bank, and riparian fringe.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) Basin Plan does not identify the action area as being within an identified groundwater basin. Depth to groundwater is greater than 6.5 feet.

3.3.1 Water Quality

The Clean Water Act (CWA) regulates water quality, establishes the National Pollutant Discharge Elimination System (NPDES; Sections 401 and 402), and requires permits for any dredge or fill activities in jurisdictional waters of the United States (Section 404).

The general water quality parameters established for all San Francisco Bay hydrologic basins are color, taste and odor, floating material, suspended material, sulfide, settleable material, oil and grease, bacteria, biostimulatory substances, sediment turbidity, pH, population and community ecology, dissolved oxygen, temperature, toxicity, pesticides, un-ionized ammonia, salinity, chemical constituents, organic substances, and radioactive substances.

San Pablo Creek is listed as impaired for diazinon and trash. Diazinon within San Pablo Creek is covered under the San Francisco Bay Urban Creeks diazinon total maximum daily load (TMDL) approved by the U.S. Environmental Protection Agency.

Temporary localized impacts to water resources could occur during construction related to excavation, grading activities, and removal of vegetation, which can cause increased erosion. Storm water runoff from the project site could transport pollutants to San Pablo Creek if BMPs are not properly implemented.

The project would replace more than 10,000 square feet of impervious roadway area, so permanent storm water treatment was considered in the design of the project. The project would not create or replace one acre or more of impervious area, so hydromodification impacts to San Pablo Creek were not considered. In comparison to the overall watershed of the San Pablo Creek, the increase in flow due to the proposed project would not be adverse.

The project would comply with NPDES requirements that address both construction activities and long term impacts that would prevent sediment and suspended solids from entering San Pablo Creek and its tributaries. Therefore, the impact to water quality from the proposed project would not be adverse.

The proposed project could result in temporary impacts to groundwater related to excavation and proposed jack and bore work. At the deepest location, the proposed pipeline invert would be approximately 30 feet below existing grade. If dewatering of excavations is necessary for jack and bore operations, groundwater contamination studies would be required to determine whether the groundwater could directly discharge to San Pablo Creek, or whether it would be treated or hauled to an approved wastewater facility.

The project design has reduced the need for excavation in San Pablo Creek and the riparian area to the greatest extent possible. A temporary cofferdam would be used to allow channel flow to bypass the construction area. The cofferdam would consist of a polyethylene liner with gravel bags to anchor it around the area that would be disturbed. The cofferdam would not block the whole stream, but would instead redirect it around the construction area.

The project would use jack and bore to further reduce the amount of excavation in the riparian corridor of San Pablo Creek. The City would also minimize tree removal in the riparian corridor by minimizing the area cleared for the temporary access road.

Work in the unnamed tributary along North Lane would be limited to modifying the existing headwall to accommodate the storm water diversion to the proposed drainage system. The proposed modifications are within the footprint of the existing headwall. There would be no net addition of fill.

The outfall of the bypass line would be designed with adequate discharge angle and appropriate energy dissipation system, such as rock slope protection, to prevent erosion and scour of the San Pablo Creek river bed and banks. The City would prepare a Storm Water Pollution Prevention Plan (SWPPP) before construction begins to avoid and minimize discharges into San Pablo Creek and the unnamed tributary. This plan would include specifications for the placement of erosion control devices and measures to reduce the introduction of pollutants from runoff and spills into the creek.

As described in Section 3.3.3, a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and Section 401 Water Quality Certification from the RWQCB would be required.

With the implementation of avoidance and minimization measures such as BMPs for erosion and sediment control, as described in Section 4.1 and 4.3, impacts to water quality would be minimal.

3.3.2 Hydrology/Hydraulics

As indicated above, the action area is within the North Lane watershed. For watersheds less than one square mile, the City of Orinda and Contra Costa County's design criteria require storm water facilities to be capable of conveying the 10-year flow. The 10-year flow for this watershed, as determined by the Contra Costa County Flood Control and Water Conservation District, is 550 cubic feet per second (cfs) at San Pablo Creek.

The existing storm water system along North Lane consists of ditches, channels, and 48-inch pipes. The existing ditch and 48-inch pipe drainage system along North Lane and across Camino Pablo can convey 230 cfs. The proposed new pipe would convey 320 cfs. As a result, the proposed 60-inch pipeline, in combination with the existing drainage system, would adequately convey the 10-year flow of 550 cfs.

The proposed project would install a new 60-inch stormwater drainage pipeline, leaving the existing line in place. There would be no permanent modification to the surface of North Lane and Ardilla Road, and there would be no increased impervious area from the proposed project. The project would result in an increase in 100-year flow in the San Pablo Creek from 6,700 cfs to 7,300cfs. This change in flow would increase the water surface elevation by less than 0.3 feet, or 2.3 percent. The depth of San Pablo Creek varies from 15 to 25 feet. The 100-year flow depth would be approximately 13 feet. The flow rates are accurate to plus/minus ten percent, so the maximum flow, considering the ten percent margin, would not exceed 15 feet. As a result, the level of flow in a 100-year storm would be contained within San Pablo Creek at its lowest depth (15 feet).

The existing velocity in San Pablo Creek during the 100-year flow in the study reach is approximately six feet per second. The increase in flow would only slightly increase the velocity of flow. The peak flows from the watershed could reach San Pablo Creek sooner due to the additional pipe flow capacity, especially for those storm events equal to or smaller than a 10-year storm. However, since the bypass line also provides additional storage volume for the more frequent events, the impact from the proposed project to the San Pablo Creek hydrology is considered negligible. As indicated above, San Pablo Creek has adequate conveyance capacity for the 100-year flow.

Executive Order 11988

Executive Order (EO) 11988 requires federal agencies to avoid, to the extent possible, the short-and long-term adverse impacts associated with the occupancy and modification of floodplains. If there is no practicable alternative to undertaking an action in a floodplain, any potential adverse impacts must be mitigated. FEMA's regulations for complying with Executive Order 11988 are found in 44 CFR Part 9.

The Flood Insurance Rate Map (FIRM) (#06013C0264F) for San Pablo Creek at the outlet to the North Lane storm drain bypass indicates that the Creek is located within Zone AE. The 100-year (base flood) elevations have been determined and are shown on the FIRM. The Zone AE designations are confined within the banks of San Pablo Creek. The floodway must be kept free of encroachment so that the one percent annual flood can be carried without substantial increases in flood heights. The FIRMette, which is the portion of the FIRM showing the immediate action area, is shown in Figure 7.

As reported on the FIRM, the water surface elevation at the outlet of the 60-inch pipe for the 100-year flows in San Pablo Creek is approximately 376 feet. The typical vertical distance from the bottom of San Pablo Creek to the top of bank for the reach from the outlet of the 60-inch pipe downstream to Manzanita Drive varies from 15 to 25 feet. As indicated above, the project would increase the 100-year flow in San Pablo Creek from 6,700 cfs to 7,300 cfs. This change in flow would result in an increase in water surface elevation of less than 0.3 feet. As indicated above, this change would not result in flooding within the 100-year floodplain.

FEMA applies the Eight-Step Decision-Making Process to ensure that it funds projects that are consistent with EO 11988. Because the proposed action includes an area within a 100-year flood plain, the Eight-Step Decision-Making Process would apply to this project. NEPA compliance involves essentially the same basic decision-making process to meet its objectives as the Eight-Step Decision-Making Process. Thus, the Eight-Step Decision-Making Process has been applied through implementation of the NEPA process. FEMA published an Initial Public Notice at the declaration of the disaster. FEMA would ensure publication of a Final Public Notice on their website and in a local newspaper in compliance with EO 11988 before implementation of the Proposed Action. Therefore, the proposed project complies with EO 11988.

3.3.3 Wetlands

Executive Order 11990: Protection of Wetlands

EO 11990, Protection of Wetlands, requires federal agencies to minimize damage to wetlands resulting from federal and federally assisted projects.

Approximately 450 feet downstream of the action area, San Pablo Creek is classified by the United States Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) as PFOC - palustrine forested wetland that is seasonally flooded. The palustrine system of wetlands, as defined by the USFWS, includes all non-tidal wetlands that are dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 parts per thousand (ppt). Forested wetlands are characterized by woody vegetation that is six meters tall or taller; seasonally flooded wetlands are those where surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years.

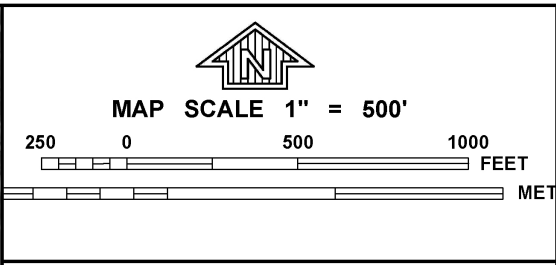
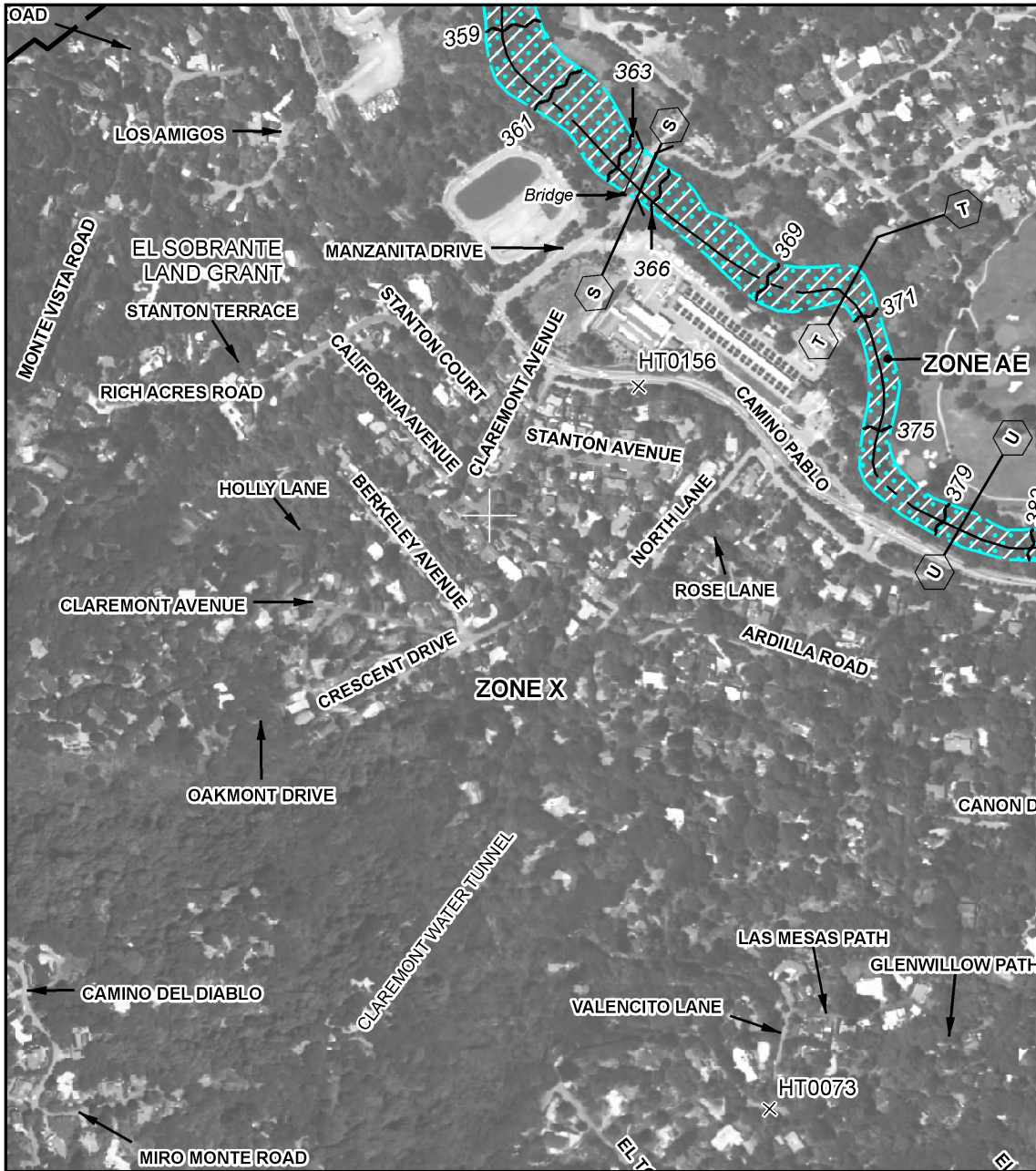
According to USFWS, the nearest wetland to the action area is a permanently flooded, impounded/ diked Palustrine wetland, known as Lake Cascade, located approximately 0.6 miles east of the action area. There would be no turbidity or other adverse effects from the project on this wetland.

During the site assessment for potential effects to creeks and riparian habitats, survey personnel identified affected areas at San Pablo Creek that would require a CDFW Lake and Streambed Alteration Agreement and a Clean Water Act Section 404 Nationwide permit from the USACE. In conjunction with the 404 permit, the City of Orinda would obtain a Section 401 Water Quality permit from the San Francisco BayRWQCB. The City would apply for the 401 certification through the submittal of a Joint Aquatic Resources Permits Application (JARPA). The City is preparing a JARPA for submittal to agencies.

The project would require a cofferdam to divert flow in San Pablo Creek during construction of the headwall. However, channel flow would return to its original condition after removal of the cofferdam. The storm water outfall would require placement of fill in San Pablo Creek to construct a headwall.

During site visits and reconnaissance surveys, biologists assessed the location of the headwall for potential jurisdictional wetlands. During these visits, they assessed the area for wetland obligate or facultative plant species, indicators of wetland hydrology, and hydric soils. Much of the stream bank at the location of the headwall is lined with rock slope protection. Some wetland plant species were found on the stream bank and on gravel and sand bars within the creek channel; however, these plant species are also common in riparian communities. Soils in the study area did not demonstrate redox features. Since the indicators observed in the field did not meet the three parameters used by the USACE to define jurisdictional wetlands, it was determined the project study area did not include wetlands.

As a result, the project is not anticipated to impact any wetlands and the project, in coordination with USACE and RWQCB, would, therefore, comply with EO 11990.



NTIP

PANEL 0264F

FIRM
FLOOD INSURANCE RATE MAP


**CONTRA COSTA COUNTY,
CALIFORNIA**
AND INCORPORATED AREAS

PANEL 264 OF 602
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CONTRA COSTA COUNTY	060025	0264	F
ORINDA, CITY OF	060722	0264	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
06013C0264F

EFFECTIVE DATE
JUNE 16, 2009

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

3.4 Biological Resources

Field studies were conducted of the biological study area (BSA) to assess natural resources and to identify vegetation communities, habitat types, and the potential for the presence of special-status species. Habitat surveyed included areas within the project footprint, action area, and vicinity, focusing on habitat within the stream along the proposed pipeline alignment along North Lane and at the point of discharge into San Pablo Creek adjacent to the EBMUD Orinda Water Treatment Plant. The BSA is shown in Figure 8.

Large mature trees and other vegetation are present along the alignment of the storm drain. There is potential for migratory birds, including raptors, to nest within this vegetation. Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA). If the proposed project would result in removal or disturbance of active migratory bird nests during the nesting season (February 1- August 1), impacts to migratory birds could occur. The City of Orinda is responsible for complying with the MBTA. This SEA is not required to analyze species listed under the California Endangered Species Act (ESA). However, those species were analyzed in the California Environmental Quality Act (CEQA) document prepared for the proposed project.

3.4.1 Habitat Types

Riparian Habitat

Riparian habitat occurs along San Pablo Creek at the location of the existing outfall. Tree species within this habitat are dominated by white alder (*Alnus rhombifolia*), with other native tree species, including coast live oak (*Quercus agrifolia*), big-leaf maple (*Acer macrophyllum*), valley oak (*Quercus lobata*), and California buckeye (*Aesculus californica*). The understory is generally open and dominated by non-native plants including Himalayan blackberry (*Rubus discolor*), English ivy (*Hedera helix*), fennel (*Foeniculum vulgare*), and non-native annual grasses.

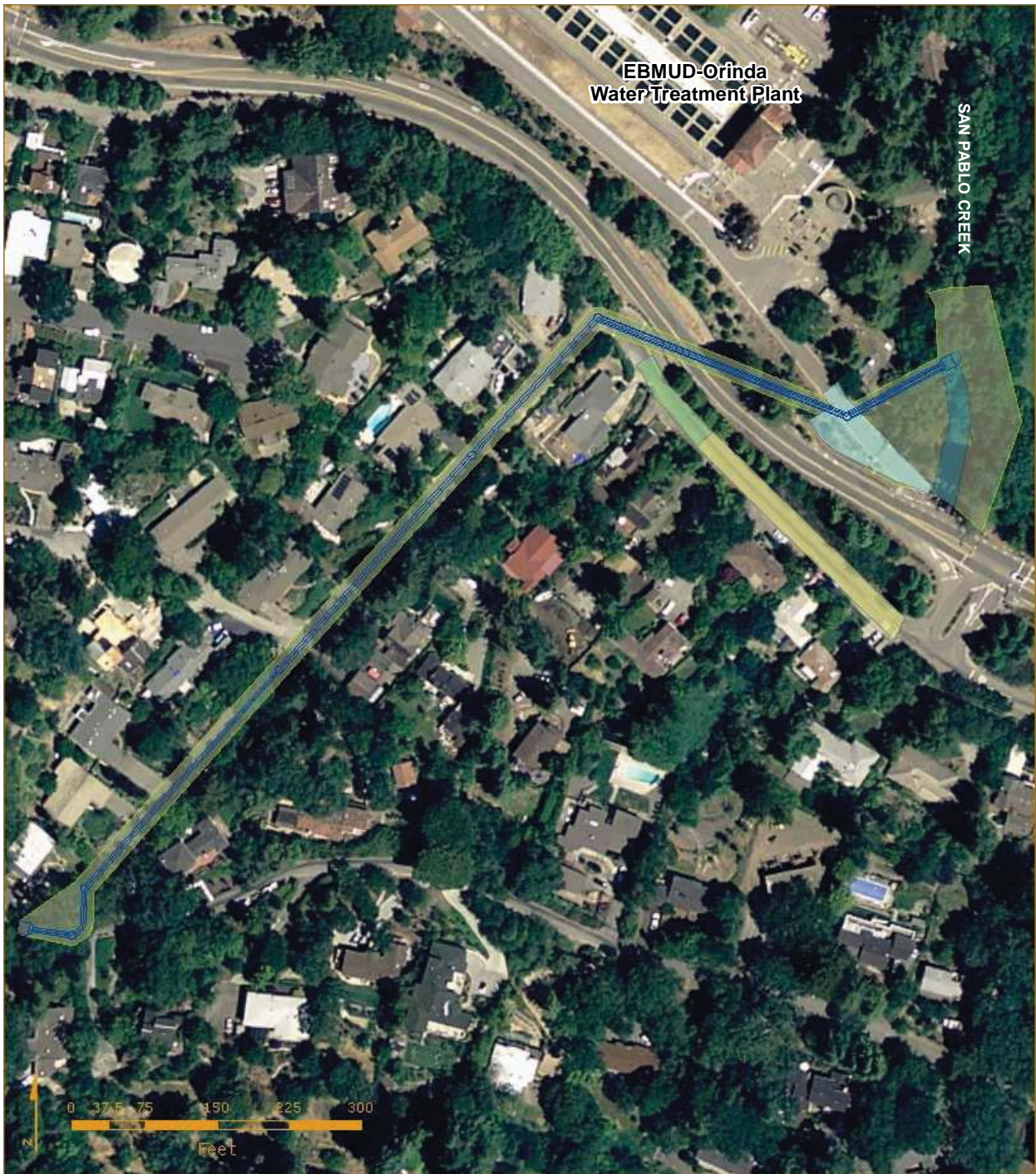
Representative wildlife species observed in this habitat include spotted towhee (*Pipilo maculatus*), mountain chickadee (*Poecile gambeli*), and Stellar's jay (*Cyanocitta stelleri*). Other species likely to occur in this habitat, but not observed during the site reconnaissance, include Cooper's hawk (*Accipiter cooperii*), Pacific treefrog (*Pseudacris regilla*), and raccoon (*Procyon lotor*).

In addition, riparian habitat exists along the stream channel adjacent to North Lane and consists primarily of large coast live oaks and big-leaf maples located on adjacent residential properties. The understory is dominated by Himalayan blackberry and English ivy. The stream flows northeast through a series of culverts and daylights on both sides of North Lane for short spans. Near the northeast end of North Lane, the stream flows within an open concrete channel between two residential lots and then through a culvert under the frontage road and Camino Pablo. The culvert ends at an existing outfall to San Pablo Creek north of the EBMUD Orinda Water Treatment Plant.

Aquatic Habitat

Within the action area, San Pablo Creek is approximately 20 feet wide and two-to three feet deep with a substrate consisting of cobbles, sand, and gravel. A small check dam approximately one foot high crosses the creek channel just downstream of the existing outfall location. Rock slope protection and gunnite were observed along the banks of the creek during the site reconnaissance.

Aquatic habitat supports wildlife such as freshwater mollusks and aquatic macroinvertebrates. Although no fish or other aquatic species were observed during the site reconnaissance, San Pablo Creek may support common fish species such as California roach and Sacramento sucker. Historical runs of anadromous fish



Biological Study Limits

North Lane Stormwater Mitigation Project

- Proposed Stormwater Drainage
- BSA
- Staging
- Laydown
- Access

Data Sources: Basemap (c) 2010 Microsoft Corporation and its data suppliers, <http://www.bing.com/maps>. Additional data from Cal-Atlas Geospatial Clearinghouse, <http://atlas.ca.gov>. Prepared by Robert Atanasio (WRECO) November 1, 2011.

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including steelhead and Chinook salmon no longer occur in San Pablo Creek because their passage is blocked by the San Pablo Dam downstream. Along North Lane, aquatic habitat within the adjacent stream is disturbed and consists primarily of concrete channel with areas containing cobbles and gravel substrate.

3.4.2 Federally-Listed Species

Two federally-listed species have the potential to occur in the project area. Those species are the California red-legged frog (*Rana draytonii*) and the Alameda whipsnake (*Masticophis lateralis euryxanthus*). The project area is not located within designated critical habitat for any species.

California Red-legged Frog

The California red-legged frog (CRLF) was federally listed as threatened by USFWS in 1996. Critical habitat was designated in 2006 (USFWS 2006a) and revised in 2010 (USFWS 2010). The known physical and biological features or primary constituent elements (PCEs) essential to the conservation of the CRLF are those that provide 1) aquatic habitat for breeding, 2) non-breeding aquatic habitat, 3) upland habitat, and 4) dispersal habitat (USFWS 2006a). Suitable aquatic breeding habitat consists of low-gradient fresh water bodies, including natural and manmade backwaters within streams and creeks, marshes, lagoons, and dune ponds (USFWS 2006a). Breeding occurs between November and April in standing or slow moving water at least 0.7 m (2.5 ft) in depth with emergent vegetation, including cattails (*Typha* spp.), tules or bulrush (*Schoenoplectus* spp, *Scirpus* spp.), or overhanging willows (*Salix* spp.) (USFWS 2010).

Non-breeding aquatic habitat for the CRLF consists of the aquatic elements described above and also includes other wetland habitats such as intermittent creeks, seeps, and springs which enable CRLF to survive drought periods or be able to disperse to other breeding habitat (USFWS 2006a). Upland habitat essential for the CRLF consists of natural areas within 500 ft of the edge of the riparian habitat that provides natural structures, such as downed trees or rocks, for shade, moisture, and cooler temperatures. Dispersal habitat provides connectivity among breeding and associated upland habitat patches. It must be free of barriers and connect two or more patches of aquatic breeding habitat within 0.7 mi (1.2 km) of one another. Barriers to dispersal include heavily traveled roads without bridges or culverts, large expanses of asphalt or concrete that do not contain suitable habitat, and large reservoirs over 50 ac (20 ha) in size that contain predatory species (USFWS 2006a).

The nearest critical habitat for the CRLF is Unit #CCS-1, Berkeley Hills, located approximately five miles northeast of the action area (USFWS 2010). Unit #CCS-1 contains high-quality permanent and ephemeral aquatic habitats suitable for breeding and upland areas for dispersal, shelter, and food. CRLF are known to occur in the project vicinity. There is one documented occurrence of CRLF less than one mile north of the action area, based on a search of the California Natural Diversity Database (CNDDDB 2012). This occurrence included two adults and 40 to 60 tadpoles documented in 2007 within a small (40 feet by 40 feet) man-made pond vegetated by cattails, tules, and other wetland vegetation. Although San Pablo Creek supports aquatic habitat that could be utilized by CRLF, the portion of San Pablo Creek near the Orinda Water Treatment Plant is deemed unlikely to support CRLF because the creek is very swift in this location and has variable water levels. Although the action area lacks suitable breeding habitat, it is possible that CRLF could use the stream for dispersal.

Alameda Whipsnake

The Alameda whipsnake (AWS) was federally listed as threatened by USFWS in 1997. Critical habitat was designated in 2000 (USFWS 2000) and revised in 2006 (USFWS 2006b). The PCEs essential to the conservation of the AWS provide space for individual and population growth and normal behavior; food, shelter, and dispersal habitat. PCEs include 1) scrub/shrub communities with a mosaic of open and closed canopy; 2) woodland or annual grassland plant communities contiguous to lands containing PCE 1; and 3)

lands containing rock outcrops, talus, and small mammal burrows within or adjacent to PCE 1 and or PCE 2 (USFWS 2006b). Suitable habitat for PCE 1 is characterized by the chamise, chamise-eastwood manzanita, chaparral whitethorn, and interior live oak shrub vegetation series (USFWS 2006b).

The nearest critical habitat for the Alameda whipsnake (AWS) is Unit #1, approximately 3,000 feet northwest of the action area (USFWS 2006b). Unit #1 contains a complex mosaic of grassland with woody scrub vegetation as well as rock outcrops or other talus features with little habitat fragmentation. Although there is no chaparral habitat in or near the project area, AWS are known to occur in the general vicinity, as described in the Natural Environment Study for the nearby Manzanita Drive Bridge Replacement Project (Caltrans 2010). Based on the CNDDDB (2012), the nearest documented occurrence of AWS to the project area is about 0.6 mile southwest, where an adult female was found and collected dead-on-road in May 1996. The next nearest record is just short of one mile southeast of the action area on EBMUD lands where one adult was observed in April 1990 (CNDDDB 2012). Based on the lack of suitable habitat and the information on documented occurrences, the AWS is not likely to occur in the project area.

3.4.3 Effects to Federally-Listed Species

Given the timing and short duration of the proposed project, the low potential use of the action area by CRLF and AWS, and lack of suitable habitat and documented occurrences, the proposed action would not result in incidental take of CRLF or AWS. Furthermore, BMPs and the avoidance measures described in Section 4.4 would be implemented during construction to avoid or reduce effects to riparian and aquatic habitat and water quality from excavation, grading activities, and removal of vegetation.

The Biological Assessment (BA) prepared for the proposed project provides a detailed analysis of the potential effects to federally listed species (CDM Smith 2012). The BA was submitted to USFWS for informal consultation under Section 7 of the ESA. In response to the BA, USFWS provided a letter of concurrence (dated September 7, 2012) with the finding that the project is not likely to adversely affect the CRLF or the AWS. The letter can be found in Appendix A. Therefore, the proposed project complies with Section 7 of the ESA.

3.5 Cultural Resources

Cultural resources investigations and archaeological surveys were undertaken to identify both recorded and previously undiscovered sites within the project area. The cultural resources report has been prepared to supplement the SEA. The report was prepared to ensure compliance with Section 106 of the National Historic Preservation Act (NHPA) and the 2005 First Amended Programmatic Agreement (PA) among FEMA, the California State Historic Preservation Officer (SHPO), the Governor's Office of Emergency Services (now the California Emergency Management Agency), and the Advisory Council on Historic Preservation.

A pedestrian cultural resources reconnaissance survey of the proposed project's area of potential effect (APE) was conducted by a qualified cultural resource professional. One potentially historical resource was identified during the survey: the Orinda Storm water System.

In accordance with Stipulation VII.A of the PA, FEMA has determined that the APE for direct impacts consists of all areas that are subject to construction activities. The location of the outfall structure was included in the APE. The vertical APE consists of the areas that would be subject to construction activities, including the trench, which would be 8 feet wide, and a maximum of 16 feet deep. The jack and bore crossing planned for the crossing at Camino Pablo would include pits 15 feet by 30 feet in width with a maximum depth of 30 feet. The vertical APE would consist of work in disturbed soils within city streets and disturbed contexts of the residential neighborhood, and within a stratigraphic unit (Pleistocene age alluvium) with no potential for resources to be found, due to flooding and construction within the roadway area. The proposed project would result in a negligible change to the landscape. None of the residential structures lining the roadway fall

within the APE and would not be impacted. A separate APE for indirect impacts was not determined because no potential effects beyond the construction zone from factors such as visual intrusions and noise were identified.

On August 24, 2011, pursuant to Stipulation VII.B of the PA, FEMA reviewed the Northwest Information Center (NWIC) Cultural Resource Inventory (located in the Department of Anthropology, Sonoma State University) to identify information about prior cultural resources studies and recorded historic properties within 0.5 mile of the APE. Nine previous studies have been conducted within a 0.5-mile radius of the APE. According to the data furnished by NWIC, there have been no previous studies of the APE. No cultural resources were identified within the APE; however, one previously recorded resource is located within 0.5 mile of the APE.

Basin Research Associates (Basin) conducted a literature search in July 2010 of the current APE and included a 0.25-mile study buffer for prehistoric resources and a 0.5-mile study buffer for historic resources. No resources were identified within the study area. The absence of previously reported subsurface cultural material is likely the result of material being buried or removed by periodic flooding and scouring by the various water courses, as well as construction over the last 50 years. A field survey was conducted of the APE on August 11, 2011. No resources were discovered during Basin's field investigation (CH2MHill 2012).

A record search of the Native American Heritage Commission (NAHC) sacred lands file was performed and did not indicate the presence of Native American cultural resources in the project survey area or within the 0.5-mile study buffer.

The NAHC responded on September 9, 2011 with a list of Native Americans interested in consulting on proposed projects in the vicinity. Native American consultation letters were provided by the City of Orinda. Two responders indicated no concern, while one recommended the implementation of best practices in the event of inadvertent discoveries made during project implementation. NAHC correspondence can be found in Appendix B.

One cultural resource was identified during the survey: a segment of the historic Orinda Stormwater System. The historic Orinda Stormwater System segment is part of the larger City of Orinda stormwater system, which is made up of individual elements constructed at different times throughout the 20th century using a variety of materials and construction techniques to accommodate the needs of a continuously growing city. The earliest part of the City's Stormwater System, San Pablo Reservoir and Dam, were constructed from 1916 to 1919. The EBMUD was authorized in 1923 and the East Bay Water Company was conveyed to EBMUD in 1928. These two developments marked the beginning of the storm water system components, which were constructed beginning in the 1930s.

The channelized storm drain/culvert recorded within the APE is an approximately 1,300-foot-long corrugated-metal, pipe storm drain and culvert. It is a partially open and channelized storm drain/culvert lined with stone, mortar, and concrete. Construction of the storm water segments near the water treatment plant began about 1930, and the drainages along North Lane were constructed about 1950. It has been subject to alterations, upgrades, and routine maintenance through the years, including upkeep of the natural rock wall and replacement of sections of drain pipe.

The sub-applicant proposes to supplement approximately 1,300 feet of the existing storm drain system with a new 60-inch RCP beginning at the confluence of North Lane and Ardilla Road, running southwest to northeast along North Lane, turning east-southeast, crossing Camino Pablo, turning northeast, and discharging at a new outfall on San Pablo Creek. The segment of the storm water system to be supplemented is a typical municipal stormwater system. It is not a significant engineering accomplishment, and it does not meet the definition of the work of a master, or have high artistic value. It does not embody distinctive

characteristics of a particular style or method of construction. Therefore the structure is not eligible for the National Register of Historic Places (NRHP) under Criterion C. This segment of the storm water system is not associated with events that have made significant contributions to the broad patterns of local, regional or national history, and it is not associated with any persons considered important in local, state or national history. It is therefore not eligible for the NRHP under Criterion A or B. The system is not likely to yield information important in prehistory or history; it is therefore not eligible for the NRHP under Criterion D.

Although one cultural resource, a segment of the historic Orinda Stormwater System, was identified in the APE during the cultural resources reconnaissance survey, it is not eligible for listing to the NRHP. No historical or archaeological resources were identified within the APE from the NWIC records search.

No historical or archaeological resources were identified in the APE during the cultural resources survey and records search. FEMA has determined that no properties eligible for listing in the National Register of Historic Places exist within the APE. A response to SHPO's comments on the project was sent September 24, 2012. This correspondence can be found in Appendix B. To date, a response has not been received. As a result, FEMA assumes SHPO concurrence with the project. In accordance with Stipulation VII.C of the PA, FEMA has determined that the proposed project would result in a finding of "no historic properties affected."

Project construction could result in the discovery of buried resources. With the implementation of measures in Section 4.5, the proposed project would have minimal impacts to buried cultural resources, if any, during project construction.

3.6 Socioeconomics and Public Safety

3.6.1 Executive Order 12898: Environmental Justice

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs federal agencies to ensure that their programs, policies, and activities do not have a disproportionately high and adverse human health and environmental effect on minority or low-income populations. This executive order also tasks federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

The environmental justice analysis identifies the potential for the proposed action to result in disproportionately high and adverse effects on minority or low-income populations. First, locations of minority populations and low-income populations in the proposed project area were identified using the most recent block group level data from the 2010 Census. Minority or low-income block groups are defined as meeting either or both of the following criteria:

- The census block group contains 50 percent or more minority persons or 25 percent or more low-income persons.
- The percentage of minority or low-income persons in any block group is more than 10 percent greater than the average of the surrounding county.

U.S. Census data relevant to environmental justice were collected for residents in the project vicinity and compared to data for the City of Orinda and Contra Costa County as a whole. Currently, only a portion of the relevant demographic data from the 2010 Census is available. Data on primary household language, educational attainment and income at the census tract and block group level are not currently available. As shown in Tables 3 and 4, only total population data and data related to the percentage of minorities are available from the 2010 Census. Data from the 2000 Census were used for the remaining parameters (see Table 4). The proposed project site is located within two separate census tracts and block groups for the 2010 Census: Census Tract 3540.01 Block Group 1 and Census Tract 3540.02 Block Group 2.

**Table 3
Demographic Data for the Project Area from the 2010 Census**

Parameter	Block Group 1, Contra Costa County Census Tract 3540.01 ¹	Block Group 2, Contra Costa County Census Tract 3540.02 ²	Contra Costa County Census Tract 3540.02 ²	City of Orinda	Contra Costa County
Total Population in 2010	1,859	731	6,590	17,643	1,049,025
Total Minority Population ³	366	138	1,179	3,917	690,073
	19.7%	18.9%	17.9%	22.2%	65.8%

¹South of San Pablo Creek. Census tract contains only one block group, so data for block group are also data for census tract.

²North of San Pablo Creek.

³Persons not "white alone" plus Hispanics and Latinos who are "white alone."

**Table 4
Demographic Data for the Project Area from the 2000 Census¹**

Parameter	Block Group 1, Contra Costa County Census Tract 3540.01 ¹	Block Group 2, Contra Costa County Census Tract 3540.02 ²	Contra Costa County Census Tract 3540.02 ²	City of Orinda	Contra Costa County
Total Population ⁴	1,843	670	6,466	17,389	938,310
Households in which English Is Not the Primary Language	89	10	151	1,134	91,744
	4.8%	1.5%	2.3%	6.5%	9.8%
People over 25 with Less Than a High School Education	21	0	116	277	81,867
	1.1%	0%	1.8%	1.6%	8.7%
Median Household Income 1999	\$104,341	\$155,109	\$149,926	\$117,637	\$63,675
Median Family Income 1999	\$113,514	\$155,669	\$175,310	\$132,531	\$73,039
People below Poverty Level in 1999	18	30	297	328	71,575
	1.0%	4.5%	9.2%	1.9%	7.6%

¹2010 census results for the parameters in this table are not yet available at the block group level.

²South of San Pablo Creek. Census tract contains only one block group, so data for block group are also data for census tract.

³North of San Pablo Creek.

⁴From Summary File 3

As shown in Tables 3 and 4, the total minority percentage, the percentage of people with less than a high school education, and the percentage of people below poverty level in the block groups, census tracts, and City of Orinda are all very low. The values for each of these parameters are lower than in Contra Costa County as a whole. The total minority population is less than 25 percent for all block groups, census tracts, and the City of Orinda. Therefore, the community surrounding the proposed project site is not an environmental justice population with respect to race for purposes of EO 12898 (CEQ, 1997, page 25).

Table 4 shows that the percentage of households in which English is not the primary language in Census Tract 3540.01, Census Tract 3540.02, and Census Tract 3540.02 Block Group 2 are 4.8 percent, 2.3 percent, and 1.5 percent, respectively. These values are all lower than both the City of Orinda and Contra Costa County.

Table 4 also shows that the percentage of people with less than a high school education is less than 2 percent for Census Tract 3540.01, Census Tract 3540.02, Census Tract 3540.2 Block Group 2, and the City of Orinda. This is an extremely low percentage.

Table 4 shows that the percentage of people below the poverty level is 9.2 percent for Census Tract 3540.2, and 4.5 percent for Census Tract 3540.02 Block Group 2. These values are higher than the poverty rate for the City of Orinda (1.9 percent) and are comparable to the rate for Contra Costa County (7.6 percent).

The proposed project would not adversely affect minority or low income populations because the census block groups in which the project is located do not meet either of the criteria defined above. The community surrounding the proposed project site is not an environmental justice population with respect to income, education, or language. Thus, the proposed project complies with EO 12898.

3.7 Public Services and Recreation

No parks or recreational areas are within or adjacent to the project work area. However, utility lines for the major services and utilities such as water, power, sewer, and natural gas are located within the street and rights of way where the proposed pipeline would be installed. These utilities would be relocated during construction to prevent interruption of service. With the implementation of avoidance and minimization measures in Section 4.6, no impacts would occur.

3.8 Transportation

The proposed project consists of the installation of a new storm water drainage pipeline. Therefore, no long-term increases in traffic would occur.

However, increases in traffic would occur during project construction. Construction would result in a short-term increase in the number of vehicles operating in the project area. Construction would occur in areas of residential traffic flow along North Lane in Orinda. The specific construction equipment and estimated duration of use for each piece of equipment can be found in Section 3.2.

During construction, residents within the construction area would have access to their homes. Access to any one house along North Lane would not be restricted for longer than four days. Within that timeframe, the City would provide access to driveways at least once every four hours. The construction contractor would provide trench plates for driveway access and the contractor would not leave any open trenches after each working day. All homes would be accessible during nighttime hours.

In the vicinity of the construction area, two-lane access would be maintained on North Lane where no construction is occurring. Two-lane access would also be available along the Camino Pablo frontage road. Truck trips related to project construction would utilize both North Lane and Ardilla Road.

The project would require parking for six to twelve construction workers as well as for residents of North Lane that would temporarily not have access to their driveways. Parking for workers would be provided along the Camino Pablo frontage road at the north end of North Lane, within the area outlined on Figure 2. During periods when residents could not access their driveways, Ardilla Road would provide sufficient street parking.

The bike lane that runs along the south side of Camino Pablo utilizes the Camino Pablo frontage road to bypass a section of the road that does not have sufficient shoulder for a bike lane. During construction, the City would close an approximately 450 foot section of this bike path to prevent bicyclists from crossing the project area. Detour signs would direct bicyclists around the construction area.

The traffic-related impacts would be short-term, and once construction is completed, all traffic impacts associated with the project would cease. With implementation of the minimization and avoidance measures described in Section 4.7, substantial or permanent adverse impacts to transportation are not anticipated.

3.9 Noise

Noise in the project area is mainly associated with traffic and household activities. Sensitive receptors within the project area include residences along North Lane and the surrounding areas in the Claremont district in the City of Orinda and the Orinda Country Club.

Construction of the proposed project would temporarily increase noise in the immediate vicinity of the storm water drain installation. The temporary noise increases would result from use of construction equipment to install the pipeline and from increased traffic as workers commute to the project area. To prevent potential noise disturbances to the community, construction would not occur during the hours prohibited by the City of Orinda's noise ordinance (6 p.m. to 8 a.m. during weekdays and 5 p.m. to 10 a.m. on the weekends).

With the implementation of the minimization and avoidance measures described in Section 4.8, no substantial or permanent adverse impacts due to noise are anticipated.

3.10 Visual Resources

The project site is located in a predominantly residential area. Hilly areas are visible from within and around the project site. Viewers of the project site and the surrounding area would be mostly residents and visitors to the area.

The proposed project would have a temporary effect on the scenic aspects of the project site and its surroundings during construction. Temporary construction activities would be visible from multiple viewing points within the project area.

Implementation of the proposed project would not substantially or permanently affect the visual quality or scenic nature of the project site or its surroundings, particularly with the implementation of avoidance and minimization measures described in Section 4.9.

3.11 Cumulative Impacts

Cumulative impacts are impacts on the environment that result from the incremental impact of the proposed project when added to other past, present, and reasonably foreseeable future projects regardless of the person or agency that undertakes the other projects (40 CFR 1508.7).

The evaluation of cumulative impacts for this SEA considered past, present and reasonably foreseeable projects in the potentially affected area of the project. The City of Orinda Planning Department indicated that no cumulative projects would occur at the same time or in the same area as the proposed project. However, a number of major development projects are occurring within the City. A list of these projects, which could combine with the proposed project to cause cumulative impacts, is shown in Table 5 below.

**Table 5
Cumulative Projects List**

Project	Location	Type
Lavenida Lane Subdivision	Donna Maria Way	Subdivision
Senior Affordable Housing	2 Irwin Way	Residential
J&J Ranch Subdivision	24 Adobe Lane	Subdivision
Orinda Grove	South of Altarinda Road	Residential
Wilder Subdivision	Highway 24/Wilder Road	Subdivision

Source: City of Orinda, July 2012

The proposed project would result in temporary, construction-related impacts to visual resources, air quality, biological resources, geology and soils, hydrology and water quality, noise, socioeconomics and public safety,

public services and recreation, and transportation and traffic. As described in each respective section of the SEA, potential impacts related to these resources would not be substantial or adverse. There would be no long-term, operations-related impacts to any of the resource areas analyzed in this SEA. Given the limited extent and duration of potential impacts during construction and operations of the proposed project, the proposed project's contribution to potentially cumulatively considerable impacts from past, present, and reasonably foreseeable projects in the surrounding area would not be substantial.

4. Avoidance and Minimization Measures

4.1 Geology, Seismicity, and Soils

The City of Orinda would be responsible for implementing erosion protection measures including BMPs such as installing silt fences and mulching cleared soil described in Section 4.3, below, to avoid or minimize soil erosion during construction. The City of Orinda would be responsible for implementing permanent erosion control measures including revegetation with native species when construction is completed.

4.2 Air Quality

The City of Orinda would be required to comply with the rules and standards of the BAAQMD, including applicable BMPs (<http://www.baaqmd.gov/>).

4.3 Water Resources

To avoid and minimize adverse impacts to water resources, BMPs would be implemented including the following:

- Discharge of pollutants from vehicle equipment cleaning into any storm drains or watercourses shall not be allowed.
- Vehicle and equipment fueling and maintenance operations shall be at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facilities.
- Concrete wastes from washouts and water from curing operations shall be collected and disposed of and not allowed into watercourses.
- Dust control shall include the use of water trucks and dust palliatives to control dust in excavation and fill areas and covering temporary stockpiles when weather conditions require.
- Coir rolls or straw wattles shall be installed along or at the base of slopes during construction to capture sediment.
- Graded areas shall be protected from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting, as appropriate on sloped areas.
- Work within drainages shall occur outside the Central and Northern California rainy season of October 15 through April 15.
- A SWPPP shall be prepared and approved prior to the start of construction. The SWPPP must include the development of a Construction Site Monitoring Program and detail the necessary efforts and BMPs required to ensure disturbed soil and construction related work do not impact San Pablo Creek or any other water resources.

- Sediment control measures shall be applied to all exposed areas during construction, including the trapping of sediments within the construction area through the placement of barriers such as silt fences or fiber rolls at the perimeter of downstream drainage points.
- Dewatering measures shall be developed if groundwater is encountered during construction.
- Permanent pollution prevention BMPs shall be considered to reduce the amount of suspended particulates entering waterways. The measures would be incorporated into the final engineering design or landscape design of the project and would take into account expected runoff from the roadway.
- Existing mature vegetation and landscaping shall be protected in place wherever possible.
- Replacement vegetation and landscaping for slope stabilization shall be placed wherever existing landscaping is disturbed.
- Permanent erosion control BMPs such as fiber rolls and netting shall be placed and permanent hydroseed (with native species) applied to provide further permanent stabilization.
- The City of Orinda and its contractors shall incorporate storm water treatment such as bioretention facilities, flow-through planters, dry wells, cistern plus bioretention, and bioretention plus vault.
- The City of Orinda would be required to comply with the CWA, state water quality regulations, and local water quality regulations, and to obtain all required permits.

4.4 Biological Resources

The City of Orinda would be responsible for implementing the following measures to minimize potential impacts to biological resources:

- A biological monitor would conduct all biological surveys, monitoring, and avoidance activities. No earth-moving or other project activities would begin until the biological monitor is present on site to survey, monitor, and ensure avoidance measures are in place. The biological monitor would be experienced in their respective field of specialization, have permits as required to perform the required work, and have the authority to stop construction activities if situations arise that could be detrimental to listed species.
- At least fifteen (15) calendar days prior to the onset of activities, and prior to the start of the construction, the biological monitor would conduct preconstruction surveys for CRLF and AWS within construction areas. If listed species are found, the City would contact FEMA and USFWS at the earliest opportunity and before work activities begin. FEMA would then re-consult with USFWS prior to commencing any work activities.
- The biological monitor would have authority to, and shall, halt any construction activities if either CRLF or AWS are observed in the work area and inform FEMA and the USFWS of presence at the earliest opportunity and prior to continuing the project activities; FEMA would then re-consult with USFWS. The biological monitor would conduct all biological surveys, monitoring, and avoidance activities.
- The biological monitor would be present at the work site during construction to monitor on-site compliance with all avoidance measures.

- The biological monitor would conduct a worker environmental awareness training in identification of the CRLF and AWS. The training would include a description of the animals and requirements for environmental compliance.
- Vehicle speed shall be limited to ten miles per hour.
- Vehicular traffic shall be confined to the existing roads, designated construction access routes and staging areas.
- To prevent inadvertent entrapment of listed species, all excavated steep walled holes or trenches shall be covered at the end of each workday with plywood or similar materials and thoroughly inspected at the beginning of each workday.
- The contractor shall avoid storage of any pipes measuring 10 cm (4 inches) or greater in diameter at the site, or seal the ends of any such pipes with tape as they are brought to the site to prevent any listed species from entering and becoming trapped.

4.5 Cultural Resources

As a matter of best practices, in the highly unlikely event that cultural resources are encountered during construction, excavation and construction activities should halt and no activity shall occur within 50 feet of the discovery. Construction shall resume only after a professional cultural resources specialist has assessed the discovery. If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the County Coroner with jurisdiction within 48 hours and there shall be no further disturbance to the site where the remains are found.

4.6 Public Services and Recreation

All public utility and service providers would be notified in advance of the construction and the City would work with such service providers to prevent any disruption of services during construction.

4.7 Transportation

The City of Orinda would be responsible for implementing the following measures to minimize the potential short-term impacts to transportation in the project area during construction:

- Circulation and detour plans shall be developed to minimize impacts to local street circulation.
- Haul routes shall be utilized by construction trucks to minimize truck traffic on local roadways to the extent possible. When necessary, flaggers and/or signage to guide vehicles through and/or around the construction zone shall be utilized.
- Truck trips shall be scheduled outside of peak morning and afternoon commute periods to the extent possible.
- Lane closures shall be limited during peak hours to the extent possible. Access to driveways shall be restored by covering trenches with steel plates outside of allowed working hours or when work is not in progress.
- Signs shall be included to indicate the closure of pedestrian and bicycle access around project construction work zones that displace sidewalks and/or bike lanes.

- All equipment and materials shall be stored in designated contractor staging areas on or adjacent to the worksite, in such a manner as to minimize obstruction to traffic.
- The project contractor shall comply with roadside safety protocols. “Road Work Ahead” warning signs and speed control (including signs informing drivers of state-legislated double fines for speed infractions in a construction zone) shall be placed to achieve required speed reductions for safe traffic flow through the work zone.
- The City shall notify potentially affected residents of planned construction activities and anticipated effects on access to local roads and residences. Notifications shall be combined with noise notification and shall include both written notices and a public meeting.
- The construction contractor shall post signs indicating closure of the bicycle path prior to construction at:
 - The intersection of Claremont Avenue and Camino Pablo.
 - Immediately before the closed section of the bike path, alerting motorists to share the road.

4.8 Noise

The City of Orinda would be responsible for implementation of the following measures to reduce noise and vibration in the community surrounding the project area during construction of the proposed project:

To reduce noise from construction equipment, the construction contractor shall ensure that equipment mufflers are in good working condition.

The applicant shall implement a Noise Complaint Plan to notify potentially affected residents of noise impacts and to provide residents with a means for making and resolving noise complaints. The Noise Complaint Plan shall include:

- Mailing of notices to all residences within 550 feet of proposed project construction locations and the Orinda Country Club. Notices shall include:
 - Purpose of proposed project and description of construction activities
 - Dates and times of proposed construction activities
 - Date, time, and location of a public meeting about project noise and traffic impacts
 - Name and telephone number of a person to contact with questions and noise complaints
- Holding a public meeting at least one month prior to construction to describe construction activities and answer questions concerning noise impacts
- Posting of construction dates and times at the project site

4.9 Visual Resources

The City of Orinda would be responsible for implementing minimization and avoidance measures to address potential short-term and long-term impacts to visual resources. The measures will include but are not limited to the following:

- Finished surfaces shall be contoured to blend with adjacent natural terrain where appropriate.

-
- Vegetation removed from the project area during construction shall be replaced with native vegetation.
 - Native trees shall be replaced at a 3:1 ratio on the site.
 - Non-native trees shall be replaced with native species at a 1:1 ratio on the site.
 - After construction, the access road shall be graded, revegetated, and returned to original or better condition.
 - Replacement native vegetation shall be maintained until it is well established.

5. References

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USFWS. 2006b. Designation of Critical Habitat for the Alameda Whipsnake. Federal Register 71:58176-58231.

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WRECO. Draft Noise Technical Report. December 2011.

WRECO. Hydrology and Hydraulic Study Summary. April 21, 2011.

WRECO. Draft Transportation and Traffic Technical Report. December 2011.

WRECO. Water Quality Study Report. December 2011.

Appendix A – USFWS Letter of Concurrence



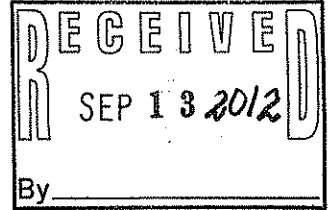
United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In Reply Refer To:
08ESMF00-2012-I-0538-2



SEP 07 2012

Mr. Alessandro Amaglio
Regional Environmental Officer
Attn: Gilda Barboza
U.S. Department of Homeland Security
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, California 94607-4052

Subject: Informal Section 7 Consultation for the North Lane Storm Water Improvement Project, City of Orinda, Contra Costa County, California (HMGP 1810-021-016, FEMA-1810-DR-CA)

Dear Mr. Amaglio:

This letter is in response to your August 22, 2012, letter requesting informal consultation with the U.S. Fish and Wildlife Service (Service) on the North Lane Storm Water Improvement Project in the City of Orinda, Contra Costa County, California. Your letter specifically requests concurrence with a not likely to affect determination on federally listed or proposed species or habitat. The provided *Biological Assessment Revised August 2012* analyzes the project for effects to the federally threatened California red-legged frog (*Rana draytonii*) and endangered Alameda whipsnake (*Masticophis lateralis euryxanthus*). Therefore, this response only addresses the California red-legged frog and Alameda whipsnake. Your letter was received in our office on August 23, 2012. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The proposed project is located in the City of Orinda in Contra Costa County, California. The project vicinity consists primarily of residential homes, along with municipal use at the East Bay Municipal Utility District Orinda Water Treatment Plant. The project area includes Camino Pablo Road, North Lane, and San Pablo Creek, a tributary to San Pablo Reservoir.

The proposed project will install approximately 900 feet of 60-inch reinforced concrete pipe under the length of North Lane, and jack and bore 320 linear feet of 60-inch reinforced concrete pipe under Camino Pablo Road to a new outfall structure at San Pablo Creek. The proposed storm drain system also includes a debris rack, a headwall, three inlet structures, five manholes,

connection to existing lateral storm drain pipes, fence reinstallation, and pavement repair. With the exception of the last segment between the frontage road adjacent to Camino Pablo Road and San Pablo Creek, the new storm drain will be constructed within the right-of-way of existing streets, parallel to the existing corrugated metal pipe and ditch system on the North Lane, which will remain in place. The new outfall will be located upstream of the existing outfall through which existing flows are conveyed along North Lane to San Pablo Creek. Flows would continue to run through the existing storm drain system; the new storm drain will carry flows above the capacity of the existing storm drain. The new and existing pipes combined could handle runoff from a 10-year storm.

Construction will take approximately four months to complete and would be conducted by a contractor to the City of Orinda. The proposed project is planned to be completed in 2013.

To avoid and minimize impacts to water resources, best management practices (BMPs) will be implemented. BMPs to be implemented will be finalized with the final design, but will typically include the following:

- Discharge of pollutants from vehicle equipment cleaning shall not be allowed into any storm drains or watercourses.
- Vehicle and equipment fueling and maintenance operations shall be at least 50 feet away from watercourses, except established commercial gas stations or established vehicle maintenance facilities.
- Concrete wastes shall be collected in washouts and water from curing operations shall be collected and disposed of and not allowed into watercourses.
- Dust control shall include the use of water trucks and dust palliatives to control dust in excavation and fill areas and covering temporary stockpiles when weather conditions require. Coir rolls or straw wattles shall be installed along or at the base of slopes during construction to capture sediment.
- Graded areas shall be protected from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting, as appropriate on sloped area.
- Work within drainages shall occur outside the rainy season of October 15 through April 15.
- A Stormwater Pollution Prevention Plan shall be prepared and approved prior to the start of construction. The Stormwater Pollution Prevention Plan will include the development of a Construction Site Monitoring Program, as well as detail the necessary efforts and BMPs used to ensure disturbed soil and construction related work do not impact San Pablo Creek or any other water resources.
- Sediment control measures shall be applied to all exposed areas during construction, including the trapping of sediments within the construction area through the placement of barriers, such as silt fences or fiber rolls, at the perimeter of downstream drainage points.
- Dewatering measures shall be developed if groundwater is encountered during construction.
- Permanent pollution prevention BMPs shall be considered to reduce the amount of suspended particulate loads entering waterways. The measures would be incorporated

into the final engineering design or landscape design of the project and would take into account expected runoff from the roadway.

- Existing mature vegetation and landscaping shall be protected in place wherever possible.
- Replacement erosion control BMPs, such as fiber rolls and netting, shall be placed and permanent hydroseed applied to provide further permanent stabilization.
- Stormwater treatment such as bioretention facilities, flow-through planters, dry wells, cistern plus bioretention, and bioretention plus vault shall be incorporated.
- The City of Orinda will be required to comply with the Clean Water Act, State water quality regulations, and local water quality regulations, and to obtain all required permits.

Surveys to determine California red-legged frog and presence were not conducted. The closest known California red-legged frog occurrence is approximately 0.6 mile northwest of the project site in a small pond at the Wagner Ranch Nature Area. San Pablo Creek in the project area contains riparian and aquatic habitat. There are several Alameda whipsnake occurrences within 2 miles of the project area, including a roadkill approximately 0.6 mile southwest of the project site. Alameda whipsnakes have been documented up to 4.5 miles away from scrub/chaparral habitat and have been reported to use riparian habitat.

The following measures are proposed to avoid adverse effects to California red-legged frogs and Alameda whipsnakes:

1. At least 15 days prior to the onset of any construction-related activities, the City of Orinda or FEMA shall submit to the Service, for approval, the name(s) and credentials of biological monitors it requests to conduct activities specified for this project. Information included in a request for authorization must include, at a minimum: (1) relevant education; (2) relevant training on species identification, survey techniques, handling individuals of different age classes, and handling of different life stages by a permitted biologist or recognized species expert authorized for such activities by the Service; (3) a summary of field experience conducting requested activities (to include project/research information and actual experience with the species); (4) a summary of biological opinions and/or informal consultations under which they were authorized to work with the listed species and at what level (such as construction monitoring versus handling), this should also include the names and qualifications of persons under which the work was supervised as well as the amount of work experience on the actual project including detail on whether the species was encountered or not; and (5) a list of Federal Recovery Permits [10(a)1(A)] if any, held or under which individuals are authorized to work with the species (to include permit number, authorized activities, and name of permit holder).

No project activities shall begin until the City of Orinda or FEMA has received written Service approval for biologists to conduct specified activities.

2. A biological monitor will conduct all biological surveys, monitoring, and avoidance activities. No earth-moving activities or other project activities will begin until the biological monitor is present on-site to survey, monitor, and ensure avoidance.
3. Within 24 hours prior to the onset of project, a Service-approved biological monitor will

survey the project area for California red-legged frogs and Alameda whipsnakes.

4. The Service-approved biological monitor will have the authority to, and shall, halt any construction activities, if any California red-legged frogs and/or Alameda whipsnakes are observed in the work area. If California red-legged frogs and/or Alameda whipsnakes are found at any time during project work, construction will stop and the Service will be contacted immediately for further guidance.
5. The biological monitor will be present at the work site to monitor on-site compliance and all avoidance measures.
6. The biological monitor will conduct a worker environmental awareness training in identification of the California red-legged frog and Alameda whipsnake. The training will include a description of the species, habitats, and requirements for environmental compliance.
7. Vehicle speed will be limited to 10 miles per hour.
8. Vehicular traffic will be confined to the existing roads, designated construction routes and staging areas, and the temporary bridge.
9. To prevent inadvertent entrapment of listed species, all excavated steep walled holes or trenches should be covered at the end of each workday with plywood or similar materials and inspected at the beginning of each workday.
10. Avoid storage of any pipes measuring 4 inches or greater in diameter at the site, or seal the ends of any such pipes with tape as they are brought to the site to prevent any listed species from entering and becoming trapped in pipes.

The Service concurs that the North Lane Storm Water Improvement Project is not likely to adversely affect the California red-legged frog and Alameda whipsnake based on the suburban setting, the small likelihood of this species being present at the project site during construction, and the implementation of the avoidance measures and BMPs. Therefore, unless new information reveals effects of the project that may affect federally listed species or critical habitat in a manner not identified to date, or if a new species is listed or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary.

Mr. Alessandro Amaglio

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If you have any questions regarding this response, please contact Kim Squires, Senior Endangered Species Biologist (Kim_Squires@fws.gov) or Ryan Olah, Coast Bay/Forest Foothills Division Chief (Ryan_Olah@fws.gov), at the letterhead address, or telephone (916) 414-6600.

Sincerely,

A handwritten signature in black ink that reads "Ryan Olah". The signature is written in a cursive, flowing style.

~~for~~ Eric Tattersall
Deputy Assistant Field Supervisor

Appendix B – Historic Properties/NAHC Correspondence



August 5, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Mr. Larry Meyers
Executive Secretary
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

RE: Request for Review of Sacred Lands Inventory –
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Mr. Meyers,

Please let this letter stand as our request for the Native American Heritage Commission (NAHC) to conduct a review of the NAHC *Sacred Lands Inventory* to determine if any listed properties are present within or adjacent to the above proposed project area (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

Information from the NAHC *Sacred Lands Inventory* will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES

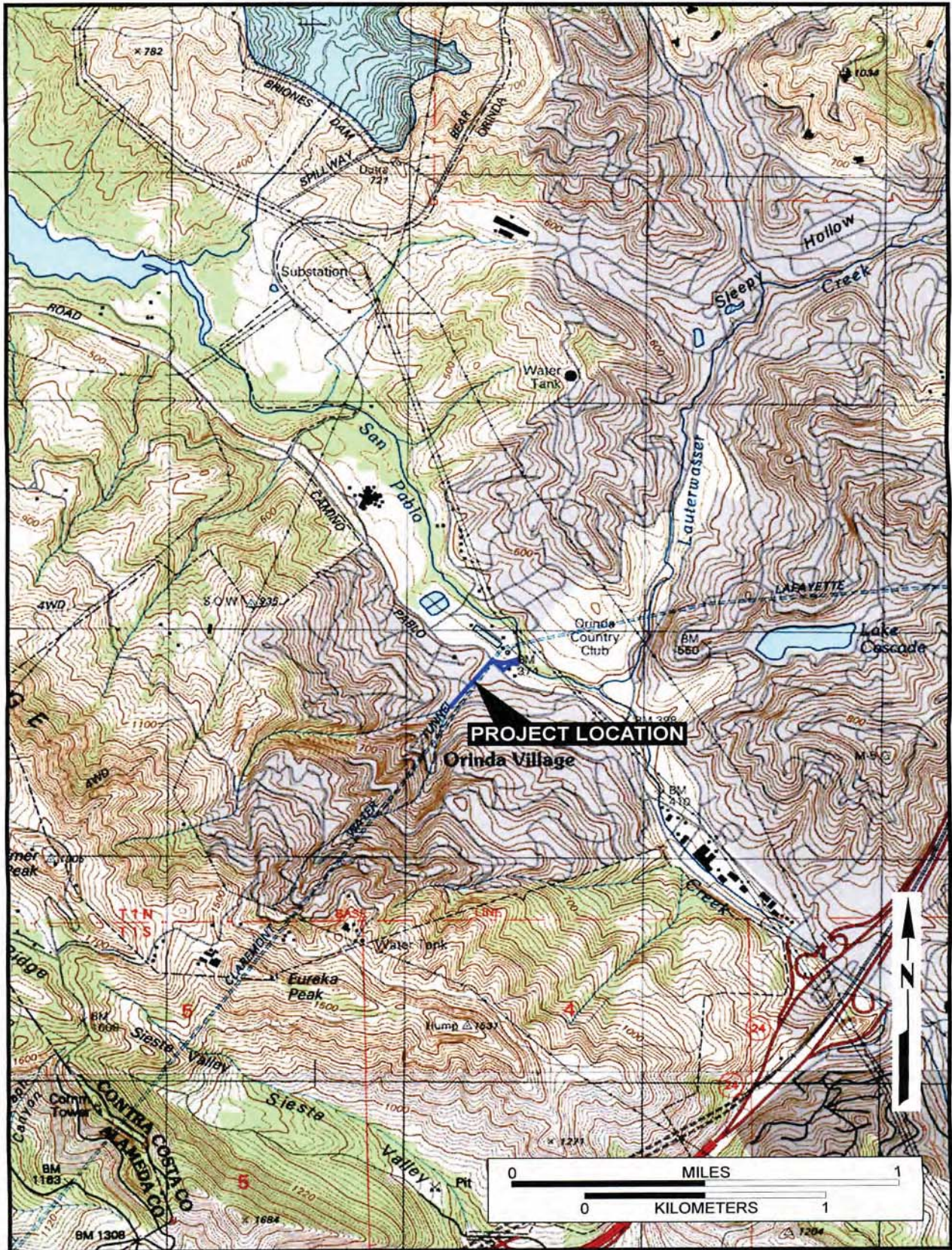


Figure 1: Project Location T1N R3W (USGS Briones Valley, CA 1995 and Oakland East, CA 1997)

STATE OF CALIFORNIAEdmund G. Brown Jr., Governor**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov



August 11, 2011

Colin I. Busby, Ph.D., RPA
BASIN RESEARCH ASSOCIATES
1933 DAVIS STREET, SUITE 210
SAN LEANDRO, CA 94577

Sent by Fax: 510-430-8443
Number of Pages: 2

Re: Proposed North Lane Storm Water Mitigation project, Contra Costa County

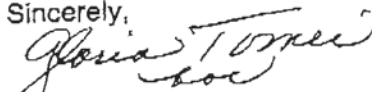
Dear Dr. Busby:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission 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 (916) 653-4038.

Sincerely,


Debbie Pilas-Treadway
Environmental Specialist III

**Native American Contacts
Contra Costa County
August 11, 2011**

Jakki Kehl
720 North 2nd Street
Patterson, CA 95363
jakki@bigvalley.net
(209) 892-1060

Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024
ams@indiancanyon.org
831-637-4238

Ohlone/Costanoan

Katherine Erolinda Perez
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Linden, CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
2574 Seaboard Avenue
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muwekma@muwekma.org
408-205-9714
510-581-5194

Ohlone / Costanoan

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Ohlone/Costanoan

The Ohlone Indian Tribe
Andrew Galvan
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chochenyo@AOL.com
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(510) 687-9393 - Fax

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/Mutsun Tribal Band
Irene Zwielerlein, Chairperson
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amah_mutsun@yahoo.com
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(650) 851-7489 - Fax

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
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Union City, CA 94587
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510-972-0645-home
209-688-4753-cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/Mutsun Tribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding, CA 96003
jmfmc@sbcglobal.net
530-243-1633

Ohlone/Costanoan

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 North Lane Storm Water Mitigation project, Contra Costa County



August 12, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Jakki Kehl
720 North Second Street
Patterson, CA 95363

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Jakki,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

Information provided will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES



August 12, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Katherine Erolinda Perez
P.O. Box 717
Linden, CA 95236

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Kathy,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

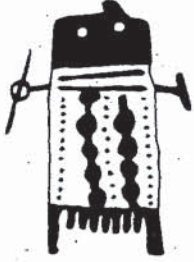
If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

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August 12, 2011

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RESEARCH
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1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Linda G. Yamane
1585 Mira Mar Avenue
Seaside, CA 93955

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Linda,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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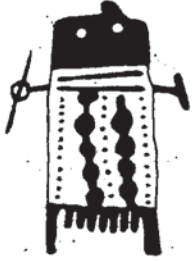
Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg



August 12, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Irenne Zwierlein, Chairperson
Amah/Mutsun Tribal Band
789 Canada Road
Woodside, CA 94062

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Irenne,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

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August 12, 2011

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1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Jean-Marie Feyling
Amah/Mutsun Tribal Band
19350 Hunter Court
Redding, CA 96003

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Jean-Marie,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES



August 12, 2011

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RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Ann Marie,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES



August 12, 2011

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ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Mr. Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Andrew,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES



August 12, 2011

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RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Rosemary Cambra, Chairperson
Muwekma Ohlone Tribe of the SF Bay Area
2574 Seaboard Avenue
San Jose, CA 95131

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Rosemary,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

Information provided will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES



August 12, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Ramona Garibay, Representative
Trina Marine Ruano Family
30940 Watkins Street
Union City, CA 94587

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Ramona,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo. Information provided will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

Record of Native American Contacts

Proposed North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County.

- 08/05/11 Letter to Mr. Larry Meyers, Executive Secretary, Native American Heritage Commission (NAHC), Sacramento. Regarding: Request for Review of Sacred Lands Inventory for project.
- 08/11/11 Letter response by Debbie Pilas-Treadway, NAHC
- 08/12/11 Letters sent to all parties recommended by NAHC

Letters to Jakki Kehl, Patterson; Katherine Perez, Linden; Linda Yamane, Seaside; Irenne Zwierlein, Amah/Mutsun Tribal Band, Woodside; Jean-Marie Feyling Amah/Mutsun Tribal Band, Redding; Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan, Hollister; Rosemary Cambra, Chairperson, Muwekma Ohlone Indian Tribe of the SF Bay Area, Milpitas; Andrew Galvan, The Ohlone Indian Tribe, Mission San Jose; and Ramona Garibay, Representative, Trina Marine Ruano Family, Union City.

- 08/23/11 Telephone calls made by Basin Research Associates (Christopher Canzonieri) in the afternoon to non-responding parties.

Jakki Kehl – called at 3:06 PM, unable to leave message.

Katherine Perez – left message at 3:07 PM.

Linda Yamane – left message at 3:09 PM.

Irenne Zwierlein – called at 3:11 PM, has no concerns.

Jean-Marie Feyling – same as her sister; Irenne Zwierlein.

Ann Marie Sayers – called at 3:14 PM, line busy unable to get through after several tries.

Rosemary Cambra – called at 3:14 PM, unable to leave message.

Andrew Galvan – called at 3:15 PM, if something is encountered the proper measures should be implemented (i.e., contact County Coroner and Native American Heritage Commission if Native American remains are exposed and follow recommendations).

Ramona Garibay – called at 3:15 PM, number is incorrect.

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

Primary #
 HRI #
 Trinomial
 NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 8

Orinda Stormwater System

*Resource Name or #: North Lane to Camino Pablo channelized storm drain/culvert segment of

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: Contra Costa

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

*b. USGS 7.5' Quad: Briones Valley

Date: 2010 T 01N ; R 03W ; ¼ of NW ¼ of Sec 33; M.D.

B.M.

c. Address: N/A City: Orinda Zip: 94563

d. UTM: NAD83 Zone: 10N, 570227.0614X; 4194033.9455Y

mE/

mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This resource is an approximately 1300 foot-long corrugated metal pipe storm drain and culvert. It is a partially open and channelized storm drain/culvert lined with stone, mortar and concrete. The storm drain is located in the city of Orinda at the confluence of North Lane and Ardilla Road, and running west to east along North Lane, turning south at a 45 degree angle, crossing Camino Pablo, and running along San Pablo Creek. It is located on the north side of the East Bay Municipal Utilities Filtration Plant. The drainage system leads from the San Pablo Creek into the plant. There are steps leading down to this section of the drainage canal. The storm drain ties into the larger City of Orinda Stormwater System.

*P3b. Resource Attributes: HP11 – Engineering Structure

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

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: North Lane to Camino Pablo channelized storm drain/culvert segment of Orinda Stormwater System– facing north

*P6. Date Constructed/Age and

Sources: Historic

Prehistoric Both

Constructed circa 1930 & circa 1950– Visual observation & Basin Research Associates

*P7. Owner and Address:

East Bay Municipal Utilities District
 375 11th Street, Oakland, CA 94607

*P8. Recorded by: (Name, affiliation, and address)

Megan Venno
 CH2M HILL
 6 Hutton Center Dr. Suite 700
 Santa Ana, CA, 92707

*P9. Date Recorded: November 2011

*P10. Survey Type: Reconnaissance

PRIMARY RECORD

Primary # _____

HRI # _____

Trinomial _____

Page 2 of 8

Resource Name or #: (Assigned by recorder) _____

***P11. Report Citation:** Basin Research Associates. "Historic Property Survey Report/Finding of Effect – North Lane Storm Water Mitigation Project" – City of Orinda, Contra Costa County. October 2011.

Contra Costa County Historic Landmarks Advisory Committee. Historic Resources Inventory. 2011.

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

DPR 523A (1/95)

***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 8

*NRHP Status Code Not eligible for NRHP

*Resource Name or # (Assigned by recorder) North Lane to Camino Pablo channelized storm drain/culvert segment of Orinda Stormwater System -

B1. Historic Name: N/A

B2. Common Name: channelized storm drain/culvert

B3. Original Use: Public Utility

B4. Present Use: Public Utility

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)

The channelized storm drain/culvert at North Lane was constructed in two phases. The portion north of the East Bay Municipal Utilities Filtration Plant was constructed circa 1930, and the section located along North Lane was constructed circa 1950. It has been altered through the years as needed to maintain its function as a municipal stormwater system. Alterations include upkeep of the natural rock wall and drain replacements. It ties into the Orinda Stormwater System, which was built in phases to accommodate the growing city of Orinda.

*B7. Moved? No Yes Unknown Date:

Original Location:

*B8. Related Features:

The resource is a component of the Orinda Stormwater System, which encompasses the city of Orinda. The storm drain/culvert leads from the San Pablo Creek into the East Bay Municipal Utility District (EBMUD) filtration plant, which was constructed in 1936.

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: Public Utilities Theme: Public Works

Area: Orinda

Period of Significance: 1930-present

Property Type: Engineered storm water system Applicable Criteria: N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The system of infrastructure that presently constitutes the city of Orinda Stormwater System, is a made up of individual elements constructed at different times throughout the 20th century and using a variety of materials and construction techniques to accommodate the needs of a continuously growing city. The channelized storm drain/culvert recorded within the APE is an approximately 1300 foot-long corrugated metal pipe storm drain and culvert. It is a partially open and channelized storm drain/culvert lined with stone, mortar and concrete. It is located in the city of Orinda at the confluence of North Lane and Ardilla Road, and running west to east along North Lane, turning south at a 45 degree angle, crossing Camino Pablo, and running along San Pablo Creek. It was constructed in phases, with the portion north of the East Bay Municipal Utilities Filtration Plant built first, beginning in the 1930s. The second phase of construction took place in the early 1950s along North Lane. It has been subject to alterations, upgrades, and routine maintenance through the years. These changes have included upkeep of the natural rock wall and replacement of sections of drain pipe.

The earliest part of the Orinda Stormwater System the The San Pablo Reservoir and Dam, constructed from 1916-1919, was one of the earliest components. The East Bay Mud Utility District (EBMUD) was authorized in 1923 and the East Bay Water Company was conveyed to EBMUD in 1928. The EBMUD Orinda Filter Plant was built in 1936, and the drainage system leads from the San Pablo Creek into the plant. These two developments marked the beginning of the stormwater system components, which were constructed beginning in the 1930s in order to manage stormwater to control flooding and erosion. It also manages and controls hazardous materials to prevent release of pollutants into the environment by bringing stormwater to the EBMUD filtration plant so that it can be filtered. As the community grew, the stormwater system was expanded to accommodate the demand, and the storm drain/culvert was constructed in the 1950s.

(This space reserved for official comments.)

The storm drain is located approximately 1.3 miles southeast of San Pablo Reservoir and west of the Orinda Water Treatment Plant (also known as the EBMUD Filtration Plant). It is not part of the San Pablo Dam and Reservoir, built in the late 1800s and first quarter of the 1900s. Because it is distinct from the dam and reservoir, and is an independent element of infrastructure both in

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 4 of 8 Resource Name or #* (Assigned by recorder) _____

terms of its date of construction and in its design, it is being evaluated as a stand-alone resource.

This 1300 foot-long corrugated metal pipe storm drain and culvert is not a significant engineering accomplishment, and it does not meet the definition of the work of a master, or have high artistic value. It does not embody distinctive characteristics of a particular style or method of construction. Therefore the structure is not eligible for the NRHP under Criterion C. This segment of the stormwater system is not associated with events that have made significant contributions to the broad patterns of local, regional or national history, and it is not associated with any persons considered important in local, state or national history. It is therefore not eligible for the NRHP under Criteria A or B. The site is not likely to yield information important in prehistory or history; it is therefore not eligible for the NRHP under Criterion D.

The Orinda Stormwater infrastructure from North Lane to Camino Pablo is recommended not eligible for listing in the NRHP.

B11. Additional Resource Attributes: (List attributes and codes) None

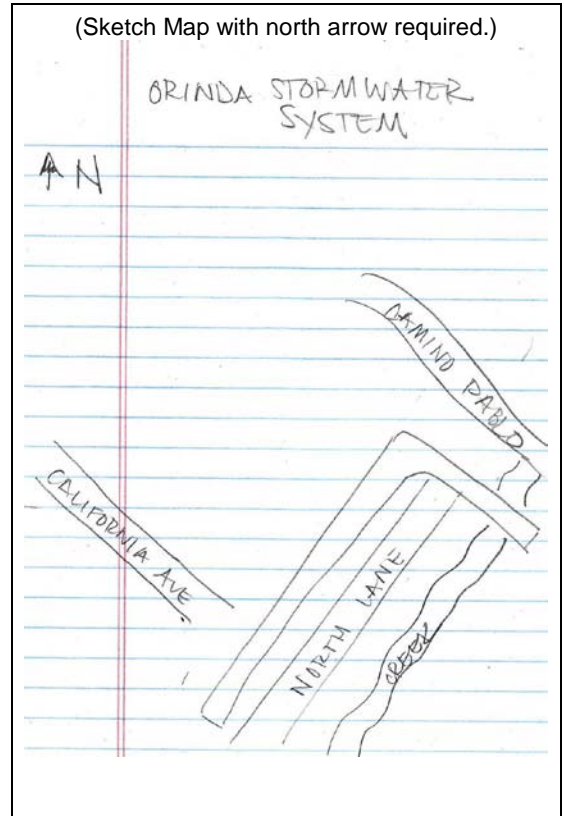
*B12. References: Basin Research Associates. "Historic Property Survey Report/Finding of Effect – North Lane Storm Water Mitigation Project" – City of Orinda, Contra Costa County. October 2011.

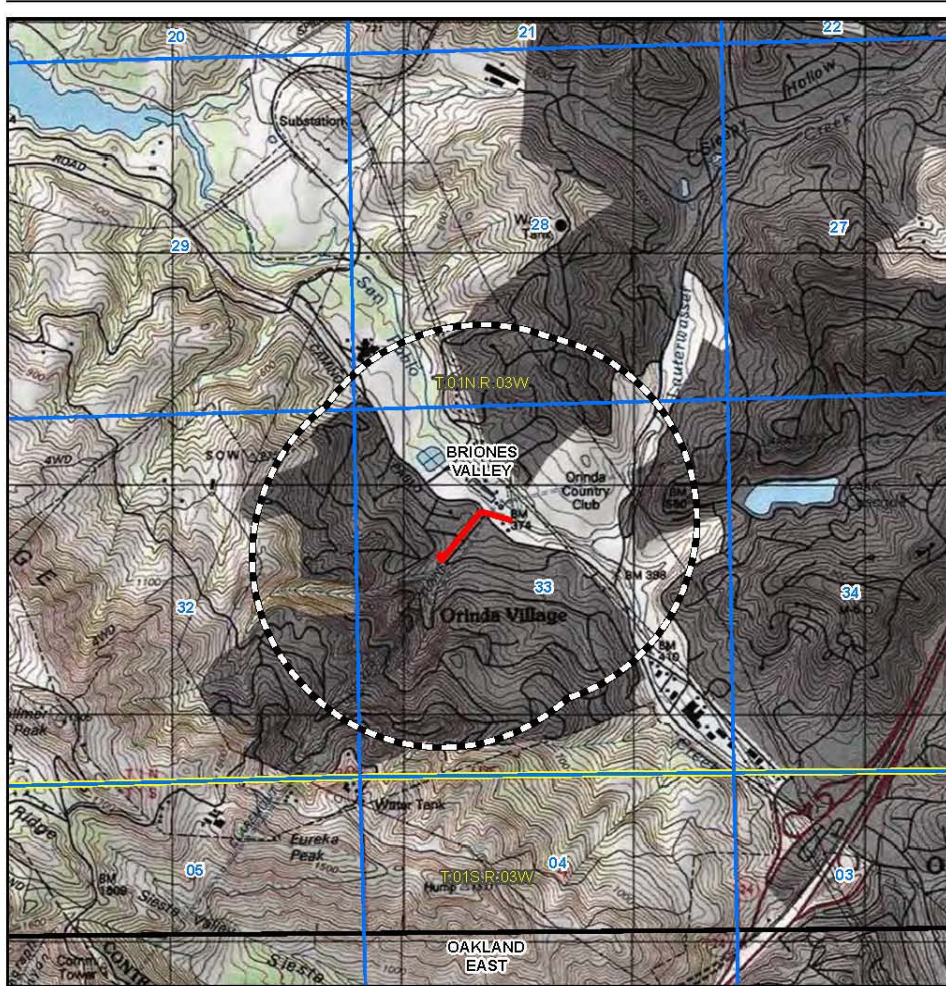
Contra Costa County Historic Landmarks Advisory Committee. Historic Resources Inventory. 2011.

B13. Remarks:

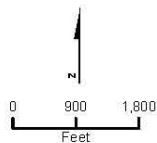
*B14. Evaluator: Megan Venno

*Date of Evaluation: November 11, 2011

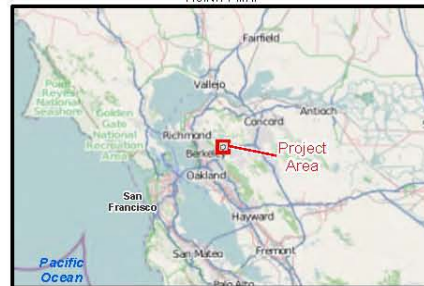




- LEGEND
- Orinda Project Area
 - 1/2 mile Buffer
 - USGS 7.5 minute Quadrangle Boundary
 - Township Boundary
 - Section Boundary



1:24,000



Note:
 - Project Area is entirely within the BRIONES VALLEY
 USGS 7.5 minute Quadrangle; 12/1/2010

Cultural Resources
 North Lane, Orinda - Stormwater Improvements

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

Primary #
HRI#
Trinomial


Page 6 of 8

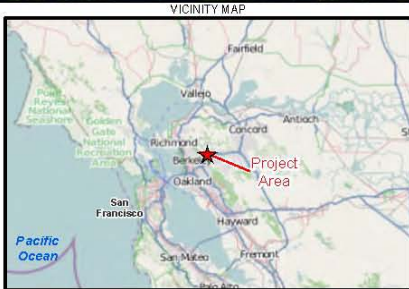
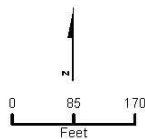
*Resource Name or #: #: North Lane to Camino Pablo channelized storm drain/culvert segment of Orinda Stormwater System

*Map Name: North Lane to Camino Pablo channelized storm drain/culvert segment of Orinda Stormwater System Location Map

*Scale: 1:2400 *Date of Map: 11/11/11



LEGEND
 Orinda Stormwater System - North Lane to Camino Pablo



Note:
 - Project Area is entirely within the BRIONES VALLEY
 USGS 7.5 minute Quadrangle

Orinda Stormwater System - North Lane to Camino Pablo
 North Lane, Orinda - Stormwater Improvements

Recorded by: Megan Venno

*Date: 11/11/11

Continuation

Update



Orinda Stormwater Stytem – Steps



Orinda Stormwater Stytem – Drain



Orinda Stormwater Stytem – Drain pipe and original stone walls
DPR 523L (1/95)



Orinda Stormwater System – stone dropoff



Orinda Stormwater System



Orinda Stormwater System – pipe drain



FEMA

June 27, 2012

Mr. Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, California 95816
Attention: Susan Stratton

**Re: North Lane Storm Water Improvement Project
HMGP 1810-21-16, FEMA-1810-DR-CA
Sub-Applicant: City of Orinda**

Dear Mr. Donaldson:

The City of Orinda (Sub-Applicant) proposes installation of an underground storm drainage system designed to handle runoff from a 10-year storm within a portion of the City of Orinda, Contra Costa County, California, located along North Lane and discharging to San Pablo Creek. The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide financial assistance to the Sub-Applicant, through the California Emergency Management Agency (Cal EMA), for the proposed project under the Hazard Mitigation Grant Program. FEMA's action of providing Federal financial assistance meets the definition of an Undertaking in 36 CFR § 800.16(y) and therefore requires the completion of a Section 106 review in accordance with the National Historic Preservation Act of 1966 (16 U.S.C. 470f).

In accordance with Stipulation VII.A of the 2005 First Amended Programmatic Agreement (Agreement) among FEMA, the State Historic Preservation Officer, California EMA, and the Advisory Council on Historic Preservation, FEMA defined the project's area of potential effects (APE) as those areas that would be subject to construction activities, as depicted in Figure 1 (enclosed). The vertical APE includes disturbed soils within city streets and other disturbed contexts of the residential neighborhood and within a stratigraphic unit (Pleistocene age alluvium) with no potential for resources to be found.

In accordance with Stipulation VII.B of the Agreement, FEMA's consultant conducted a cultural resources survey and prepared a brief technical report (enclosed). One resource was found within the APE: a segment of the City of Orinda's stormwater system, constructed in two phases in c. 1930 and 1950. This resource is not eligible for listing on the National Register of Historic

Mr. Milford Wayne Donaldson, FAIA

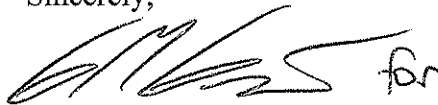
June 27, 2012

Page 2

Places. Given the project's setting in highly disturbed contexts and the absence of potential to affect historic properties, FEMA has documented a determination that no historic properties would be affected by the Undertaking in accordance with Stipulation VII.C of the Agreement. Unless you notify FEMA of your objection to FEMA's determination within 21 days of receipt of this documentation, FEMA may authorize funding for the Sub-Applicant's project.

If you require any additional information, please contact Mr. Morgan Griffin, Deputy Environmental Officer at (510) 627-7033, morgan.griffin@fema.dhs.gov, or the letterhead address. Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alessandro Amaglio', followed by the initials 'for'.

Alessandro Amaglio
Environmental Officer

Enclosures

Technical Report in Support of a Finding of No Historic Properties Affected: Cultural Resources Assessment in Support of Hazard Mitigation Grant Program 1810-21-16, FEMA-1810-DR-CA, City of Orinda, North Lane Stormwater Improvements Project

PREPARED FOR: FEMA
PREPARED BY: Gloriella Cardenas M.A, RPA / CH2M HILL
DATE: June 27, 2012

FINDING OF NO HISTORIC PROPERTIES AFFECTED

"A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary" (36 CFR § 800.11(d)(l))

The City of Orinda, California (Sub-Applicant) proposes installation of an underground storm drainage system designed to handle runoff from the 10-year storm located along North Lane and discharging to San Pablo Creek near the East Bay Municipal Utility District (EBMUD)-Orinda water treatment plant, in Contra Costa County, California (Appendix A. Figure 1).

The storm drain system would include approximately 900 feet of 60-inch reinforced concrete pipe (RCP) under the length of North Orinda Lane. From the foot of North Orinda Lane, 320 linear feet of 60-inch RCP would be jacked and bored under Camino Pablo. An additional 80 feet of 60-inch RCP would connect the jacked and bored segment to a new outfall structure constructed upstream from the existing outfall, on San Pablo Creek.

The Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide financial assistance to the City of Orinda, through the California Emergency Management Agency (Cal EMA), for the proposed project under the Hazard Mitigation Grant Program. FEMA's action of providing Federal financial assistance meets the definition of an Undertaking in 36 CFR § 800.16(y) and therefore requires the completion of a Section 106 review in accordance with the National Historic Preservation Act of 1966 (16 U.S.C. 470f).

In accordance with Stipulation VII.A of the 2005 First Amended Programmatic Agreement (Agreement) among FEMA, the State Historic Preservation Officer, the California Emergency Management Agency, and the Advisory Council on Historic Preservation, the project's Area of Potential Effects (APE) for direct impacts consists of the areas that would be subject to construction activities (Appendix A. Figure 1). The vertical APE would consist

of work in disturbed soils within city streets and disturbed contexts of the residential neighborhood, and within a stratigraphic unit (Pleistocene age alluvium) with no potential for resources to be found.

Concurrently, Basin Research and Associates (Basin) conducted a study of the same APE and conducted Native American consultation on behalf of the City of Orinda (Basin 2011) in support of its California Environmental Quality Act (CEQA) documentation and in anticipation of FEMA's Section 106 compliance requirements. In order to avoid duplicating efforts since the work is still relevant, where applicable, Basin's study and results shall be referenced.

"A description of the steps taken to identify historic properties, including, as appropriate, efforts to seek information pursuant to §800.4(b)" (36 CFR § 800.11(d)(2))

CH2M HILL contracted the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC) located in the Department of Anthropology, Sonoma State University, to conduct a cultural resources literature search on August 24, 2011. Nine previous studies have been conducted within 0.5 mile of the APE. According to the data furnished by NWIC, there have been no previous studies of the APE. No cultural resources were identified within the APE; however, one previously recorded resource is located within 0.5 mile of the APE.

Basin conducted a literature search in July 2010 of the current APE and included a 0.25-mile study buffer for prehistoric resources and a 0.5-mile study buffer for historic resources; no resources were found within the study area as a result of the record search (Basin 2011). A field survey was conducted of the APE in August 11, 2010. No resources were discovered during Basin's field investigation (Basin 2011).

Native American Consultation

CH2M HILL conducted a search of the Sacred Land files by the Native American Heritage Commission (NAHC) on September 1, 2011, and this search failed to indicate the presence of Native American sacred sites in the immediate project vicinity. The NAHC responded on September 9, 2011, with a list of Native Americans interested in consulting on proposed projects in the vicinity.

The City of Orinda provided CH2M HILL with the Native American consultation letters sent by Basin on August 11, 2010. Because Basin has conducted consultation for the same APE and project, duplicate letters were not sent by CH2M HILL. However, CH2M HILL cross-referenced the September 9, 2011, list to ensure that there were no changes from the Native American representatives contacted by Basin.

Basin conducted follow up calls on August 21, 2011. As a result of these calls, the following responses were obtained: Irene Zwierlein and Jean-Marie Feyling had no concerns, while Andrew Galvan recommended the implementation of best practices in the event of inadvertent discoveries made during project implementation.

Voice mail messages were left for the remaining individuals and groups, when possible. To date, no other responses have been received.

Consultation letters are provided as Confidential Appendix D.

Results of Reconnaissance Survey

On October 4, 2011, Gloriella Cardenas, M.A., RPA of CH2M HILL, conducted a pedestrian cultural resources reconnaissance survey of the APE, located mainly within a residential development (Appendix B. Project Photos). One cultural resource was identified during the survey: a segment of the historic Orinda Stormwater System (Confidential Appendix C).

The Orinda Stormwater System segment is part of the larger City of Orinda Stormwater System. Construction of the stormwater segments near the water treatment plant began c. 1930, and the drainages along North Lane were constructed c. 1950. This section of the stormwater system is an existing corrugated metal pipe drain with a partially open and channelized storm drain/culvert lined with stone, mortar and concrete. The Sub-Applicant proposes to supplement approximately 1,300 feet of the existing storm drain system with a new 60-inch RCP beginning at the confluence of North Lane and Ardilla Road, running southwest to northeast along North Lane, turning east-southeast, crossing Camino Pablo, turning northeast, and discharging at a new outfall on San Pablo Creek. The segment of the stormwater system to be supplemented is a typical municipal storm water system. It is not a significant engineering accomplishment, and it does not meet the definition of the work of a master, or have high artistic value. It does not embody distinctive characteristics of a particular style or method of construction. Therefore the structure is not eligible for the National Register of Historic Places (NRHP) under Criterion C. This segment of the stormwater system is not associated with events that have made significant contributions to the broad patterns of local, regional or national history, and it is not associated with any persons considered important in local, state or national history. It is therefore not eligible for the NRHP under Criteria A or B. The system is not likely to yield information important in prehistory or history; it is therefore not eligible for the NRHP under Criterion D. A site record is provided in Confidential Appendix C.

"The basis for determining that no historic properties are present or affected" (36 CFR § 800.11(d)(3))

Although one cultural resource was identified in the APE during the cultural resources reconnaissance survey, it is not eligible for listing to the NRHP. No historical or archaeological resources were identified within the APE from the NWIC records search. To date, there have been two cultural resources field studies conducted of the APE; Basin conducted its cultural survey in 2010 (Basin 2011) and CH2M HILL conducted a field study in October 2011.

The APE consists of highly disturbed soils within city streets and disturbed contexts of the residential neighborhood, and within a stratigraphic unit (Pleistocene alluvium) with no potential for resources. The proposed project would result in a negligible change to the landscape. A separate APE for indirect impacts was not determined because no potential

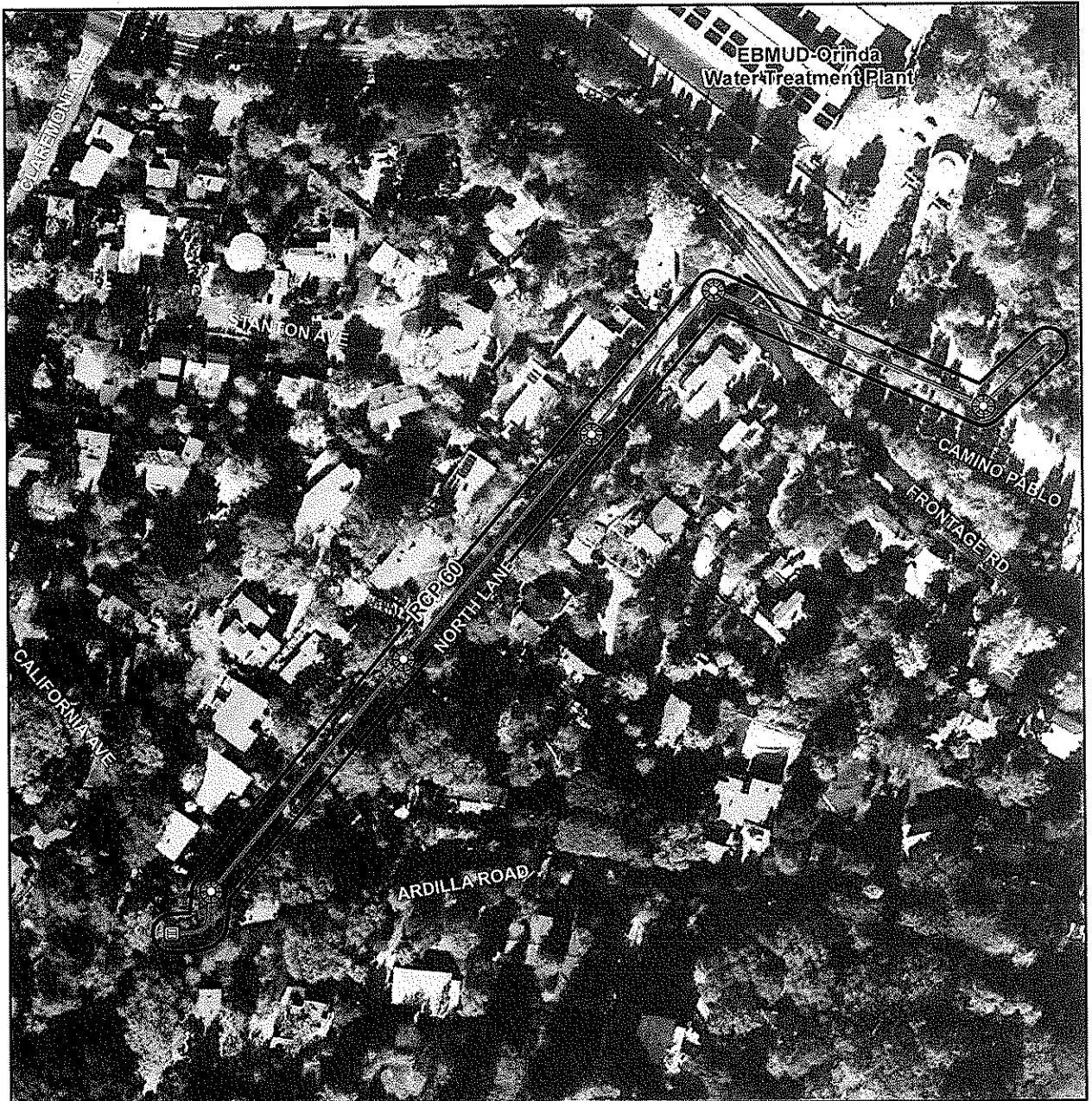
effects beyond the construction zone from factors such as visual intrusions and noise were identified.

FEMA has determined that no historic properties exist within the APE. Therefore, in accordance with Stipulation VII.C of the Agreement, FEMA has determined that the proposed Undertaking would result in "no historic properties affected."

As stated in Stipulation X.A of the Agreement, in the highly unlikely event that cultural resources are encountered, excavation and construction activities must halt, no activity may occur in the vicinity of the discovery, and the Sub-Applicant must take all reasonable measures to avoid or minimize harm to the property until FEMA concludes consultation with the SHPO. If human remains are found during construction, the Sub-Applicant is required by the California Health and Safety Code (Code) Section 7050.5 to contact the local law enforcement office and the County Coroner with jurisdiction immediately and must not further disturb the site where the remains are found. Should the County Coroner determine that the human remains are or may be that of a Native American, the discovery will be treated in accordance with Section 5097.98, a through d, of the Code.

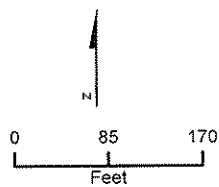
References

Basin Research and Associates (Basin). 2011. North Lane Stormwater Mitigation Project, City of Orinda, Contra Costa County, California: Draft Historic Properties Survey Report/Findings of Effect. MS on file with the City of Orinda.

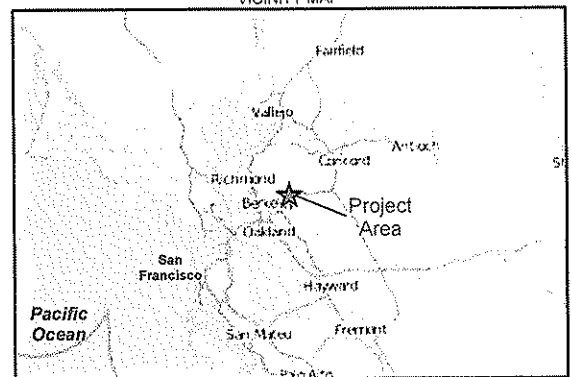


LEGEND

- Area of Potential Effect
- North Lane Orinda Stormwater System**
- Storm Drain
- Manhole
- Mainline



VICINITY MAP

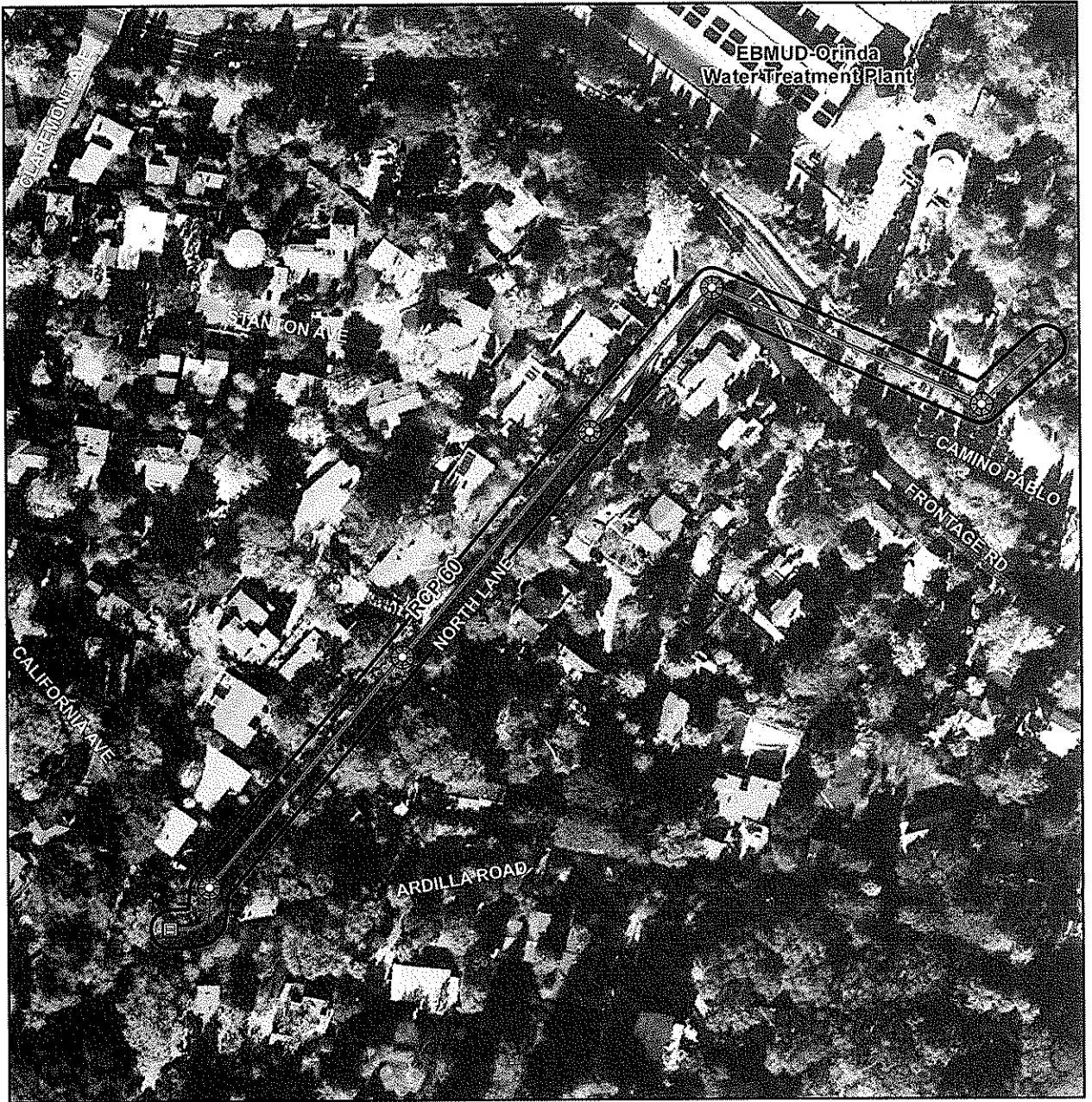


Note:
 - Project Area is entirely within T.01N.R.03W Section 33 and the BRIONES VALLEY USGS 7.5 minute Quadrangle

FIGURE 1
Orinda Stormwater System -
North Lane to Camino Pablo
 North Lane, Orinda - Stormwater Improvements

Appendix A

Map of Project Area Surveyed for Cultural Resources (Area of Potential Effects)



LEGEND

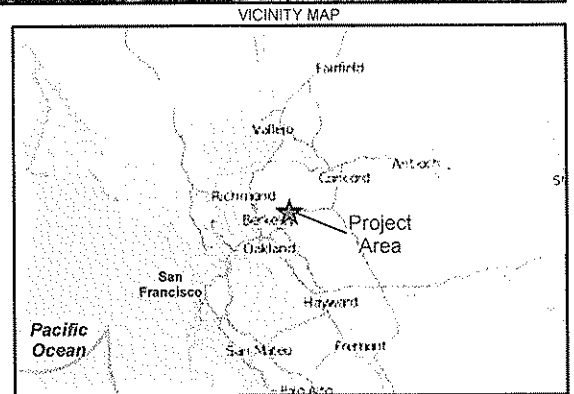
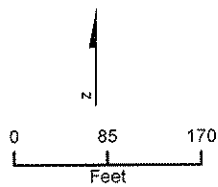
Area of Potential Effect

North Lane Orinda Stormwater System

Storm Drain

Manhole

Mainline



Note:
 - Project Area is entirely within T.01N.R.03W Section 33 and the BRIONES VALLEY USGS 7.5 minute Quadrangle

FIGURE 1
Orinda Stormwater System -
North Lane to Camino Pablo
 North Lane, Orinda - Stormwater Improvements

Appendix B

Representative Photos of Project Area



Photo 1. Overview of San Pablo Creek adjacent to EBMUD-Orinda water treatment plant.



Photo 2. Overview of storm drain alignment from the EBMUD-Orinda water treatment plant looking towards the southeast onto Camino Pablo



Photo 3. Intersection of Camino Pablo and North Lane

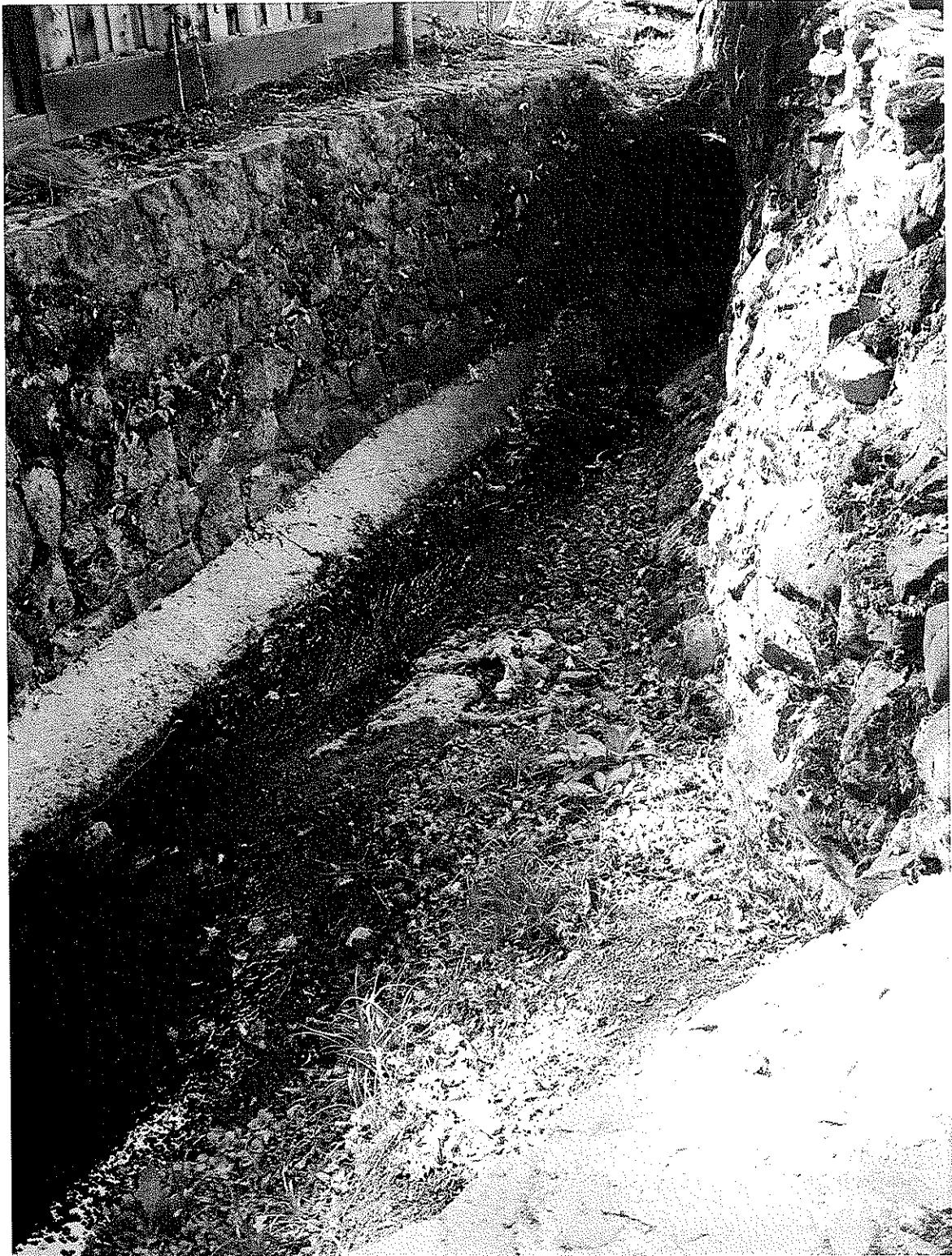


Photo 4. Overview of existing storm drain system on North Lane



Photo 5. Overview of existing storm drain on North Lane

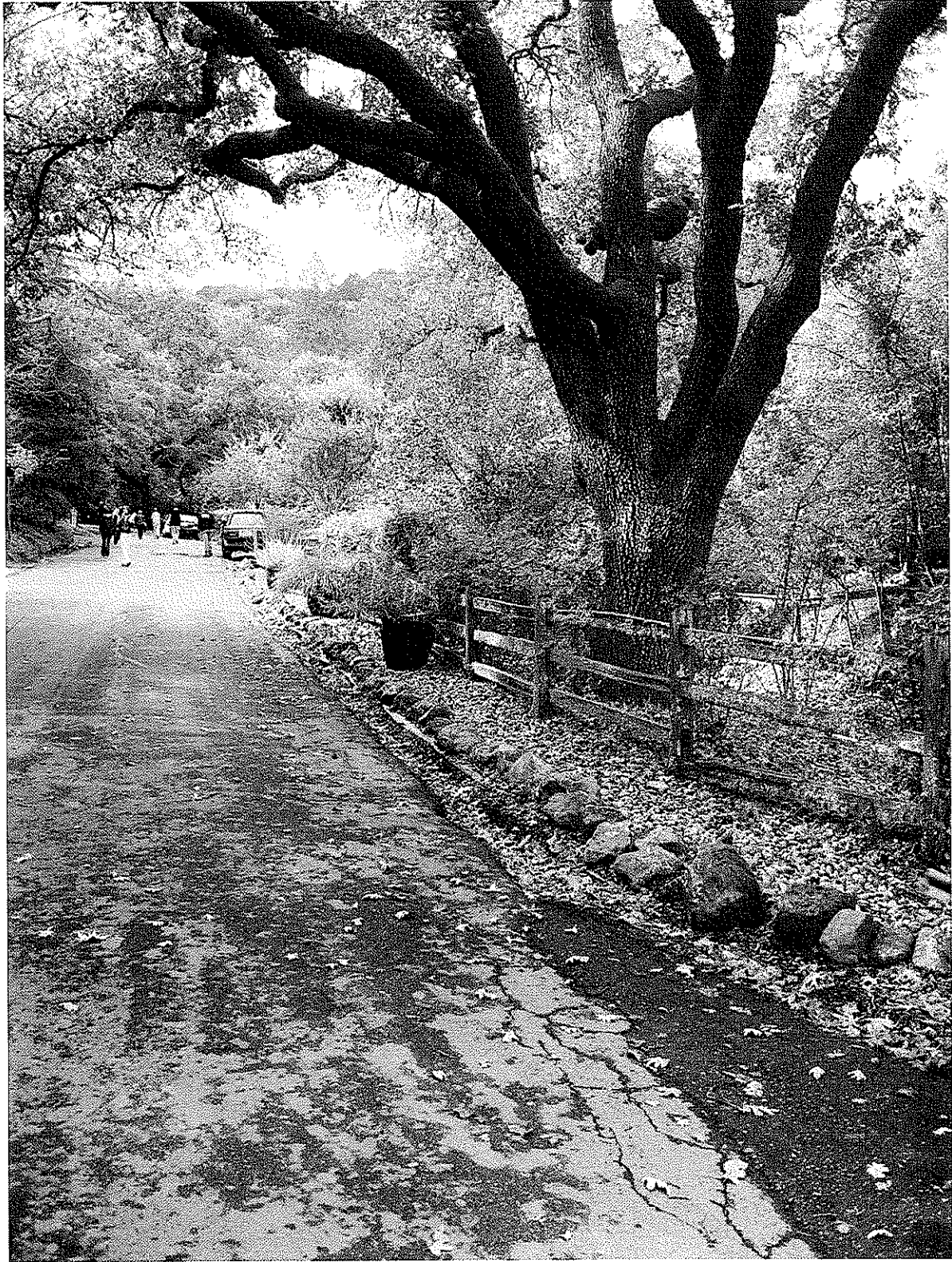


Photo 6. Overview of proposed storm drain alignment on North Lane, view to the southwest.



Photo 7. Project area overview on North Lane, view to the northeast



Photo 8. Overview of southwest end of project area, at Ardilla Road and North Lane



Photo 9. Overview of project area on North Lane looking to the northeast

Confidential Appendix C

DPR Forms

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

Primary #
 HRI #
 Trinomial
 NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 8

*Resource Name or #: Orinda Stormwater System - North Lane to Camino Pablo

P1. Other Identifier:

***P2. Location:** Not for Publication Unrestricted

*a. County: Contra Costa

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

*b. USGS 7.5' Quad: Briones Valley

Date: 2010 T 01N ; R 03W ; ¼ of NW ¼ of Sec 33; M.D. B.M.

c. Address: N/A City: Orinda Zip: 94563

d. UTM: NAD83 Zone: 10N, 570227.0614X; 4194033.9455Y mE/ mN (G.P.S.)

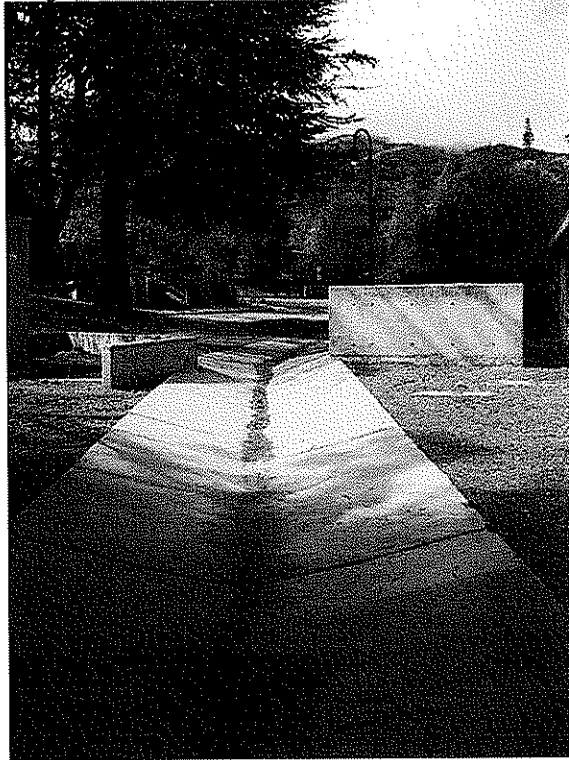
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
 This resource is part of the larger City of Orinda Stormwater System. This section of the stormwater system is an existing corrugated metal pipe drain with a partially open and channelized storm drain/culvert lined with stone, mortar and concrete. Approximately 1,300 feet of storm drain is being replaced, beginning at the confluence of North Lane and Ardilla Road, and running west to east along North Lane, turning south at a 45 degree angle, crossing Camino Pablo, and running along San Pablo Creek. The older section of the drain system is located on the north side of the East Bay Municipal Utilities Filtration Plant. The drainage system leads from the San Pablo Creek into the plant. There are steps leading down to this section of the drainage canal.

***P3b. Resource Attributes:** HP11 – Engineering Structure

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

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: Orinda Storm water system – facing north

***P6. Date Constructed/Age and**

Sources: Historic

Prehistoric Both

Constructed circa 1930 & circa 1950–
 Visual observation & Basin Research
 Associates

***P7. Owner and Address:**

East Bay Municipal Utilities District
 375 11th Street, Oakland, CA 94607

***P8. Recorded by:** (Name, affiliation,
 and address)

Megan Venno
 CH2M HILL
 6 Hutton Center Dr. Suite 700
 Santa Ana, CA, 92707

***P9. Date Recorded:** November 2011

***P10. Survey Type:** Reconnaissance

***P11. Report Citation:** Basin Research Associates. "Historic Property Survey Report/Finding of Effect – North Lane Storm Water Mitigation Project" – City of Orinda, Contra Costa County, October 2011.
 Contra Costa County Historic Landmarks Advisory Committee. Historic Resources Inventory. 2011.

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

Primary # _____
HRI # _____
Trinomial _____

PRIMARY RECORD

Page 2 of 8

Resource Name or #: (Assigned by recorder) _____

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

DPR 523A (1/95)

*Required information

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 8

*NRHP Status Code Not eligible for NRHP

*Resource Name or # (Assigned by recorder) Orinda Stormwater System - North Lane to Camino Pablo

B1. Historic Name: N/A

B2. Common Name: Orinda Stormwater System

B3. Original Use: Public Utility

B4. Present Use: Public Utility

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)

The Orinda Stormwater System from North Lane to Camino Pablo was constructed as part of the larger Orinda stormwater system circa 1930 in the area north of the filtration plant, and circa 1950 along North Lane. It has been altered throughout the years as needed to maintain its function as a municipal stormwater system. Alterations include upkeep of the natural rock wall and drain replacements.

*B7. Moved? No Yes Unknown Date:

Original Location:

*B8. Related Features:

The resource is part of the Orinda stormwater system, which encompasses the city of Orinda. The East Bay Municipal Utility District (EBMUD) filtration plant was constructed in 1936. It is the largest filter plant in the EBMUD system and serves most of Berkeley and Oakland (Contra Costa County, 2011). The San Pablo Dam and Reservoir (1916-1919) is also a related resource for the stormwater system.

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: Public Utilities Theme: Public Works

Area: Orinda

Period of Significance: 1930-present

Property Type: Engineered storm water system Applicable Criteria: N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The San Pablo Reservoir was proposed in the early 1880s and built on former lands of Patricio Castro, an heir to Rancho El Sobrante. The Peoples Water Company began construction of the San Pablo Dam in 1916, and it was completed in 1919 by the East Bay Water Company. The EBMUD was authorized in 1923 and the East Bay Water Company was conveyed to EBMUD in 1928. The life expectancy of the dam was estimated at 490 years (Basin Research Associates, 2011). A stormwater system was constructed beginning in the 1930s in order to manage stormwater to control flooding and erosion. It also manages and controls hazardous materials to prevent release of pollutants into the environment by bringing stormwater to the EBMUD filtration plant so that it can be filtered.

The 1897 USGS topographic map of the Concord quadrangle, surveyed in 1893-1894, shows the route of the "California and Nevada R.R." along with the Orinda, Laveaga, and Bryant railroad. San Pablo Dam/Reservoir truncated the former C&NRR alignment north of the APE. At the time, North Lane did not exist, nor did it exist in the 1915 USGS Concord topographic quadrangle.

The 1943 USGS Concord topographic quadrangle as well as the 1948 US War Department Concord topographic quadrangle both show no development other than Camino Pablo in, adjacent to, or crossing the APE. Orinda is shown south of State Route 24. The 1959 USGS Concord topographic quadrangle shows the Claremont Water Tunnel, North Lane, and Ardilla Road. Camino Pablo Avenue just to the west of Camino Pablo – visible on contemporary aerial maps – is not shown on these topographic quadrangles (Basin Research Associates, 2011).

The 1968 USGS Briones Valley topographic quadrangle is similar to the 1959 map and includes the EBMUD Orinda Filter Plant. The Orinda Filter Plant, the largest filter plant in the EBMUD, is located north of the project alignment at 190 Camino Pablo (USGS 1968). This facility, one of six EBMUD water treatment plants, was built in 1936 as part of the Mokelumne River Project. In 1988 the plant was designated the City of Orinda's first Historic Landmark (Basin Research Associates, 2011).

(This space reserved for official comments.)

This segment of the stormwater system is a typical municipal storm water system. It is not a significant engineering accomplishment, and it does not meet the definition of the work of a master, or have high artistic value. It does not embody distinctive characteristics of a particular style or method of construction. Therefore the structure is not eligible for the NRHP under Criterion C. This segment of the stormwater system is not associated

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 4 of 8

Resource Name or #* (Assigned by recorder) _____

with events that have made significant contributions to the broad patterns of local, regional or national history, and it is not associated with any persons considered important in local, state or national history. It is therefore not eligible for the NRHP under Criteria A or B. The system is not likely to yield information important in prehistory or history; it is therefore not eligible for the NRHP under Criterion D.

Given these circumstances, Orinda Stormwater System - North Lane to Camino Pablo is not eligible for listing in the National Register.

B11. Additional Resource Attributes: (List attributes and codes) None

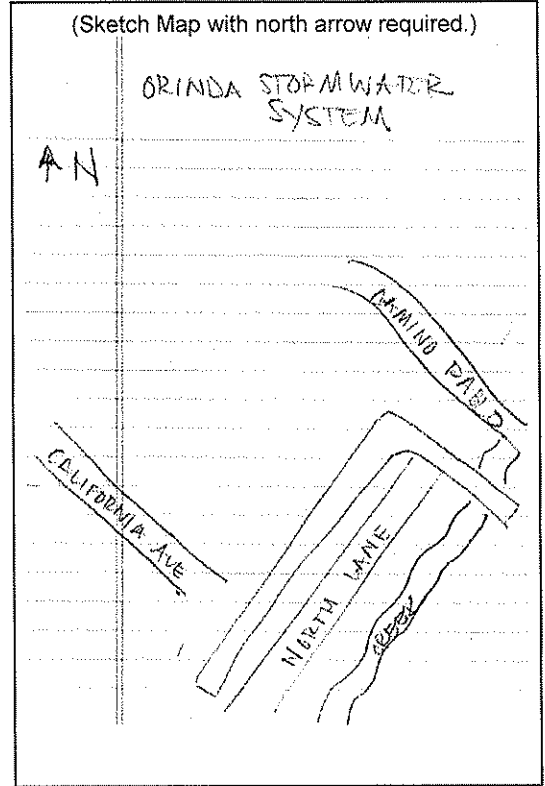
*B12. References: Basin Research Associates. "Historic Property Survey Report/Finding of Effect – North Lane Storm Water Mitigation Project" – City of Orinda, Contra Costa County, October 2011.

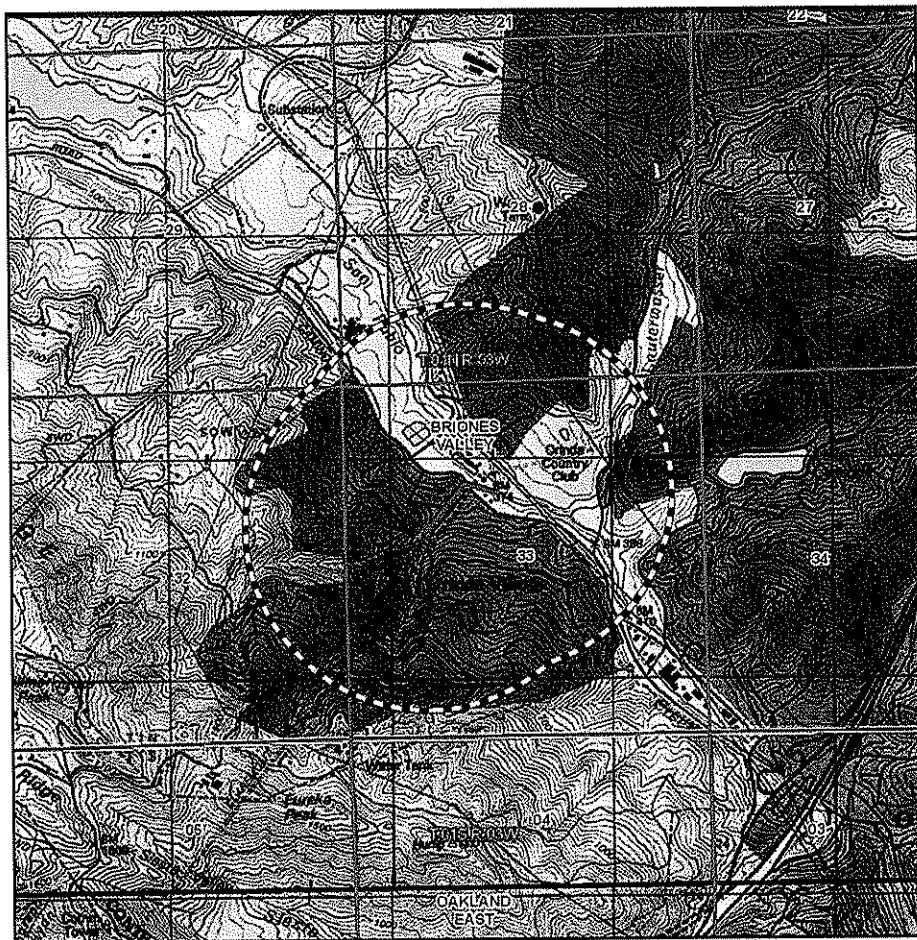
Contra Costa County Historic Landmarks Advisory Committee. Historic Resources Inventory. 2011.

B13. Remarks:

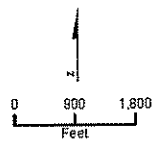
*B14. Evaluator: Megan Venno

*Date of Evaluation: November 11, 2011

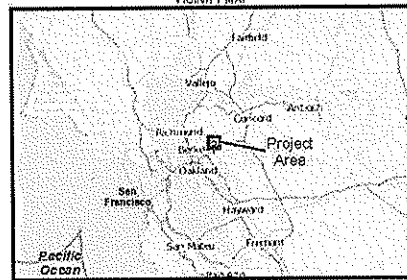




- LEGEND
- Orinda Project Area
 - 1/2 mile Buffer
 - USGS 7.5 minute Quadrangle Boundary
 - Township Boundary
 - Section Boundary



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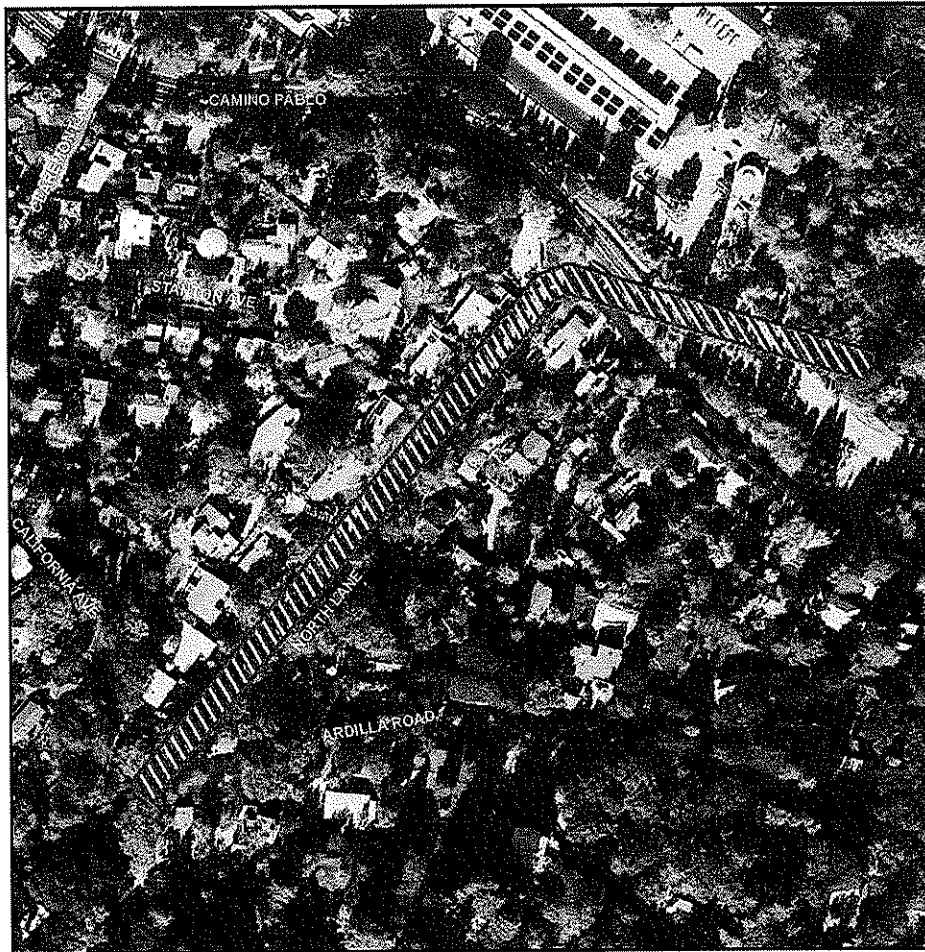


Note:
 - Project Area is entirely within the BRIONES VALLEY
 USGS 7.5 minute Quadrangle: 12/1/2010


Cultural Resources
 North Lane, Orinda - Stormwater Improvements

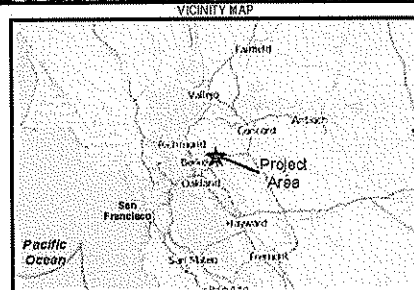
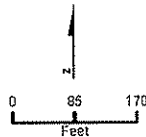
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CH2MHILL.



LEGEND

 Orinda Stormwater System - North Lane to Camino Pablo



Note:
 - Project Area is entirely within the BRIONES VALLEY
 USGS 7.5 minute Quadrangle

Orinda Stormwater System - North Lane to Camino Pablo
 North Lane, Orinda - Stormwater Improvements

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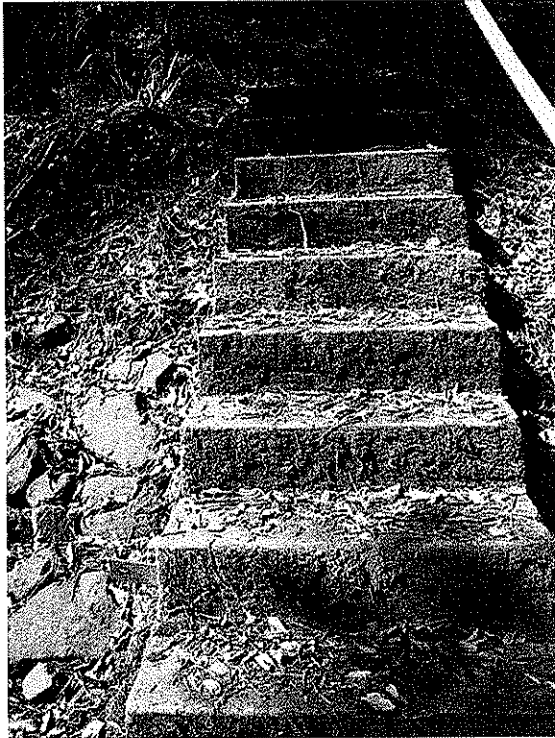
CH2MHILL.

Recorded by: Megan Venno

*Date: 11/11/11

Continuation

Update



Orinda Stormwater Stytem – Steps



Orinda Stormwater Stytem – Drain



Orinda Stormwater Stytem – Drain pipe and original
stone walls
DPR 523L (1/95)



Orinda Stormwater System – stone dropoff

Recorded by: Megan Venno

*Date: 11/11/11

Continuation

Update



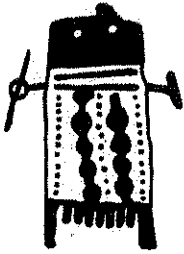
Orinda Stormwater System



Orinda Stormwater System – pipe drain

Confidential Appendix D

Basin's NAHC and Tribal Consultation



August 5, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Mr. Larry Meyers
Executive Secretary
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

RE: Request for Review of Sacred Lands Inventory –
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Mr. Meyers,

Please let this letter stand as our request for the Native American Heritage Commission (NAHC) to conduct a review of the NAHC *Sacred Lands Inventory* to determine if any listed properties are present within or adjacent to the above proposed project area (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

Information from the NAHC *Sacred Lands Inventory* will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES

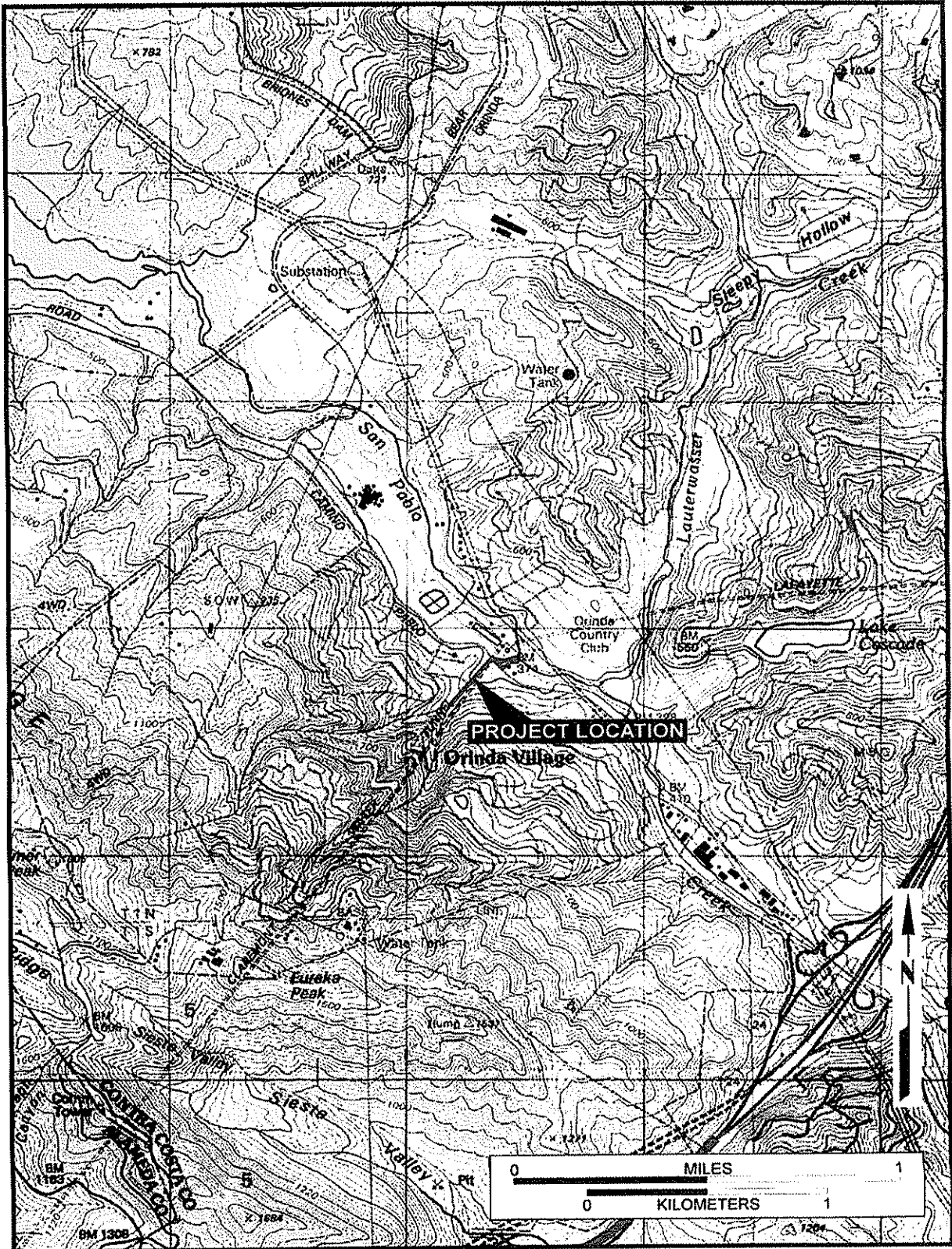


Figure 1: Project Location T1N R3W (USGS Briones Valley, CA 1995 and Oakland East, CA 1997)

STATE OF CALIFORNIA

Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov



August 11, 2011

Collin I. Busby, Ph.D., RPA
BASIN RESEARCH ASSOCIATES
1933 DAVIS STREET, SUITE 210
SAN LEANDRO, CA 94577

Sent by Fax: 510-430-8443
Number of Pages: 2

Re: Proposed North Lane Storm Water Mitigation project, Contra Costa County

Dear Dr. Busby:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission 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 (916) 653-4038.

Sincerely,


Debbie Pillas-Treadway
Environmental Specialist III

**Native American Contacts
Contra Costa County
August 11, 2011**

Jakki Kehl
720 North 2nd Street
Patterson, CA 95363
jakki@bigvalley.net
(209) 892-1060

Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024
ams@indiancanyon.org
831-637-4238

Ohlone/Costanoan

Katherine Erolinda Perez
PO Box 717
Linden, CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
2574 Seaboard Avenue
San Jose, CA 95131
muvekma@muvekma.org
408-205-9714
510-581-5194

Ohlone / Costanoan

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831-394-5915

Ohlone/Costanoan

The Ohlone Indian Tribe
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chochenyo@AOL.com
(510) 882-0527 - Cell
(510) 687-9393 - Fax

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/Mutsun Tribal Band
Irene Zwielerlein, Chairperson
789 Canada Road
Woodside, CA 94062
amah_mutsun@yahoo.com
(650) 851-7747 - Home
(650) 851-7489 - Fax

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City, CA 94587
soaprootmo@msn.com
510-972-0645-home
209-688-4753-cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

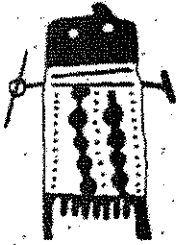
Amah/Mutsun Tribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding, CA 96003
jmfmc@sbcglobal.net
530-243-1633

Ohlone/Costanoan

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 5097.99 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed North Lane Storm Water Mitigation project, Contra Costa County



August 12, 2011

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 210
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Jakki Kehl
720 North Second Street
Patterson, CA 95363

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Jakki,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

Information provided will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

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August 12, 2011

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Ms. Katherine Erolinda Perez
P.O. Box 717
Linden, CA 95236

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Kathy,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

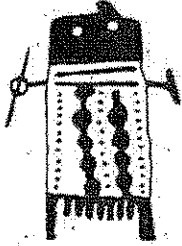
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Colin I. Busby, Ph.D., RPA
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August 12, 2011

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FAX (510) 430-8445

Linda G. Yamaue
1585 Mira Mar Avenue
Seaside, CA 93955

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Linda,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

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Colin I. Busby, Ph.D., RPA
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August 12, 2011

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FAX (510) 430-8443

Ms. Irenne Zwierlein, Chairperson
Amah/Mutsun Tribal Band
789 Canada Road
Woodside, CA 94062

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Irenne,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

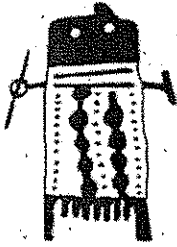
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Colin I. Busby, Ph.D., RPA
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August 12, 2011

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VOICE (510) 430-8441
FAX (510) 430-8443

Ms. Jean-Marie Feyling
Amah/Mutsun Tribal Band
19350 Hunter Court
Redding, CA 96003

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Jean-Marie,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

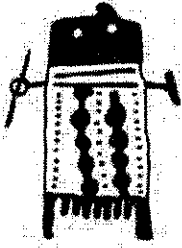
If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

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Colin I. Busby, Ph.D., RPA
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August 12, 2011

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FAX (510) 430-8443

Ms. Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Ann Marie,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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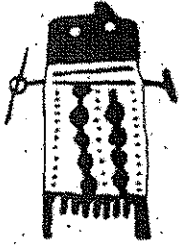
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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
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August 12, 2011

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FAX (510) 430-8443

Mr. Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Andrew,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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Closing Remarks

If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
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August 12, 2011

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FAX (510) 430-8443

Ms. Rosemary Cambra, Chairperson
Muwekma Ohlone Tribe of the SF Bay Area
2574 Seaboard Avenue
San Jose, CA 95131

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Rosemary,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo.

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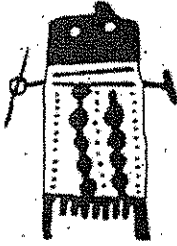
If I can provide any further information, please don't hesitate to contact me (510 430-8441 or Basinres1@gmail.com). Thank you for your timely review of our request.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
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BASIN RESEARCH ASSOCIATES



August 12, 2011

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1935 DAVIS STREET
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FAX (510) 430-8443

Ms. Ramona Garibay, Representative
Trina Marine Ruanò Family
30940 Watkins Street
Union City, CA 94587

RE: Request for Information
North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County

Dear Ramona,

The Native American Heritage Commission has provided your name as an individual who may have information regarding Native American sites within or adjacent to the above proposed project (see enclosed USGS map).

The City of Orinda in cooperation with the East Bay Municipal Utility District (EBMUD) proposes to construct a storm drain bypass line under North Lane from about Ardilla Road crossing Camino Pablo and continuing southeasterly to about San Pablo Creek. Three alternatives are under consideration in order to install 1000 feet of 60-inch pipe under North Lane and 320 feet of 60-inch pipe under Camino Pablo. Information provided will be used in a Historic Property Survey Report/Finding of Effect Report (HPSR/FOE) to be submitted to the City of Orinda, the California Emergency Management Agency (CalEMA), and Federal Emergency Management Agency (FEMA).

Closing Remarks

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA
Principal

CIB/dg

BASIN RESEARCH ASSOCIATES

Record of Native American Contacts

Proposed North Lane Storm Water Mitigation Project, City of Orinda, Contra Costa County.

08/05/11 Letter to Mr. Larry Meyers, Executive Secretary, Native American Heritage Commission (NAHC), Sacramento. Regarding: Request for Review of Sacred Lands Inventory for project.

08/11/11 Letter response by Debbie Pilas-Treadway, NAHC

08/12/11 Letters sent to all parties recommended by NAHC

Letters to Jakki Kehl, Patterson; Katherine Perez, Linden; Linda Yamane, Seaside; Irenne Zwierlein, Amah/Mutsun Tribal Band, Woodside; Jean-Marie Feyling Amah/Mutsun Tribal Band, Redding; Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan, Hollister; Rosemary Cambra, Chairperson, Muwekma Ohlone Indian Tribe of the SF Bay Area, Milpitas; Andrew Galvan, The Ohlone Indian Tribe, Mission San Jose; and Ramona Garibay, Representative, Trina Marine Ruano Family, Union City.

08/23/11 Telephone calls made by Basin Research Associates (Christopher Canzonieri) in the afternoon to non-responding parties.

Jakki Kehl – called at 3:06 PM, unable to leave message.

Katherine Perez – left message at 3:07 PM.

Linda Yamane – left message at 3:09 PM.

Irenne Zwierlein – called at 3:11 PM, has no concerns.

Jean-Marie Feyling – same as her sister; Irenne Zwierlein.

Ann Marie Sayers – called at 3:14 PM, line busy unable to get through after several tries.

Rosemary Cambra – called at 3:14 PM, unable to leave message.

Andrew Galvan – called at 3:15 PM, if something is encountered the proper measures should be implemented (i.e., contact County Coroner and Native American Heritage Commission if Native American remains are exposed and follow recommendations).

Ramona Garibay – called at 3:15 PM, number is incorrect.



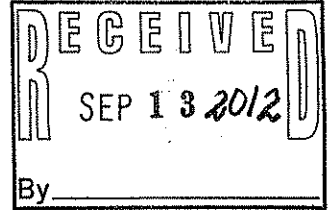
United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In Reply Refer To:
08ESMF00-2012-I-0538-2



SEP 07 2012

Mr. Alessandro Amaglio
Regional Environmental Officer
Attn: Gilda Barboza
U.S. Department of Homeland Security
Federal Emergency Management Agency
1111 Broadway, Suite 1200
Oakland, California 94607-4052

Subject: Informal Section 7 Consultation for the North Lane Storm Water Improvement Project, City of Orinda, Contra Costa County, California (HMGP 1810-021-016, FEMA-1810-DR-CA)

Dear Mr. Amaglio:

This letter is in response to your August 22, 2012, letter requesting informal consultation with the U.S. Fish and Wildlife Service (Service) on the North Lane Storm Water Improvement Project in the City of Orinda, Contra Costa County, California. Your letter specifically requests concurrence with a not likely to affect determination on federally listed or proposed species or habitat. The provided *Biological Assessment Revised August 2012* analyzes the project for effects to the federally threatened California red-legged frog (*Rana draytonii*) and endangered Alameda whipsnake (*Masticophis lateralis euryxanthus*). Therefore, this response only addresses the California red-legged frog and Alameda whipsnake. Your letter was received in our office on August 23, 2012. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The proposed project is located in the City of Orinda in Contra Costa County, California. The project vicinity consists primarily of residential homes, along with municipal use at the East Bay Municipal Utility District Orinda Water Treatment Plant. The project area includes Camino Pablo Road, North Lane, and San Pablo Creek, a tributary to San Pablo Reservoir.

The proposed project will install approximately 900 feet of 60-inch reinforced concrete pipe under the length of North Lane, and jack and bore 320 linear feet of 60-inch reinforced concrete pipe under Camino Pablo Road to a new outfall structure at San Pablo Creek. The proposed storm drain system also includes a debris rack, a headwall, three inlet structures, five manholes,

connection to existing lateral storm drain pipes, fence reinstallation, and pavement repair. With the exception of the last segment between the frontage road adjacent to Camino Pablo Road and San Pablo Creek, the new storm drain will be constructed within the right-of-way of existing streets, parallel to the existing corrugated metal pipe and ditch system on the North Lane, which will remain in place. The new outfall will be located upstream of the existing outfall through which existing flows are conveyed along North Lane to San Pablo Creek. Flows would continue to run through the existing storm drain system; the new storm drain will carry flows above the capacity of the existing storm drain. The new and existing pipes combined could handle runoff from a 10-year storm.

Construction will take approximately four months to complete and would be conducted by a contractor to the City of Orinda. The proposed project is planned to be completed in 2013.

To avoid and minimize impacts to water resources, best management practices (BMPs) will be implemented. BMPs to be implemented will be finalized with the final design, but will typically include the following:

- Discharge of pollutants from vehicle equipment cleaning shall not be allowed into any storm drains or watercourses.
- Vehicle and equipment fueling and maintenance operations shall be at least 50 feet away from watercourses, except established commercial gas stations or established vehicle maintenance facilities.
- Concrete wastes shall be collected in washouts and water from curing operations shall be collected and disposed of and not allowed into watercourses.
- Dust control shall include the use of water trucks and dust palliatives to control dust in excavation and fill areas and covering temporary stockpiles when weather conditions require. Coir rolls or straw wattles shall be installed along or at the base of slopes during construction to capture sediment.
- Graded areas shall be protected from erosion using a combination of silt fences, fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting, as appropriate on sloped area.
- Work within drainages shall occur outside the rainy season of October 15 through April 15.
- A Stormwater Pollution Prevention Plan shall be prepared and approved prior to the start of construction. The Stormwater Pollution Prevention Plan will include the development of a Construction Site Monitoring Program, as well as detail the necessary efforts and BMPs used to ensure disturbed soil and construction related work do not impact San Pablo Creek or any other water resources.
- Sediment control measures shall be applied to all exposed areas during construction, including the trapping of sediments within the construction area through the placement of barriers, such as silt fences or fiber rolls, at the perimeter of downstream drainage points.
- Dewatering measures shall be developed if groundwater is encountered during construction.
- Permanent pollution prevention BMPs shall be considered to reduce the amount of suspended particulate loads entering waterways. The measures would be incorporated

into the final engineering design or landscape design of the project and would take into account expected runoff from the roadway.

- Existing mature vegetation and landscaping shall be protected in place wherever possible.
- Replacement erosion control BMPs, such as fiber rolls and netting, shall be placed and permanent hydroseed applied to provide further permanent stabilization.
- Stormwater treatment such as bioretention facilities, flow-through planters, dry wells, cistern plus bioretention, and bioretention plus vault shall be incorporated.
- The City of Orinda will be required to comply with the Clean Water Act, State water quality regulations, and local water quality regulations, and to obtain all required permits.

Surveys to determine California red-legged frog and presence were not conducted. The closest known California red-legged frog occurrence is approximately 0.6 mile northwest of the project site in a small pond at the Wagner Ranch Nature Area. San Pablo Creek in the project area contains riparian and aquatic habitat. There are several Alameda whipsnake occurrences within 2 miles of the project area, including a roadkill approximately 0.6 mile southwest of the project site. Alameda whipsnakes have been documented up to 4.5 miles away from scrub/chaparral habitat and have been reported to use riparian habitat.

The following measures are proposed to avoid adverse effects to California red-legged frogs and Alameda whipsnakes:

1. At least 15 days prior to the onset of any construction-related activities, the City of Orinda or FEMA shall submit to the Service, for approval, the name(s) and credentials of biological monitors it requests to conduct activities specified for this project. Information included in a request for authorization must include, at a minimum: (1) relevant education; (2) relevant training on species identification, survey techniques, handling individuals of different age classes, and handling of different life stages by a permitted biologist or recognized species expert authorized for such activities by the Service; (3) a summary of field experience conducting requested activities (to include project/research information and actual experience with the species); (4) a summary of biological opinions and/or informal consultations under which they were authorized to work with the listed species and at what level (such as construction monitoring versus handling), this should also include the names and qualifications of persons under which the work was supervised as well as the amount of work experience on the actual project including detail on whether the species was encountered or not; and (5) a list of Federal Recovery Permits [10(a)1(A)] if any, held or under which individuals are authorized to work with the species (to include permit number, authorized activities, and name of permit holder).

No project activities shall begin until the City of Orinda or FEMA has received written Service approval for biologists to conduct specified activities.

2. A biological monitor will conduct all biological surveys, monitoring, and avoidance activities. No earth-moving activities or other project activities will begin until the biological monitor is present on-site to survey, monitor, and ensure avoidance.
3. Within 24 hours prior to the onset of project, a Service-approved biological monitor will

survey the project area for California red-legged frogs and Alameda whipsnakes.

4. The Service-approved biological monitor will have the authority to, and shall, halt any construction activities, if any California red-legged frogs and/or Alameda whipsnakes are observed in the work area. If California red-legged frogs and/or Alameda whipsnakes are found at any time during project work, construction will stop and the Service will be contacted immediately for further guidance.
5. The biological monitor will be present at the work site to monitor on-site compliance and all avoidance measures.
6. The biological monitor will conduct a worker environmental awareness training in identification of the California red-legged frog and Alameda whipsnake. The training will include a description of the species, habitats, and requirements for environmental compliance.
7. Vehicle speed will be limited to 10 miles per hour.
8. Vehicular traffic will be confined to the existing roads, designated construction routes and staging areas, and the temporary bridge.
9. To prevent inadvertent entrapment of listed species, all excavated steep walled holes or trenches should be covered at the end of each workday with plywood or similar materials and inspected at the beginning of each workday.
10. Avoid storage of any pipes measuring 4 inches or greater in diameter at the site, or seal the ends of any such pipes with tape as they are brought to the site to prevent any listed species from entering and becoming trapped in pipes.

The Service concurs that the North Lane Storm Water Improvement Project is not likely to adversely affect the California red-legged frog and Alameda whipsnake based on the suburban setting, the small likelihood of this species being present at the project site during construction, and the implementation of the avoidance measures and BMPs. Therefore, unless new information reveals effects of the project that may affect federally listed species or critical habitat in a manner not identified to date, or if a new species is listed or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary.

Mr. Alessandro Amaglio

5

If you have any questions regarding this response, please contact Kim Squires, Senior Endangered Species Biologist (Kim_Squires@fws.gov) or Ryan Olah, Coast Bay/Forest Foothills Division Chief (Ryan_Olah@fws.gov), at the letterhead address, or telephone (916) 414-6600.

Sincerely,

A handwritten signature in black ink that reads "Ryan Olah". The signature is written in a cursive, flowing style.

~~for~~ Eric Tattersall
Deputy Assistant Field Supervisor

Responses to Email Comments of 9 Aug 12
HMGP 1810-21-16, SHPO FEMA120628B

1. Is the new storm drain system being proposed intended to replace or supplement the existing system?

As stated on p. 3 (second paragraph of the *Results of Reconnaissance Survey* section) of the 27 June 27 2012 Technical Report in Support of a Finding of No Historic Properties Affected: Cultural Resources Assessment in Support of Hazard Mitigation Grant Program 1810-21-16, FEMA-1810-DR-CA, City of Orinda, North Lane Stormwater Improvement Project (hereafter "Technical Report"), the proposed storm drain installation (Undertaking) will supplement the existing storm drain. When the capacity of the existing storm drain is exceeded, stormwater will be conveyed via the proposed new storm drain. The existing storm drain will remain in-situ and physically unaffected. FEMA acknowledges that this information should have been provided in the Technical Report's section describing the Undertaking and will ensure that such information is provided here in future submittals.

2. If it replaces the existing system, will the existing system be demolished?

Please see response to Comment 1. The existing system will not be replaced and will not be demolished.

3. Are there any historic properties along the road where the new RCP will be jacked and bored? There may be potential effects from construction noise and vibration.

Construction activity does not have potential to generate levels of noise or vibration that would result in the potential to impact the residential structures within the neighborhood and bordering the city streets. Therefore, residences in proximity to North Lane and other areas subject to construction activity are not within the APE and their potential historic significance is inconsequential.

All activity conforms to normal and typical construction practices using light machinery (excavator, backhoe, and hand-excavation) to excavate within the existing city streets within which the storm drain pipe will be placed. The pipeline has been designed to avoid existing and future utilities running parallel along North Lane, including water, sewer, and storm drain pipelines running beneath the street. The vertical alignment will set the pipe below the depths of several utility crossings. Most of the alignment within the open trench area will be approximately 10 to 15 feet below ground surface to avoid existing lateral pipelines while the jack-and-bore will be up to 30 feet below existing grade.

The proposed 60-inch-diameter storm drain bypass pipe will be installed by excavating a trench approximately 8 feet wide along the alignment, within the public right-of-way, to a maximum depth of about 16 feet deep depending on the locations of existing utilities. A jack-and-bore crossing is planned for crossing Camino Pablo with the bore pits 15 feet by 30 feet with a maximum depth of 30 feet. Saw cuts will be made along the existing asphalt, which will be removed and recycled. Excavation will require an excavator or backhoe. The excavator will not dig the entire trench where the alignment crosses existing utilities; the material around the existing utilities will be removed by hand.

Approximately 12 inches of bedding material will be placed at the bottom of the trench, and the pipeline will be laid on top of the bedding material and covered with additional bedding material to a depth of approximately 12 inches. After the pipeline has been installed, connections completed,

and the pipe zone filled with bedding material, the trench will be backfilled with sand to approximately 12 inches below street level. A new layer of subgrade material will be placed on top of the backfilled material, and asphalt paving will be poured to match the existing profiles.

4. This is also why the APE should include the properties lining the road where the new storm drain will be installed.

Please see response to Comment 3. The process to construct and placement of the buried pipeline has no potential to affect the residential structures outside of the existing roadway footprint.

5. How deep will the new RCP storm drain be installed so we can know the extent of ground disturbance?

Please see response to Comment 3.

Note that with regard to geoarchaeological conditions within the APE, a parallel study of the project APE commissioned by the City of Orinda and performed by Basin Research (2011) for the project describes the following regarding potential for subsurface archaeological resources to be present within the APE. These findings are supported in part by a geoarchaeological study of the region in 2007 (Meyer and Rosenthal 2007) and several other data sources cited in the City's report. FEMA's independent study concurs with the following findings and conclusions, in particular, excerpted from the City's report. Note that two independent inventories were performed for the undertaking; both the FEMA study and the City's analysis conclude that no historic properties will be impacted:

Subsurface testing to supplement the surface field inventory is not recommended as the presence of buried utilities within the proposed right-of-way within a heavily urban area precludes systematic subsurface investigation to supplement the surface observations. In addition, the archival and literature record and the geoarchaeological data suggest a low potential for exposing subsurface resources through mechanically assisted testing.

The project area is situated within a hilly area and adjacent to a riparian vector – San Pablo Creek, at a distance from the high sensitivity San Francisco bay shore and marsh areas. The project alignment includes two intermittent drainages in the vicinity of Ardilla Road and North Lane and an outfall on the west bank of San Pablo Creek. In addition, the confluence of San Pablo Creek with Lauterwasser Creek is approximately 0.25 mile south of the APE (e.g., US War Dept 1943; USGS 1959, 1995).

This general absence of previously reported subsurface cultural material in the APE could be the result of several factors. Cultural materials could have been buried or removed by periodic flooding and scouring by the various water courses. In addition, construction excavations over the past 50+ years including surface street improvements, utility excavations and urban development have not resulted in the exposure of any significant subsurface resources within the APE. These activities include the installation of sanitary sewer lines, potable water pipelines and underground utilities and past development activities including road work, construction associated with the San Pablo Camino, building construction, and other infrastructure activities with native soil impacts. Studies linking geology and soil types with aboriginal occupation also suggest a low potential for subsurface prehistoric archaeological deposits dating greater than 700 years in age (e.g., Meyer and Rosenthal 2007). As noted above, the local geology is Middle and/or Lower Pliocene nonmarine rocks (Jennings and Burnett 1961); the three soil types within the APE are clays - Botella and Los Osos clay loams and Sehorn clay (USDA 1977).

The reasonable and good faith effort to identify archaeological resources within the project APE included a systematic field inventory. The proposed project alignment has been impacted

by the construction of surface road construction; subsurface infrastructure improvements within the public right of way and by adjacent residential development. Exposures of undisturbed native soil are very limited due to infrastructure improvements and introduced landscaping.

Meyer, Jack and Jeffrey Rosenthal (Far Western Anthropological Research Group), 2007 Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. June 2007. MS on file, S-33600, CHRIS/NWIC, Sonoma State University, Rohnert Park.

6. Did the reconnaissance survey of the APE include the location of the new outfall structure?

As stated on p. 1 (last paragraph) of the Technical Report, the APE included all areas subject to construction activities. As installation of a new outfall structure is a construction activity, the location of the outfall structure was included in the APE and surveyed. The location of the proposed outfall structure is at the down-gradient or northeast terminus of the mainline as depicted in Appendix A, Figure 1, of the Technical Report. FEMA acknowledges that a symbol marking the location of the proposed outfall structure in Appendix A, Figure 1, of the Technical Report would have clarified this issue and will ensure that such information is provided in future submittals.

7. In the future, the survey report should be submitted to the SHPO.

The Technical Report provides the results of the cultural resources survey. The survey used a combination of reconnaissance and pedestrian transects spaced at 10-meter intervals to accomplish the field inventory based on field conditions. The project is located within a residential development, and specifically, within existing city streets. Whenever possible, extra time was spent examining ant hills, animal burrows, and natural cut banks for evidence of subsurface cultural resources. The cultural resources investigation was conducted to meet federal requirements under Section 106 of the NHPA. In accordance with 36 CFR 800.4(b)(1), FEMA has “take[n] into account...the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects.” FEMA believes that the Technical Report meets FEMA’s requirements to “make a reasonable and good faith effort to carry out appropriate identification efforts” per 36 CFR 800.4(b)(1).

8. The DPR 523 forms should inventory and evaluate the property, not discuss the proposed project.

Revised DPR 523 forms have been prepared and attached.

9. The DPR 523 form only evaluates the segment of the Orinda Stormwater System between North Lane and Camino Pablo. While that segment may not be individually eligible, it is clearly a portion of a larger system and should be understood and evaluated in that context.

Revised DPR 523 forms clarifying the resource that was recorded and evaluated, and its relationship to other stormwater-related infrastructure, has been prepared and is attached.

The system of infrastructure that presently constitutes the City’s stormwater system is made up of individual elements constructed at different times throughout the 20th century and using a variety of materials and construction techniques to accommodate the needs of a continuously growing city. The channelized storm drain/culvert recorded within the APE is an approximately 1300-foot-long, corrugated-metal, pipe storm drain and culvert. It is a partially open and channelized storm drain/culvert lined with stone, mortar, and concrete. It is located in the City of Orinda at the

confluence of North Lane and Ardilla Road, and runs west to east along North Lane, turns south at a 45 degree angle, crosses Camino Pablo, and runs along San Pablo Creek. It was constructed in phases, with the portion north of the East Bay Municipal Utilities District's filtration plant built first, beginning in the 1930s. The second phase of construction took place in the early 1950s along North Lane. It has been subject to alterations, upgrades, and routine maintenance through the years. These changes have included upkeep of the natural rock wall and replacement of sections of drain pipe.

The earliest part of the City's stormwater system, the San Pablo Reservoir and Dam, constructed from 1916 to 1919, was one of the earliest components. The East Bay Mud Utility District (EBMUD) was authorized in 1923, and the East Bay Water Company was conveyed to EBMUD in 1928. The EBMUD Orinda filtration plant was built in 1936, and the drainage system leads from San Pablo Creek into the plant. These two developments marked the beginning of the stormwater system components which were constructed beginning in the 1930s in order to manage stormwater to control flooding and erosion. These components also manage and control hazardous materials to prevent release of pollutants into the environment by bringing stormwater to the EBMUD filtration plant so that it can be filtered. As the community grew, the stormwater system was expanded to accommodate the demand, and the storm drain/culvert which is the subject of this discussion was constructed in the 1950s.

The storm drain is located approximately 1.3 miles southeast of San Pablo Reservoir and west of the Orinda Water Treatment Plant (also known as the EBMUD filtration plant). It is not part of the San Pablo Dam and Reservoir, built in the first quarter of the 1900s. Because it is distinct from the dam and reservoir and is an independent element of infrastructure both in terms of its date of construction and in its design, it is being evaluated as a stand-alone resource.

The 1300-foot-long, corrugated-metal, pipe storm drain and culvert is not a significant engineering accomplishment, and it does not meet the definition of the work of a master or have high artistic value. It does not embody distinctive characteristics of a particular style or method of construction. Therefore the structure is not eligible for the NRHP under Criterion C. This segment of the stormwater system is not associated with events that have made significant contributions to the broad patterns of local, regional, or national history, and it is not associated with any persons considered important in local, state, or national history. It is therefore not eligible for the NRHP under Criteria A or B. The site is not likely to yield information important in prehistory or history; it is therefore not eligible for the NRHP under Criterion D.



**CDM
Smith**