

Supplemental Environmental Assessment

# Leach Field and Sewer Main

Klamath Community Services District

FEMA-1628-DR-CA, PW #1877

*December 2007*



**FEMA**

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**Supplemental Environmental Assessment to the Programmatic Environmental Assessment (PEA) for Typical Recurring Actions Resulting From Flood, Earthquake, Fire, Rain, and Wind Disasters in California as Proposed by the Federal Emergency Management Agency**

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## 1. INTRODUCTION

Klamath Community Services District (KCSO) has applied to the Federal Emergency Management Agency (FEMA), through the California Governor's Office of Emergency Services (OES), for assistance with the replacement of the leach field and sewer main line that were damaged during the flood events of the winter of 2005 to 2006, FEMA-1628-DR-CA. FEMA proposes to fund the project under the Public Assistance (PA) Program as part of the recovery from the 2005-2006 winter storms.

The project area is in Klamath, California, approximately 20 miles south of Crescent City in Del Norte County and adjacent to the mouth of the Klamath River. The leach field and sewer line are located north and east of the Klamath River, and south and west of U.S. Highway 101. They are located half a mile north of the intersection of Chapman Street and Alder Camp Road, adjacent to the Klamath Townsite Boat Ramp (Figure 1, Appendix A).

### 1.1 SCOPE OF DOCUMENT

FEMA has prepared a Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting From Flood, Earthquake, Fire, Rain, and Wind Disasters in California (PEA), which assesses common impacts of the action alternatives that are under consideration at the proposed project site (FEMA 2003). The PEA adequately assesses impacts from the action alternatives for some resource areas, but for the specific actions of this particular project, some resources are not fully assessed in the PEA.

For the proposed project, FEMA has prepared this Supplemental Environmental Assessment (SEA) to evaluate the impacts of the proposed project. The SEA tiers from the PEA, supplementing information relevant to the proposed project. The SEA hereby incorporates the PEA by reference. The SEA has been prepared according to the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500–1508), and FEMA's implementing regulations (Title 44 CFR Part 10).

### 1.2 PURPOSE OF AND NEED FOR ACTION

Under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, and Title 44 CFR Part 206, the PA Program provides

supplemental Federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged, public owned facilities and the facilities of certain private non-profit organizations. Specifically, the PA Program provides assistance for removal of debris, the implementation of emergency protective measures, and the permanent restoration of public infrastructure. The program also encourages protection from future damage by providing assistance for mitigation measures during the recovery process. The purpose of this project is to provide funding to KCSD to implement a cost-effective recovery project for the septic system damaged in the 2005-2006 flooding disaster, FEMA-1628-DR-CA.

KCSD manages a septic system in the project area that, prior to the disaster, consisted of a sewer main, septic tank, and three adjacent leach fields next to the Klamath River. The leach fields ran north-south along the river, and this SEA will refer to them in numerical order, with Leach Field 1 being the northern-most field and Leach Field 3 being the southern-most field. Leach Field 1 was approximately 11,000 square feet, Leach Field 2 is approximately 11,000 square feet, and Leach Field 3 is approximately 23,000 square feet.

The 2005-2006 winter storms caused the Klamath River to flood and wash out two sections of the septic system. First, the floods washed out a 40 ft. wide x 80 ft. long surface area of Leach Field 1 and a section of riprap-covered riverbank that functioned as Leach Field 1's setback from the river. The damaged section of the bank was 462 ft. long x 75 ft. wide x 20 ft. tall, and the damaged section of riprap was 558 ft. long x 3 ft. wide x 23 ft. tall. The destruction of Leach Field 1's setback meant that the non-damaged section of Leach Field 1 could not be used and that Leach Field 1 was no longer functional and was abandoned. KCSD reports that this shutdown effectively closed one quarter of the town's leach field capacity. Second, the flooding exposed a 320 ft. long segment of the main sewer line that fed into the leach field system. It also washed away a section of riverbank approximately 510 ft. long x 50 ft. wide x 20 ft. tall and a section of riprap approximately 568 ft. long x 3 ft. wide x 23 ft. tall that had run alongside the main sewer line. This exposed section of the sewer line has remained unusable since the storms.

The current state of the septic system and sewer line presents a public safety hazard and a liability for the Klamath community. Action is needed to restore KCSD's septic system to its pre-disaster condition.

## **2. DESCRIPTION OF THE PROPOSED ACTIONS AND ALTERNATIVES**

FEMA reviewed a range of alternatives to meet the purpose and need for action, including those that are evaluated in detail in this section as well as those that were considered but will not be carried forward for further analysis.

### **2.1 NO ACTION ALTERNATIVE**

The existing hazard would remain under the No Action Alternative. The septic system associated with the damaged leach field and sewer line would remain unusable because of the leach field's lack of setback from the river and the destroyed section of sewer line. Under the No Action Alternative the current state of Leach Field 1 would remain a public hazard.

## 2.2 PROPOSED ACTION ALTERNATIVE

Under the Proposed Action Alternative, KCSD would: (1) excavate an area south of the Leach Field 3 and build a new leach field (2) install riprap material along a bank of an overflow channel adjacent to the Klamath River in order to protect the proposed leach field, and (3) install replacement pipe where the sewer main line is exposed and re-route a portion of the undamaged pipeline outside the floodplain. These project components are shown in Figure 2 (Appendix A).

The first part of KCSD's proposed scope of work is to excavate an area approximately 225 feet southeast of Leach Field 3 and build a new leach field. The new leach field would be twice the size of the original Leach Field 1. KCSD would install a 750 gallon dispersion tank and a dispersion system consisting of 480 feet of 4 inch diameter perforated PVC pipe backfilled with  $\frac{3}{4}$  inch-1 $\frac{1}{2}$  inch washed gravel in a trench approximately 3 feet wide and 1.33 feet below the surface. The total area covered by this system would be approximately 23,000 square feet.

After building a new leach field, KCSD would install riprap material along 700 feet of an overflow channel adjacent to the Klamath River. This section of riprap would be approximately four feet wide and would require the trimming and removal of underbrush and riparian trees. The new riprap-covered bank would protect both Leach Field 3 and the proposed site of the new leach field, which are located approximately 8 vertical feet above the level of the overflow channel, from further flooding events.

The proposed project would replace the damaged length of 3 inch PVC pipeline with 4 inch PVC pipe and reroute it outside the 100-year floodplain to the Caltrans Right-of-Way (ROW) that runs parallel to the Klamath River, east of the existing location of the sewer line. Additionally, the project would replace 150 feet of 3 inch PVC pipe connecting the Caltrans ROW to Leach Field 2 with 4 inch PVC pipe and would install 375 feet of 4 inch PVC pipe to connect Leach Field 3 to the new leach field. The project would also relocate approximately 600 feet of undamaged 3 inch PVC pipe to the Caltrans ROW outside the floodplain. Installation of all pipe would be conducted by trenching, installing the pipe and backfilling the soil material to original grade. Topsoil would be stored separately and spread over the top of the finished grades.

KCSD leased a large parcel of County land adjacent to the leach field complex on October 26, 2006. All construction would occur on this land or pre-existing KCSD property. Equipment would be staged on paved or previously disturbed areas owned by KCSD.

## 2.3 OTHER ACTION ALTERNATIVES NOT CARRIED FORWARD

KCSD considered three sites (Assessor's Parcel Numbers 140-060-01, 140-060-16, and 140-071-21) in the vicinity of the damaged leach field in order to determine the best location for the new leach field. KCSD hired a contractor, Grey Sky Engineering, in April 2006 to perform soil tests on a group of land parcels in the area and determined that land outside of the Klamath River floodplain consisted of well-graded fill material of undetermined depth that would not be suitable for on-site sewage disposal. Grey Sky Engineering concluded that the only suitable land for a replacement leach field in the area is located within the floodplain and adjacent to the Klamath River (Assessor's Parcel Number 140-060-01) where the soils are

composed of well-drained alluvial materials such as sand and silty sand. Grey Sky Engineering confirmed that no groundwater intersects with any of the test pits located in this land adjacent to the river. Therefore, KCSD has concluded that the best location for the replacement leach field is adjacent to the Klamath River, 50 feet south of Leach Field 3, even though it is located within the floodplain.

### **3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

The PEA has adequately described the affected environment and impacts of the Proposed Action Alternative for all resource areas excepting geology, seismicity, and soils; air quality; water resources; biological resources; cultural resources; socioeconomics and safety; noise; and visual resources. Therefore, the affected environment and environmental consequences for those resources are described in this section, which is intended to supplement the information contained in the PEA. Necessary avoidance and minimization measures, either stipulated in the PEA or based on the results of the impact analysis in this SEA, that are appropriate for the Proposed Action Alternative are discussed in Section 4.

#### **3.1 GEOLOGY, SEISMICITY, AND SOILS**

The project area is located at the mouth of the Klamath River, approximately 2 miles from the coast. It lies on a narrow coastal plain at the base of the Klamath Mountains, a group of steep peaks ranging in elevation from 6,000 to 8,000 feet. The Klamath Mountains Geomorphic Province has a varied geology, composed of Paleozoic sedimentary and volcanic rocks, and Mesozoic ultramafic, granitic, sedimentary and volcanic rocks. The coastal plain on which the project area is located is characterized by ultramafic rocks that belong to a formation of serpentinized peridotite of a Jurassic-aged ophiolite, called the Josephine ophiolite (Miles, 1998). The primary geomorphic processes in the area are landslides caused by shearing of the Josephine ophiolite and the fluvial erosion caused by the Klamath River and its tributaries.

The climate in the mountainous areas is characterized by cold winters with heavy snowfall and warm, dry summers with little precipitation, but along the coast, the climate is temperate and humid with heavy fog year-round. Precipitation ranges from 80 to 120 inches a year, and the mean temperature ranges from 46° to 57° F.

The project area is located on the North American plate, approximately 5 miles west of the South Fork Mountain fault and 170 miles north of the San Andreas fault. A number of smaller faults, especially the Bald Mountain-Big Lagoon fault, run very close to Klamath, subjecting the area to seismic hazards such as surface fractures along pre-existing fault planes and damage such as liquefaction and landslides from seismically induced ground motion.

The soils on the project site are mostly sediments resulting from the regular flooding and deposition of the soil material from upstream. The National Resources Conservation Service (NRCS) soil survey is currently in progress; therefore, detailed information on the soils in this area is not accessible to the public. However, tests conducted in April, 2006 by Gray Sky Engineering, a contractor KCSD hired to evaluate the project area for potential leach field replacement sites, revealed that the soils in the project area generally consist of gray sandy loam approximately 3 feet deep underlain by a gray silty loam.

Construction of the leach field and relocation of the sewer main would temporarily disturb soils by causing short-term soil loss through water and wind erosion. KCS D would implement standard construction best management practices (BMPs), as described in Section 4.1 of this SEA, to avoid and minimize soil loss and erosion. No impacts to geology or seismicity are expected from implementation of the Proposed Action Alternative.

### 3.2 AIR QUALITY

The Federal Clean Air Act (CAA) of 1970 was enacted to regulate air emissions from area, stationary, and mobile sources. This law authorized the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The six criteria pollutants regulated by the CAA are carbon monoxide (CO), lead (Pb), nitrogen oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>), particulate matter (less than 10 micrometers [PM<sub>10</sub>] and less than 2.5 micrometers [PM<sub>2.5</sub>]), and sulfur dioxide (SO<sub>2</sub>).

Additionally, the State of California set California Ambient Air Quality Standards (CAAQS) for ten criteria pollutants including CO, Pb, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, O<sub>3</sub>, SO<sub>2</sub>, sulfates, hydrogen sulfide (H<sub>2</sub>S), and visibility reducing particles. CAAQS are the same or more stringent than the NAAQS.

Under the 1977 amendments to the Clean Air Act, states with air quality that do not achieve the NAAQS are required to develop and maintain state implementation plans (SIPs). These plans constitute a Federally enforceable definition of the state's approach (or plan) and schedule for the attainment of the NAAQS. Air quality management areas are designated as "attainment," "non-attainment," or "unclassified" for each individual pollutant depending on whether or not they exceed applicable NAAQS or CAAQS. Areas that have been re-designated from non-attainment to attainment are called maintenance areas.

Prior to approval of any Federal action, the General Conformity Rule (GCR) (Title 40 CFR Part 51.853) states that "a conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates" (40 CFR 51.853 b) specified in the GCR. This requires the responsible Federal agency of a Federal action to determine the following:

- whether or not the project is exempt based on exemption criteria listed in the GCR.
- the attainment status of each pollutant in the applicable County.
- if the project is in a pollutant non-attainment or maintenance area. If so, the direct and indirect project emissions must be compared against applicable emission threshold rates listed in the GCR to determine if the project's emissions are:
  - below specific emissions threshold rates (hence, exempt from conformity analysis); or
  - above the threshold rates applicable to the specific area (hence, requiring a conformity analysis).

This project site is located in the North Coast Air Basin, which includes Del Norte, Humboldt, Trinity, Mendocino, and Sonoma Counties, and is under the jurisdiction of the North Coast Unified and Mendocino Air Pollution Control Districts (APCD). Specifically, this project is located in Del Norte County, which is designated as unclassified/attainment for all Federal

NAAQS. Additionally, Del Norte County is not in a Federal maintenance area. However, the County is designated as non-attainment for the PM<sub>10</sub> CAAQS, but is in attainment or unclassified for all other California criteria pollutants (California Air Resources Board 2007).

The GCR is a Federal regulation and provides emission threshold rates for federally designated non-attainment and maintenance areas. Project emissions are compared to these threshold rates to determine whether or not a conformity analysis is required. However, the GCR does not provide emission threshold rates for areas federally designated as unclassified or attainment.

Del Norte County is federally designated as unclassified or attainment for all six NAAQS criteria pollutants and it is not in a maintenance area. Therefore, comparison to the non-attainment and maintenance area emission threshold rates is technically infeasible. However, because the County is designated as non-attainment for the PM<sub>10</sub> CAAQS, a comparison has been made to demonstrate that the Proposed Action's emissions would be below the most stringent emission threshold rates listed in the GCR, which is a very conservative approach.

#### **Del Norte County Emission Threshold Rates**

	<b>GCR Guidance</b>	<b>GCR Guidance</b>
<b>Pollutant</b>	<b>Non-Attainment (ton/yr)</b>	<b>Maintenance Area (ton/yr)</b>
CO	100	100
NO <sub>x</sub>	10 (extreme, O <sub>3</sub> precursor)	100 (O <sub>3</sub> precursor)
PM <sub>10</sub>	70 (serious)	100
PM <sub>2.5</sub>	100	100
SO <sub>2</sub>	100	100
VOC	10 (extreme, O <sub>3</sub> precursor)	50 (O <sub>3</sub> precursor)

Under the Proposed Action Alternative, installation of the leachfield and sewer pipe would result in temporary impacts to the existing air quality in the area. These impacts include temporary increases of fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) and combustion emissions (CO, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and volatile organic compounds or VOC).

It is important to note there are no NAAQS or CAAQS for VOCs. However, VOCs are a precursor to O<sub>3</sub>, which has both a Federal and State ambient air quality standard. The formation of O<sub>3</sub> occurs in the troposphere as precursor pollutants react in the presence of sunlight. Therefore, the only way to regulate/reduce O<sub>3</sub> is through the control of its reactive precursors, one of which is VOC.

Unmitigated emission estimates were determined using the following guidance and assumptions:

- 60 construction days/year
- 10 working hours/day
- assumed 0.68 acres of ground disturbance

- emissions were estimated using the equipment loading for a permitted construction project with 38 acres of ground disturbance scaled down to the assumed 0.68 acres of this project.

Based on the above assumptions, the following unmitigated emissions are expected for the Proposed Action Alternative:

**Estimated Emission Threshold Rates for the  
Proposed Action Alternative**

	<b>Emission Rate</b>
<b>Pollutant</b>	<b>ton/yr</b>
CO	0.08
NO <sub>x</sub>	0.16
PM <sub>10</sub> <sup>a</sup>	0.23
PM <sub>2.5</sub> <sup>a</sup>	0.06
SO <sub>2</sub>	0.00014
VOC	0.02
<sup>a</sup> Includes particulate from fugitive dust and combustion activities	

Even using conservative assumptions without mitigation measures, the project emission estimates for CO, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and VOC, are below the levels of the worst case GCR threshold emission rates. Therefore, no further analysis is required to establish conformity with the State Implementation Plan or the Clean Air Act; air quality impacts as a result of implementation of this action would be temporary and minimal. Mitigation measures to minimize air quality impacts are outlined in Section 4.2 of the SEA.

### 3.3 WATER RESOURCES

The project area is located at the mouth of the Klamath River in Klamath, CA, where the Klamath River watershed empties into the Pacific Ocean. The watershed is divided into two basins—the Upper and Lower Klamath basins. The project area is in the Lower Klamath basin, which covers a total of 4.88 million acres and runs through Trinity, Humboldt and Del Norte counties in northern California (NRCS, 2007). The Lower Klamath basin consists of six hydrologic sub-basins: Shasta, Scott, Lower Klamath, Salmon, Trinity, South Fork Trinity, and the Upper Klamath (West). The Iron Gate Dam separates the Lower Klamath basin from the Upper Klamath basin, which begins at the river’s headwaters at Upper Klamath Lake in southeastern Oregon and covers 5.6 million acres in southern Oregon and Northern California (NRCS, 2007).

The Klamath River has substantial flows throughout the year, although the river has experienced a drought in the past several years. Peak flows are largely controlled by Upper

Klamath Lake and the Iron Gate Dam. Data from the U.S. Geological Survey (USGS) gauging station in Klamath, CA (for the years 1963 to 2006) indicates that annual discharge in the Klamath River typically averages 17,627 cubic feet per second (cfs). Since 1963, the highest recorded discharge was 35,020 cfs in 1974.

The project area falls under the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB), which is responsible for monitoring water quality in all California water basins draining into the Pacific Ocean from the California-Oregon border to the southern boundary of the Estero de San Antonio and Stemple Creek watersheds in Marin and Sonoma counties (NCRWQCB, 2006). The project area is within the NCRWQCB-designated Klamath River Basin, which covers an area of 10,830 square miles and is bounded by the Oregon state border on the north, the Redwood Creek and Mad River hydrologic units to the south, and the Sacramento Valley to the east (NCRWQCB, 2006). The Basin covers all of Del Norte county and portions of Trinity, Humboldt, Siskiyou and Modoc counties (NCRWQCB, 2006).

The Proposed Action would not affect groundwater quality. On April 21, 2006 Gray Sky Engineering carried out percolation testing of seven excavated soil pits at the project site. No groundwater was found in any of the excavated pits and Gray Sky Engineering confirmed that the project site for the Proposed Action has soils adequate for use as a leach field.

Temporary impacts to water quality during construction of the Proposed Action Alternative could occur due to the operation of heavy equipment, the placement of riprap, or the disturbance and stockpiling of soils adjacent to the Klamath River. As described in Section 4.3, KCS D would implement BMPs for construction activity to limit sedimentation in the Klamath River.

### 3.3.1 Executive Order 11988: Floodplain Management

In accordance with Executive Order (EO) 11988, FEMA evaluated the effects of the action alternatives on the floodplain. The project area is shown on Flood Insurance Rate Map (FIRM) number 0650250250B for Del Norte County, California, dated January 24, 1983. The FIRM indicates that the proposed leach field would be located in Zone A, which designates an area within the 100-year flood zone. The proposed relocation site for the new sewer main is partially in Zone A and partially in Zone C, which designates an area outside the 100-year flood zone.

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. FEMA's regulations for complying with EO 11988 are found in Title 44 CFR Part 9. In compliance with EO 11988, FEMA considered the Proposed Action Alternative's impacts to the floodplain. FEMA applies the Eight-Step Decision-Making Process to ensure that it funds projects consistent with EO 11988. The NEPA compliance process involves effectively the same basic decision-making process to meet its objectives as the Eight-Step Decision-Making Process. Therefore, the Eight-Step Decision-Making Process has been applied throughout 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 in compliance with EO 11988 before implementation of the Proposed Action.

FEMA performed a formal floodplain review of the Proposed Action by conducting the Eight-Step Decision-Making Process and determined that this project is consistent with EO 11988. In compliance with EO 11988, if there is no practicable alternative to undertaking an action in a floodplain, any potential adverse impacts must be mitigated. As described in Section 2.3 of the SEA, there is no practicable alternative to the Proposed Action Alternative, which involves siting the proposed leach field and a portion of the new sewer main near the Klamath River and, consequently, within the adjacent 100-year floodplain. Construction of the proposed leach field and sewer main is not expected to change the established 100-year floodplain boundary. The City would implement measures to control erosion and sedimentation during construction, as described in Section 4.3 of the SEA. With implementation of these design standards and mitigation measures, the project would not result in any significant impacts to floodplains and FEMA would be in compliance with EO 11988.

### 3.3.2 Executive Order 11990: Protection of Wetlands

EO 11990, Protection of Wetlands, requires Federal agencies to take action to minimize the loss of wetlands. The project area does not contain wetlands, as action would be limited to an area 8 feet above the overflow channel of the Klamath River. All riprap would be placed above the high water mark. Therefore, the Proposed Action Alternative complies with EO 11990.

## 3.4 BIOLOGICAL RESOURCES

Habitat within project area consists of disturbed non-native vegetation, floodplain meadow and a riparian forest that is associated with a small overflow channel. The action area is located adjacent to the Klamath River on a floodplain terrace and an adjacent fill area located along Highway 101. The overflow channel remains dry for most of the year except during flood conditions. Neither the Klamath River nor the overflow channel is part of the Proposed Action area, but they are located immediately adjacent to the action area.

The installation of rip rap material as part of the Proposed Action would occur on the slopes of the overflow channel within a riparian forest. The riparian forest contains species such as black cottonwood (*Populus balsamifera*), white alder (*Alnus rhombifolia*), salmonberry (*Rubus spectabilis*), elderberry (*Sambucus* sp.), stinging nettle (*Urtica dioica*), and poison hemlock (*Conium maculatum*) and is bordered by a previously disturbed floodplain meadow. The alignment of the sewer line would be set back from the river along the Caltrans ROW. The Caltrans ROW occurs on fill and contains exposed soils and a variety of species that typically occur in disturbed areas such as clover (*Trifolium* sp.), brambles (*Rubus* sp.), Italian ryegrass (*Lolium multiflorum*), vetch (*Vicia* sp.), filaree (*Erodium cicutarium*), and field geranium (*Geranium dissectum*). Additionally, a portion of the proposed sewer line and the leach field would be constructed within a floodplain meadow. The floodplain meadow was previously disturbed during the construction of the existing leach fields. The floodplain meadow has been cleared of almost all woody vegetation, and typical ground cover includes wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), Italian ryegrass, brambles, spearmint (*Mentha spicata* var. *spicata*), sword fern (*Polystichum* sp.), filaree, milk thistle (*Silybum marianum*), fiddle dock (*Rumex pulcher*) and curly dock (*R. crispus*). Coniferous

forests dominated by mature redwoods (*Sequoia sempervirens*) and Douglas fir (*Pseudotsuga menziesii* var. *menziesii*) are also found in distant proximity of the proposed site, but not within the action area.

FEMA obtained information concerning species listed as endangered, threatened, proposed for listing as endangered or threatened, or candidates for listing as endangered or threatened under the Federal Endangered Species Act (ESA) that may occur in the action area. The California Department of Fish and Game (CDFG) Natural Diversity Database (CNDDDB) was searched for known occurrences of special-status species within nine U.S. Geologic Survey (USGS) 7.5-minute quadrangles surrounding the action area (CDFG 2006). FEMA also obtained a list of special-status species that may occur in the Requa Quad from the U.S. Fish and Wildlife Service (USFWS) Arcata Field Office website. These sources identified a total of 23 special-status species that have the potential to occur in the action area.

FEMA conducted a literature review to identify habitat requirements and distribution of these special-status species. FEMA biologists also conducted a site reconnaissance survey of the action area on February 2, 2007 to ascertain the potential presence of special-status species. General habitat characteristics of the action area were evaluated during the reconnaissance surveys. Qualitative assessments of each habitat were used to determine whether each of the 23 special-status species identified is likely to occur in the action area. As a result of the literature review and site reconnaissance, FEMA determined that the action area or its immediate vicinity may provide habitat suitable to support the marbled murrelet (*Brachyramphus marmoratus*), bald eagle (*Haliaeetus leucocephalus*), and northern spotted owl (*Strix occidentalis caurina*).

### **Marbled Murrelet**

The marbled murrelet is federally listed under the Endangered Species Act (ESA) as a threatened species and has critical habitat designation. The distribution of the marbled murrelet is fairly continuous from the Aleutian Islands in Alaska to California (Ralph et al. 1995). In California, this species is found in marine habitats that are adjacent to old-growth or late-successional coniferous forests from Santa Cruz County north to the Oregon border.

Breeding birds require mature coniferous forests for nesting and coastal waters for feeding (Sealy and Carter 1984, Carter and Erikson 1988, Paton and Ralph 1988). Marbled murrelets prefer to nest on large, horizontal, moss-covered limbs or in trees where nest platforms have been produced by mistletoe blooms, unusual limb deformations, decadence, or tree damage (Hamer and Nelson 1995). Old-growth stands and mature stands with old-growth components are favored by nesting birds. In addition, suitable nesting habitat includes multi-storied stands with moderate to high canopy closure. Roosting and nesting birds usually occupy forest stands greater than 200 hectares (494 acres) and are usually absent from stands less than 25 hectares (61.7 acres). Most records of nesting and roosting marbled murrelets are within a few kilometers of the coast, with more isolated occurrences as far as 48 kilometers (29.8 miles) from the coast.

## **Bald Eagle**

The bald eagle is federally proposed to be de-listed under the ESA. Most breeding territories are in northern California, but bald eagles also nest in scattered locations in the central and southern Sierra Nevada mountains and foothills, in several locations from the central coast range to inland southern California, and on Santa Catalina Island (California Department of Fish and Game, 2001). Bald eagles winter at lakes, reservoirs, and along river systems throughout most of central and northern California and in a few southern California regions.

Bald eagle nesting territories in California are found primarily in ponderosa pine and mixed conifer forests (Lehman 1979). Ponderosa pine is the tree most often used for nesting (Lehman 1979), although nest sites have been observed in a variety of tree species (Jurek 1988). Bald eagle nest sites are always associated (usually within 1.6 kilometers) with a lake, river, or other large body of water (Lehman 1979). Nests are usually constructed in a tree that provides an unobstructed view of the water body and that is almost always the dominant or codominant tree in the surrounding stand (Lehman 1979). Snags and dead-topped live trees are important habitat components in bald eagle nesting territory and provide perch and roost sites. Bald eagles winter along rivers, lakes, or reservoirs that support adequate fish or waterbird prey and that have mature trees or large snags available for perch sites. They often roost communally during the winter, typically in mature trees or snags with open branching structures that are isolated from human disturbances.

## **Northern Spotted Owl**

The northern spotted owl is federally listed as a threatened species under the ESA. Spotted owls are medium-sized nocturnal birds of prey found in forested regions of western North America. The northern spotted owl, one of three identified spotted owl subspecies, ranges from southwestern British Columbia south through western Washington and Oregon to the northern Coast Ranges and Cascade Mountains of northern California (Johnsgard 1990).

Northern spotted owls are found primarily in mature and old-growth conifer forests (Forsman et al. 1984). These forests provide the structural characteristics and habitat elements necessary to meet nesting, food, and cover habitat requirements of northern spotted owls. Optimum northern spotted owl habitat includes uneven-aged forest with well-developed, multi-tiered stratification; large, decadent trees or snags with broken tops and cavities for nesting; and decaying logs and debris on the forest floor (Dawson et al. 1987). The California State Board of Forestry defines owl habitat as "Type A, B, or C owl habitat or those areas with functional foraging habitat, functional nesting habitat, and functional roosting habitat which supports the owl's biological needs for breeding, sheltering, and feeding" (California State Board of Forestry 1990).

The functional characteristics of owl habitat include various elements that determine the suitability for nesting, roosting, and foraging. These elements include the availability of trees with broken tops and cavities for nesting; dead snags, decaying logs and debris on the forest floor to support prey populations; availability of perch sites; flight space below the upper canopy to forage; and, topographical relief and aspect (owl habitat is typically located on north-facing slopes).

## **Summary**

Based upon the above evaluation, FEMA has determined that the Proposed Action Alternative is likely to adversely affect the marbled murrelet, bald eagle, and northern spotted owl, and their designated critical habitats. To expedite the review process under Section 7 of the Endangered Species Act (ESA), FEMA has developed programmatic compliance documents with the U.S. Fish and Wildlife Service (USFWS or Service). In order for the Proposed Action to qualify under this expedited review process, the Klamath Community Services District must fully and correctly implement the appropriate conservation measures described in Appendices B and C of FEMA's May 2006 Programmatic Biological Assessment (PBA) for FEMA-Funded Disaster Assistance Projects in California, as amended, for species under USFWS jurisdiction. This includes General Conservation Measures 3 through 18 from Appendix B of the PBA and Proposed Conservation Measures for northern spotted owl, marbled murrelet, and bald eagle from Appendix C of the PBA. These Proposed Conservation Measures have been specifically tailored for the Proposed Action. In compliance with Section 7 of the ESA, FEMA provided KCSO with this information in an August 1, 2007 letter requesting that KCSO comply with these measures if the Proposed Action is to be implemented. KCSO agreed to comply with these measures on August 30, 2007 (See Appendix B).

Therefore, with the implementation of the appropriate minimization and avoidance measures described in Section 4.4 of this SEA, this project would have no adverse impact on any federally listed species or their critical habitat and is thus in compliance with the ESA.

### **3.5 CULTURAL RESOURCES**

FEMA determined that the area of potential effects (APE) for this project encompasses pipeline linear segments of 605 feet, 480 feet, and 180 feet, a block area for the leach field that measures approximately 23,000 square feet, and another block area where riprap would be placed along the exposed bank west of the leach field that measures approximately 700 feet by 4.25 feet wide. Maximum width of excavation would not exceed 4 feet in depth or length for the pipelines. The leach field area would encompass an area approximately 150 feet on one side. The depth for the leach field dispersion lines within that footprint would not exceed four feet.

Pursuant to the revised implementing regulations of the National Historic Preservation Act (NHPA) found at 36 CFR 800.4(a)(2), a cultural resources literature review was performed at the Yurok Tribal Heritage Preservation Office (THPO) (File No. Grant 07-01) on March 19, 2007. According to the data provided by the Yurok Tribal Heritage Preservation Office, there are no properties listed on, or eligible for inclusion on, the National Register of Historic Places (NRHP) within the project APE.

Furthermore, Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC), as FEMA's consultant, contacted the California Native American Heritage Commission (NAHC) on March 21, 2007, for a review of its Sacred Lands Files. The NAHC responded on April 10, 2007, with a request that FEMA contact Ms. Karin Anderson, Cultural Resources Director for the Redwoods National and State Parks (National Park Service) regarding her potential concerns or information about the Redwood Creek and Marshall Pond area

approximately one half mile north of the proposed project area. On Thursday, April 12, Ms. Anderson was contacted. She stated that after having reviewed the information, she had no concerns with the proposed project, as it would have no impacts to cultural resources within the Redwoods Park. She asked, however, that FEMA and NISTAC coordinate with the Yurok tribe to ensure that their potential concerns are heard (Karin Anderson, personal communication, April 12, 2007).

Lastly, NISTAC Archaeologist Brian Hatoff, a Registered Professional Archaeologist who meets the Secretary of the Interior's Standards for Principal Investigator, surveyed the APE on March 13, 2007. It was determined that the proposed relocation site for the sewer main is mostly within the slope of the embankment west of U.S. Highway 101, an area largely composed of imported fill. The areas not contained within the highway embankment slope were walked over using a 10-meter wide pedestrian transect. The proposed site for the new leach field area was also walked over in a series of 10-meter wide pedestrian transects, and the tailings from various rodent burrows located in the proposed site for the new leach field were inspected for any evidence of archaeological deposits. The natural drainage channel embankment to be covered with riprap was also walked over using a 10-meter wide pedestrian transect. The archaeological survey revealed no cultural resources at any of the project component sites.

Therefore, after evaluating the results of the literature review, Native American consultation, and archaeological survey, FEMA determined that no properties eligible to the National Register of Historic Places exist within the project area. Based on this information and the nature of the proposed undertaking, FEMA concluded that no effect to historic properties is anticipated from the proposed project. FEMA informed the Yurok Tribal Historic Preservation Officer (THPO) of its determination in a letter dated June 7, 2007, and has received concurrence in a letter dated July 9, 2007. These letters are provided in Appendix B. Therefore, with implementation of the appropriate minimization and avoidance measures described in Section 4.5 of the SEA, this project complies with Section 106 of the NHPA.

## **3.6 SOCIOECONOMICS AND PUBLIC SAFETY**

### **3.6.1 Executive Order 12898: Environmental Justice**

Executive Order 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 and low-income populations. This executive order also tasks federal agencies with ensuring that public notification regarding environmental issues is concise, understandable, and readily accessible.

The project area has a high proportion of minority persons. According to the 2000 census, the community of Klamath, CA has a population of 651, of which 58.4 percent is White and 34.3 percent is Native American. 15.2 percent of individuals in Klamath live below the national poverty level. Klamath is located in Del Norte County, which has a population of approximately 27,000, which is 79 percent White, 4 percent black, 6 percent Native American, 2 percent Asian, and 14 percent Hispanic or Latino (of any race). 20 percent of individuals in Del Norte County live below the poverty level. California's overall population

is roughly 60 percent White, 7 percent black, 1 percent Native American, 11 percent Asian, and 32 percent Hispanic or Latino (of any race) with 14 percent of individuals living below the poverty level (US Census, 2000).

No substantial adverse impacts on minority or low-income persons are expected to occur as a result of the Proposed Action Alternative. All adverse impacts would be temporary and negligible. The Proposed Action Alternative would benefit residents, employees, and visitors to Klamath by increasing the capability of the septic system. With the implementation of the minimization and avoidance measures outlined in Section 4.6 of the SEA, no disproportionately high or adverse human health or environmental effects upon minority or low-income populations would occur as a result of the Proposed Action Alternative. Therefore, the Proposed Action Alternative complies with EO 12898.

### **3.6.2 Public Safety**

Because only three fourths of the leach field capacity associated with the septic system at the project site is functional, an inconvenience and a threat to public safety currently exist. The proposed project would restore the local septic system to its full operating capacity. Therefore, with the implementation of the minimization and avoidance measures described in Section 4.6 of the SEA, this project would improve public safety in the project area.

### **3.7 NOISE**

The action area associated with the proposed leach field and sewer main is relatively quiet, consisting primarily of noises typical of an area adjacent to a river (e.g., flowing water) and a highway (e.g., passing and idling vehicles on U.S. 101, human voices). Because the project site is on public land, there are no noise-sensitive receptors within this area. Noise associated with implementation of the Proposed Action includes the operation of equipment such as compactors, loaders, backhoes, bulldozers, scrapers, haul trucks, and paving equipment, which generate noise levels ranging from about 70 to 95 dB 50 feet from the source.

Noise associated with project activities would not occur for more than a period of two construction seasons. Therefore, with implementation of the minimization and avoidance measures described in Section 4.7, impacts to noise-sensitive receptors would be minimal.

### **3.8 VISUAL RESOURCES**

The existing visual resources of the project area are scenic in nature. The project area and its surroundings are characterized by floodplain riparian forest, disturbed floodplain meadow, disturbed non-native vegetation, and views of the Klamath River. The scenic character of the project area is typical within the region. Primary viewers adjacent to the area would include travelers along Highway 101, recreational users of the Klamath River, local residents, and local business employees/owners.

The Proposed Action would have a temporary effect on the scenic character of the project area during construction. Short-term impacts to views within the action area would also occur during vegetation clearing and brush piling when crews are working in the action area. Temporary construction activities would be visible from multiple viewing areas.

Implementation of the Proposed Action would not permanently adversely affect the visual quality or scenic nature of the project area. Except for the placement of riprap along a section of the eastern bank of the Klamath River adjacent to the proposed leach field, all work would be below grade. The riprap itself would not block any views. The Proposed Action would create an approximately 700-foot wide viewshed to the Klamath River due to the removal of trees and vegetation along a portion the river's eastern bank that is adjacent to the proposed leach field site. Trees and vegetation would be removed to allow for the installation of the riprap which would protect the replacement leach field from future flood damage. The new viewshed created by the removal of trees and vegetation along the riverbank would provide unobstructed views of and across the Klamath River but would not deteriorate from the scenic value of visual resources within the project vicinity.

The Proposed Action would also require the cutting of shrubs, grass, and trees existing on the site of the replacement leach field. Vegetation removed from the leach field site would be replaced, as practicable, with native vegetation, as part of the Proposed Action. In all, implementation of the Proposed Action would not result in permanent adverse impacts to visual resources, especially with implementation of the measures described in Section 4.8 of this SEA.

### 3.8.1 Wild and Scenic Rivers

In October 1968, Congress created the National Wild and Scenic Rivers System. The Wild and Scenic Rivers Act pronounced that "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations." The purpose of the National Wild and Scenic Rivers System is not to halt use of a river, but to preserve a river's character (NWSRS, 2007). Uses compatible with the management goals of a particular river are allowed; however, development must ensure the river's free flow and protect its "outstandingly remarkable resources."

The Klamath River is designated a Wild and Scenic River from its mouth at the Pacific Ocean up to 3,600 feet below the Iron Gate Dam. A total of 286 miles of the Klamath River are covered by this federal designation: 12 miles are wild, 24 miles are scenic, and 250 miles are recreational.

The proposed project is immediately adjacent to the mouth of the Klamath River; therefore, the project must be evaluated to determine if it threatens the wild, scenic or recreational status of the river. The proposed project would not take place within the boundaries of the river, and it would not alter its "free-flowing condition." Nor would the proposed project alter the "outstandingly remarkable resources" of the river, because the construction of the leach field and relocation of the sewer main would take place in a location with a pre-existing septic system. Therefore, with the minimization and avoidance measures listed in Section 4 of this SEA, the proposed project would have no adverse impact on the Wild and Scenic River status of the Klamath River.

### 3.9 CUMULATIVE IMPACTS

CEQ defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...” For this project, cumulative impacts would be generally related to other projects occurring in the project vicinity. FEMA is aware of only one project planned for the area near the proposed facilities: the repair of a the Requa Resort boat landing and the placement of riprap adjacent to the Klamath River at a site approximately 2 miles northwest of the Proposed Action. The repairs would require the temporary dewatering of the ramp extending 30 feet into the water from the foot of the ramp during construction. Once dewatering is complete, the toe of the ramp would be replaced using concrete. The toe of the ramp would terminate 3 feet below low water flows. In addition to repairs to the boat ramp, riprap would be placed in an area of approximately 300 feet long x 5 feet high x 2 feet deep (111 cubic yards) along the western side of the boat ramp using dump trucks. The footprint of the ramp facility would remain the same. The date of construction of the Requa Resort boat ramp has yet to be determined.

The project listed above could occur simultaneously with the construction of the Proposed Action Alternative; however, any cumulative impacts would be short-term in duration and minor in magnitude. No other cumulative impacts are expected.

## 4. MINIMIZATION AND AVOIDANCE MEASURES

The following minimization and avoidance measures have been extracted from the PEA Section 4, or from measures developed for this SEA based on site specific impacts, and are applicable for the Proposed Action Alternative.

### 4.1 GEOLOGY, SEISMICITY, AND SOILS

To avoid and minimize any adverse impacts to geology, soils, and seismicity, KCSD would be responsible for implementing construction BMPs to prevent soils from eroding and dispersing offsite. Examples of BMPs include the following measures: developing and implementing an erosion and sedimentation control plan, installing and maintaining silt fences or hay bales, mulching cleared areas, revegetating with native species when construction is completed, covering soil that is stockpiled on-site, and constructing a sediment barrier around stockpiles to prevent sediment loss.

### 4.2 AIR QUALITY

KCSD would be responsible for reducing potential air quality impacts from implementation of the Proposed Action Alternative and for employing avoidance and minimization measures to limit fugitive dust and emissions. These measures include but are not limited to the following:

- watering construction areas and all unpaved access roads, parking areas, and staging areas, as necessary;
- sweeping loose dirt and dust from all paved access roads, parking areas, staging areas, and adjacent public streets at the end of every work day;

- covering all truck loads hauling soil, sand, and other loose materials;
- scheduling the siting of staging areas to minimize fugitive dust; and
- keeping vehicles and other equipment properly maintained.

#### **4.3 WATER RESOURCES**

To avoid and minimize any adverse impacts to water resources in the project area, KCSD would be responsible for implementing construction BMPs to prevent soils from eroding and dispersing offsite. Examples of BMPs include the following measures: developing and implementing an erosion and sedimentation control plan, installing and maintaining silt fences or hay bales, mulching cleared areas, revegetating with native species when construction is completed, covering soil that is stockpiled on-site, and constructing a sediment barrier around stockpiles to prevent sediment loss. FEMA would also ensure publication of a Final Public Notice in compliance with EO 11988.

#### **4.4 BIOLOGICAL RESOURCES**

In order to avoid impacts to all federally listed species, including the marbled murrelet, bald eagle, and north spotted owl, KCSD would be responsible for implementing the minimization and avoidance measures described in Appendices B and C of FEMA's May 2006 PBA for FEMA-Funded Disaster Assistance Projects in California, as amended, for species under USFWS jurisdiction. These measures were transmitted in the June, 4, 2007 letter from FEMA to KCSD (See Appendix B) and the KCSD agreed to implement on August 30, 2007.

#### **4.5 CULTURAL RESOURCES**

If unanticipated resources are discovered during construction, KCSD would stop project activities in the vicinity of the discovery, take all reasonable measures to avoid or minimize harm to the property, and notify OES and FEMA as soon as practicable so that FEMA can initiate consultation with the THPO. If the discovery appears to contain human remains, KCSD would also contact the Del Norte County Coroner immediately. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she would contact the Native American Heritage Commission by telephone within 24 hours.

#### **4.6 SOCIOECONOMICS AND PUBLIC SAFETY**

KCSD would be responsible for implementing the following measures to protect the health and safety of the community around the project area during the Proposed Action:

- all work areas and other public hazards would be barricaded and properly marked.
- vehicles traveling through the area would be required to maintain legal and safe speeds.

#### 4.7 NOISE

KCSD would be responsible for implementation of the following measures to reduce noise levels associated with construction equipment:

- project activity would not be conducted between 7:00 p.m. and 7:00 a.m. on weekdays,
- project activity would not be conducted between 6:00 p.m. and 9:00 a.m. on Saturdays, and
- no project related activity would be allowed on Sundays or Federal holidays.

All noise-producing project equipment and vehicles using internal combustion engines would be equipped with properly operating mufflers and air inlet silencers, where appropriate, that meet or exceed original factory specification.

#### 4.8 VISUAL RESOURCES

KCSD would be responsible for minimizing the potential short-term and long-term impacts to visual resources from implementation of the Proposed Action. Mitigation measures, including contouring of finished surfaces to blend with adjacent natural terrain where appropriate, would be implemented when the Proposed Action is complete. Vegetation removed from the leach field site would be replaced, as practicable, with native vegetation.

#### 4.9 CUMULATIVE IMPACTS

No avoidance or minimization measures are required.

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### **Personal Communications**

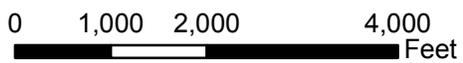
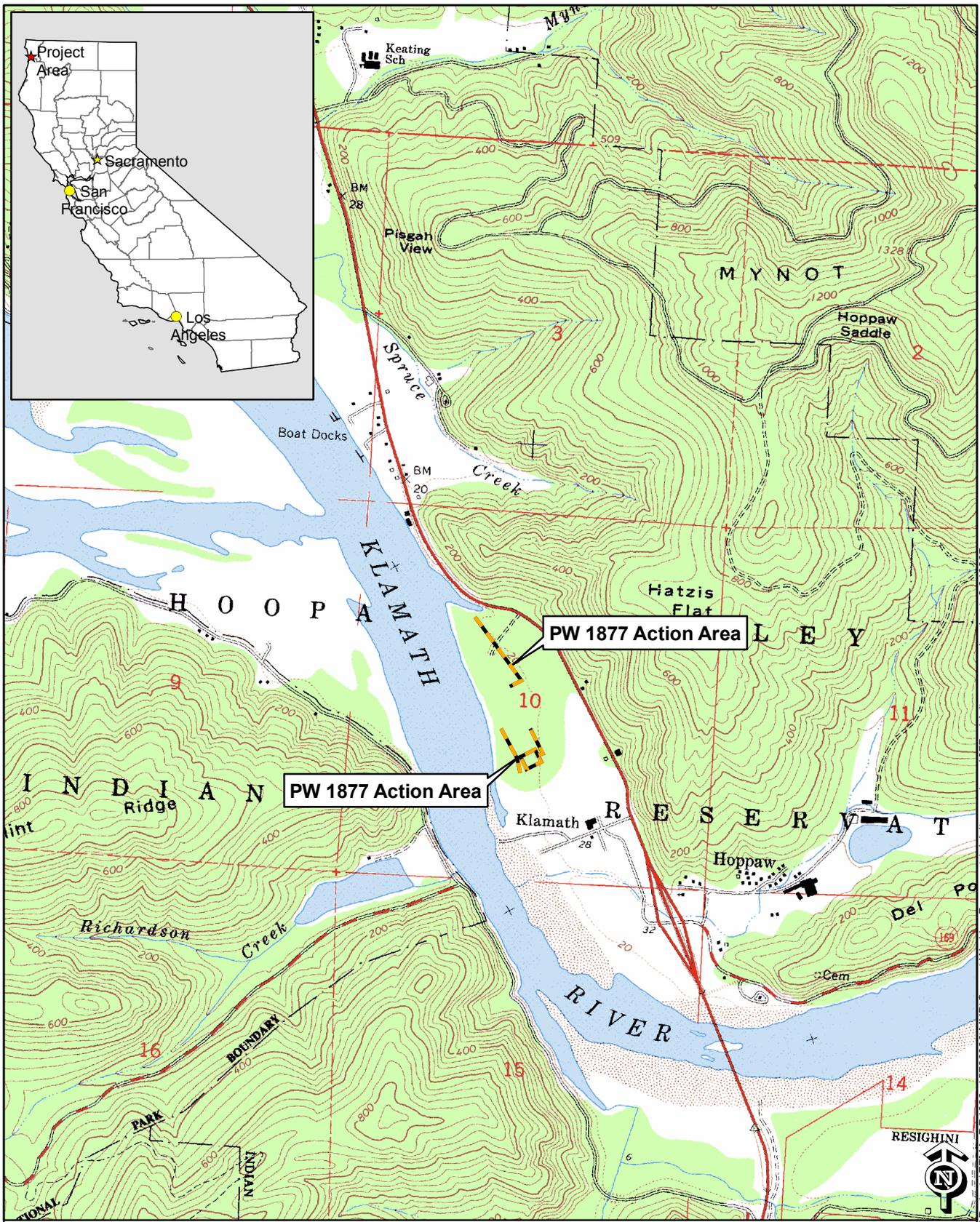
Personal Communication. 2007. Anderson, Karin, Cultural Resources Director for the Redwoods National and State Parks and Christopher Lee, NISTAC Archaeologist. Conversation confirming that the Proposed Action Alternative would have no impacts to cultural resources within the Redwoods Park and requesting coordination between FEMA, NISTAC, and the Yurok tribe. April 12.

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**Appendix A – Figures**

Figure 1 Project Location and Vicinity Map

Figure 2 Action Area



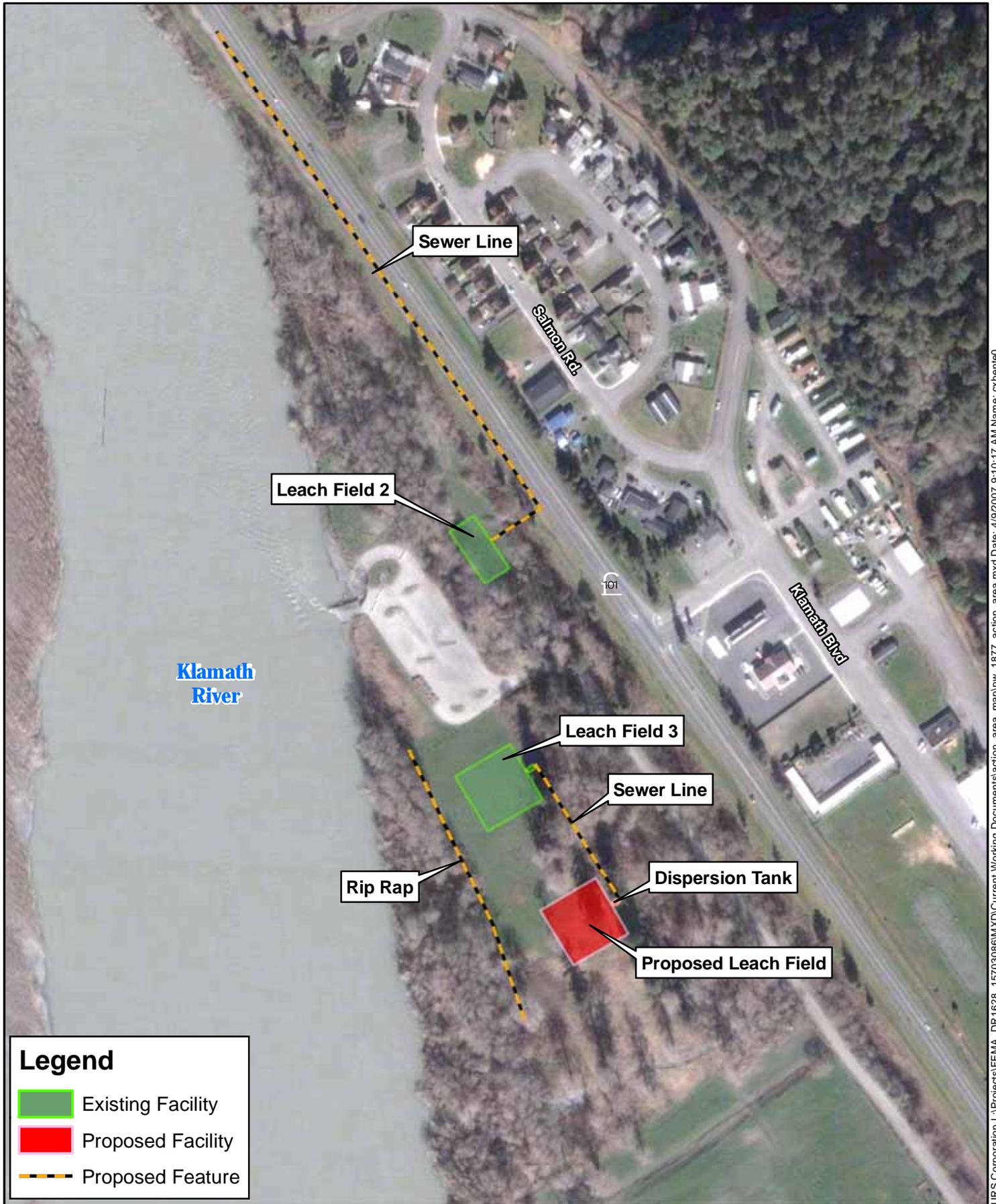
Klamath Community Service District,  
Leach Field & Main Sewer  
Line Replacement

Project Location  
and  
Vicinity Map

Figure  
1

Source: USGS 7.5 Minute Topo Quad, 1966, Requa, CA.

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	<p>15708016</p>	<p>FEMA DR-1628 PW #1877 Leach Field and Main Sewer Line Replacement</p>	<p>Action Area</p>	<p>Figure 2</p>
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**Appendix B – Subgrantee Concurrence with USFWS Conservation Measures**



**FEMA**

August 1, 2007

Fred Stocket  
Klamath Community Services District  
PO Box 985  
Klamath, CA 95548

Re: Klamath Leach Field, Klamath Community Services District, FEMA-1628-DR-CA, PW  
1877-1

Dear Mr. Stocket:

The Klamath Community Services District, through the Governor's Office of Emergency Services (OES), has applied to the Federal Emergency Management Agency (FEMA) for funding under the Public Assistance Program to replace and relocate a PVC main sewer line, replace a washed out leach field, and install rip rap material to protect the leach field. To expedite the review process under Section 7 of the Endangered Species Act (ESA), FEMA has developed programmatic compliance documents with the U.S. Fish and Wildlife Service (USFWS or Service). In order for Project Worksheet (PW) 1877-1 to qualify under this expedited review process, the Klamath Community Services District must fully and correctly implement the appropriate conservation measures described in Appendices B and C of FEMA's May 2006 Programmatic Biological Assessment (PBA) for FEMA-Funded Disaster Assistance Projects in California, as amended, for species under USFWS jurisdiction. This includes General Conservation Measures 3 through 18 from Appendix B of the PBA and Proposed Conservation Measures for northern spotted owl, marbled murrelet, and bald eagle from Appendix C of the PBA. These Proposed Conservation Measures have been specifically tailored for this PW. FEMA biologists have already conducted General Conservation Measures 1 and 2 and determined that the only species with suitable habitat present are the northern spotted owl, marbled murrelet and bald eagle. FEMA biologists have assumed presence of these species; therefore, the Klamath Community Services District does not need to complete surveys per the most recently available USFWS-approved survey guidance. The appropriate conservation measures are enclosed with this letter. The PBA is posted on the FEMA Region IX website: [www.fema.gov/about/regions/regionix/index.shtm](http://www.fema.gov/about/regions/regionix/index.shtm).

If the Klamath Community Services District accepts implementation of these conservation measures as a stipulation of funding, please sign the enclosed copy of this letter and return it to me in the pre-addressed envelope. If the Klamath Community Services District cannot comply with these conservation measures, please notify me at the earliest opportunity, so that FEMA can initiate

[www.fema.gov](http://www.fema.gov)

Section 7 consultation with USFWS for this project. Additionally, if the Klamath Community Services District cannot comply with these conservation measures, the Klamath Community Services District is advised not to proceed with project implementation prior to official notification from FEMA that this consultation has been completed or funding may be jeopardized.

If you should require any additional information regarding Section 7 consultation, the PBA, or FEMA's request, please contact Dennis Castrillo of OES at (916) 845-8270. Thank you in advance for your assistance.

Sincerely,



Alessandro Amaglio  
Environmental Officer

**Attachments**

cc:  
Dennis Castrillo, OES  
Doug Lashmett, OES

Concurrence

Klamath Community Services District accepts implementation of the conservation measures described in this letter as a stipulation of funding for PW 1877-1.

<u>Fred Stockett</u>	<u>FRED STOCKETT</u>	<u>PRESIDENT</u>	<u>AUG 30, 2007</u>
Signature	Printed Name	Title KCS D	Date

## Conservation Measures

### General Conservation Measures (from PBA Appendix B)

1. To determine the likelihood that a federally-listed species may be present in the areas that may be directly or indirectly affected by project activities, a qualified biologist will conduct a thorough review of all existing data regarding federally-listed species and their habitats prior to the implementation of any project. This review will include not only a review of the California Department of Fish and Game's California Natural Diversity Database (CNDDDB), but all other sources of information and data available within the public domain including, but not limited to, reports submitted to the Service, California Department of Fish and Game, or other public agencies; peer-reviewed publications in scientific journals, internet resources such as California Native Plant Society website, books or other published literature, and all other sources as appropriate. FEMA will consider that a federally-listed species is likely to occur on a project site if (a) it is within the dispersal distance of a documented sighting of the species, and (b) suitable habitat is present in the area.
2. To determine whether suitable habitat is present, and to further inform determinations of the likelihood that a federally-listed species occurs in areas that may be directly or indirectly affected by project activities, a qualified, Service-approved biologist will conduct pre-activity surveys for federally-listed species and habitats prior to the implementation of any project, unless a species has already been assumed to be present, then no surveys are necessary. Surveys will follow the most recently available Service-approved guidance and they will be conducted during the most appropriate times of the year to identify a species' presence. For example, plant surveys will be conducted during the flowering period following the most recently available, Service-approved survey guidance; reptile and amphibian surveys will be conducted during the animal's active periods following the most recently available, Service-approved survey guidance, not during their aestivation periods, *etc.*
3. Project proponents will ensure that, in addition to the general conservation measures proposed herein, that all species-specific conservation measures outlined in Appendix C are implemented for each federally-listed species and their habitats at each project site, as appropriate;
4. A qualified, Service-approved biological monitor will be present on site during all activities related to the project. The biological monitor will provide guidance to the project proponents and crew about federally-listed species and their habitats. The biological monitor will monitor all activities to ensure that no federally-listed species is harassed, killed, or injured and to ensure that the project otherwise conforms to the conservation measures outlined throughout this document and the subsequent programmatic consultation documents. The biological monitor will have the authority to stop any aspect of the project that will result in unauthorized take of federally-listed species;
5. Project proponents will ensure that all work will be conducted in an area, from a location, or in such a manner that it will not directly or indirectly kill or injure a listed species, will not intentional or negligently harass a listed species to such an extent as to significantly disrupt normal behavioral patterns, or will not adversely modify listed species habitats. Project planning must consider not only the effects of the action itself, but also all ancillary activities associated with the actions, such as equipment staging and refueling areas, topsoil or spoils stockpiling areas, material storage areas, disposal sites, routes of ingress and egress to the project site, and all other related activities necessary to complete the project;
6. Disturbance to existing grades and vegetation will be limited to the actual site of the project and necessary access routes. Placement of all roads, staging areas, and other facilities shall avoid and

limit disturbance to federally-listed species and their habitats to the maximum extent practicable. When possible, existing ingress or egress points will be used and the contours of the project site will be returned to pre-construction condition or better;

7. Projects proponents will, to the maximum extent practicable, reduce the amount of disturbance at a site to the absolute minimum necessary to accomplish the project. Wherever practicable, existing vegetation will be salvaged from the proposed project area and stored for replanting after earthmoving activities are completed. Topsoil will be removed, stockpiled, covered, and encircled with silt fencing to prevent loss or movement of the soil into federally-listed species habitats. All disturbed soils will undergo erosion control treatment prior to the rainy season and after construction is terminated. Treatment typically includes temporary seeding with native species and sterile straw mulch. All topsoil will be replaced in a manner to as closely as possible represent pre-disturbance conditions. This is especially necessary for listed plants to preserve the integrity of the seed contained within the topsoil;
8. Project proponents will ensure that project sites are re-vegetated with locally-acquired sources of native seeds and plants in a manner that is not likely to adversely affect listed species and will return the site to at least its pre-existing condition or better. Plantings will be done during the optimal season for the species being planted and, if necessary, an irrigation system will be installed to ensure establishment of vegetation. An 80% or more survival rate over a period of 3-5 years for new plantings will be the target. Invasive exotic plant species will be controlled to the maximum extent practicable to accomplish the re-vegetation effort. Chemical control of invasive exotic plant species will be conducted by a certified pesticide applicator per labeled directions and all other federal, state, and local laws and regulations;
9. Projects being implemented within habitat known to support plant species or species that use underground retreat, escape, hibernacula, and/or aestivation areas (e.g., snakes and amphibians, small mammals, burrowing owls, etc.) will require that vehicles and equipment be operated in a manner that does not result in the death or injury of an individual plant or animal and in a manner that does not unduly compact or disturb the soil. For example, temporarily removing topsoil in an area just large enough to allow heavy equipment access to a site (e.g., a levee repair site) after the flowering and seed set period, then returning the topsoil to the area once the equipment work is completed;
10. For projects conducted in areas where species are known to use underground burrows as escape habitat, hibernacula, aestivation areas, or other purposes of retreat, project proponents will completely encircle the project area with exclusionary fencing fitted with one-way exit holes and buried a few inches below ground level. This fencing will allow species to passively leave the project site while at the same time preventing them from re-entering the work zone. Exclusionary fencing will be installed at least six weeks prior to the implementation of the project and it will be checked frequently to ensure the fencing is intact and functioning properly. The fencing will be maintained, in place, throughout the duration of the project, to prevent species from re-entering the project site until all work activities have ceased;
11. All standardized Best Management Practices (e.g., per Regional Water Quality Control Boards, the California Stormwater Best Management Practice Handbooks, etc.) will be implemented for all projects, as appropriate to each project site;
12. Project proponents will ensure that sediment-control devices are installed and maintained correctly. For example, sediment will be removed from sediment controls once the sediment has reached one-third (1/3) of the exposed height of the control. The devices will be inspected frequently (e.g., daily) to ensure they are functioning properly; controls will be immediately repaired or replaced or

additional controls will be installed as necessary. Sediment that is captured in these controls may be disposed of on site in an appropriate, safe, approved area, or off site at an approved disposal site;

13. Project proponents will consider design factors and other recommendations detailed in the most recently available publications (*e.g.*, NMFS stream crossing criteria, California Salmonid Stream Habitat Restoration Manual, *etc.*) when undertaking projects such as bridge or culvert replacement, for example, on fish-bearing streams (particularly anadromous fish);
14. Project proponents shall exercise every reasonable precaution to protect federally-listed species and their habitats from pollution due to fuels, oils, lubricants, and other harmful materials. Vehicles and equipment that are used during the course of a project will be fueled and serviced in a "safe" area (*i.e.*, outside of sensitive habitats) in a manner that will not affect federally-listed species or their habitats. Spills, leaks, and other problems of a similar nature will be resolved immediately to prevent unnecessary effects to listed species and their habitats. A plan for the emergency clean up of any spills of fuel or other material will be available on site and adequate materials for spill cleanup will be maintained on site;
15. Project proponents shall exercise every reasonable precaution to protect federally-listed species and their habitats from construction by-products and pollutants such as construction chemicals, fresh cement, saw-water, or other deleterious materials. Water containing mud, silt, concrete, *etc.* from construction activities shall be treated by filtration, retention in a settling pond, *etc.* Fresh cement or concrete shall not be allowed to enter flowing water of streams. Construction pollutants will be collected and transported to an authorized disposal area, as appropriate, and per all federal, state, and local laws and regulations;
16. All hazardous material will be stored in properly designated containers in a storage area with an impermeable membrane between the ground and the hazardous material. The storage area will be encircled by a berm to prevent the discharge of pollutants to ground water or runoff into federally-listed species habitats. A plan for the emergency clean up of any hazardous material will be available on site and adequate materials for spill cleanup will be maintained on site;
17. All construction material, wastes, debris, sediment, rubbish, vegetation, trash, fencing, *etc.* will be removed from the site once the project is completed and transported to an authorized disposal area, as appropriate, and per all federal, state, and local laws and regulations; and
18. All concrete or other similar rubble shall be free of trash and reinforcement steel. No petroleum-based products such as asphalt will be used as a stabilizing material (*i.e.*, riprap).

**Proposed Conservation Measures (from PBA Appendix C)**

Northern Spotted Owl

1. Consult a Service-approved biologist with expertise and/or permits specific to the northern spotted owl;
2. Avoid removing or intentionally damaging any known nest trees and associated screen trees;
3. Avoid degrading or removing habitat in a nest grove; and
4. Avoid habitat modification in suitable nesting habitat between February 1 and September 15.

Marbled Murrelet

1. Consult an USFWS-approved biologist with expertise and/or permits specific to the marbled murrelet;
2. Avoid activities from March 24 through September 15 within the period two hours after sunrise and two hours before sunset;
3. Avoid removing or intentionally damaging any trees with potential nesting platforms or removing any nest platforms;
4. Avoid removing trees around potential nest trees and potential nesting platforms;
5. A qualified biologist will verify that trees to be removed are not suitable for nesting or screen trees;
6. Avoid all habitat modification from March 24 through September 15; and
7. All trash will be stored in predator-proof containers and transported off-site at the end of each work day

Bald Eagle

1. Consult a Service-approved biologist with expertise and/or permits specific to the bald eagle;
2. Avoid activities from January 1 thru August 31 within 0.5 mile or line-of-sight, whichever is greater, of an occupied nest; and
3. Avoid removing known nest trees, screen trees around known nest trees, perch trees, or roost trees

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**Appendix C – THPO Correspondence**



U.S. Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

**FEMA**

June 7, 2007

Dr. Thomas Gates  
Tribal Historic Preservation Officer  
Yurok Tribe  
15900 Highway 101 North  
Klamath, CA 95548

Re: FEMA-CA-DR-1628, PW# 1877, Leach Field, 2-Inch Sewer Main Line

Dear Dr. Gates:

The purpose of this letter is to apprise you of a proposed project in Klamath, CA, just north of the Klamath River and west and south of U.S Highway 101, adjacent to the existing boat launch facility. The proposed project is in Del Norte County within Yurok Tribal lands. The project is under consideration for funding by the Federal Emergency Management Agency (FEMA). The Del Norte County Department of Public Works (County) has applied through the California Governor's Office of Emergency Services (OES) to FEMA for funding under the Public Assistance Program.

In summary, the literature review of the area of potential effects (APE) for the project identified no archaeological and no historic era built environment resources within the project areas. Much of the proposed undertaking will take place within a previously disturbed area of fill used to create the bedding for U.S. Highway 101. Other portions of the project are within an active floodplain. FEMA, in accordance with revised implementing regulations of the National Historic Preservation Act (NHPA) found at 36 CFR 800.3(a), has determined that the proposed project is an undertaking. FEMA has determined that there will be no historic properties affected pursuant to 36 CFR 800.4(2)(d).

### **Project Description**

Severe storms that occurred from December 17, 2005 to January 3, 2006 caused flooding along the Klamath River that washed out half (40 ft wide x 80 ft long surface areas) of Leach Field 1 septic system and all of its existing setback from the river. Without the setback, the entire Leach Field 1 system was rendered unusable. At this location, much of the existing leach field was washed out. At a separate location, part of the main sewer line, a 320 linear foot section of Schedule 40, 2-inch diameter PVC Pipe, was also exposed and destroyed.

### **Proposed Repair Work**

The proposed repair work includes three distinct activities. The activities include the installation of PVC pipe, the construction and installation of a new leach field, and the installation of riprap material to protect the leach field.

The installation of the PVC would occur in three capacities: the replacement of damaged PVC, the relocation of undamaged pipeline, and the installation of new pipe to service the proposed leach field. In order to replace damaged PVC, the project will install PVC pipe along a portion of the Caltrans right-of-way (ROW) outside of the floodplain, within the embankment of fill upon which the highway rests. This will be done so that future flood events will not result in pipe failure. The project would include an upgrade from 3 inch to 4 inch PVC pipe over 470 feet, including approximately 320 feet from the damaged pipe along the Klamath River and 150 feet from the Caltrans ROW to Leach Field #2. Additionally, approximately 605 feet of undamaged 3" PVC pipe will be relocated to the Caltrans ROW outside of the floodplain. The action also involves the installation of 180 feet of new PVC pipe to service Leach Field #1. Installation of all piping will be conducted by trenching, installing the pipe, and backfilling the soil material to original grade (see Figure 1 for a depiction of these various project components).

The proposed leach field will be installed approximately 50 feet south of Leach Field 3. The leach field installation will require the excavation of soil to install a 750-gallon dispersion tank. From the dispersion tank, the action would require the installation of 4-inch diameter perforated PVC backfilled with  $\frac{3}{4}$ "-1 $\frac{1}{2}$ " washed gravel. The pipe will be installed in a trench approximately 3 feet wide and 1.33 feet below surface. Approximately 480 feet of pipe will be installed in this manner over an approximately 25,000 square foot area.

The third action involves the installation of riprap material along a bank of an overflow channel adjacent to the Klamath River. The riprap would be installed in this location to protect Leach Field 1 and the proposed leach field. The installation of the riprap material would occur along 700 feet of the natural overflow channel, approximately 4.25 feet wide. Installation of the riprap material will require the trimming and removal of underbrush and various sized riparian trees.

### **APE Determination**

FEMA has determined that the undertaking's APE encompasses pipeline linear segments of 605 feet, 480 feet, and 180 feet. There will be a block area for the leach field that measures approximately 25,000 square feet and one other segment that measures approximately 700 feet by 4.25 feet wide where riprap will be placed along the exposed bank west of the leach field. Maximum width of excavation would not exceed 4 feet in depth or length for the pipelines. The leach field area would encompass an area approximately 160 feet on one side. The depth for the leach field dispersion lines within that footprint would not exceed four feet. Pursuant to the revised implementing regulations of the NHPA found at 36 CFR 800.4(a)(1), FEMA seeks your concurrence with its determination of the APE. Figure 2 depicts the APE for this undertaking.

## **Literature Review**

Pursuant to the revised implementing regulations of the NHPA found at 36 CFR 800.4(a)(2), a cultural resources literature review was performed at the Yurok Tribal Heritage Preservation Office (File No. Grant 07-01) on March 19, 2007. According to the data provided by the Yurok Tribal Heritage Preservation Office, there are no properties listed on, or eligible for inclusion on, the NRHP within the project APE.

## **Native American Consultation**

Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC), as FEMA's consultant, contacted the California Native American Heritage Commission (NAHC) on March 21, 2007, for a review of its Sacred Lands Files. The NAHC responded on April 10, 2007, with a request that FEMA contact Ms. Karin Anderson, Cultural Resources Director for the Redwoods National and State Parks (National Park Service) regarding her potential concerns or information about the Redwood Creek and Marshall Pond area approximately one half mile north of the proposed project area. On Thursday, April 12, Ms. Anderson was contacted. She stated that after having reviewed the information, she had no concerns with the proposed project, as it will have no impacts to cultural resources within the Redwoods Park. She asked, however, that FEMA and NISTAC coordinate with the Yurok tribe to ensure that their potential concerns are heard (Karin Anderson, personal communication April 12, 2007).

## **Project Setting**

### *Natural Setting*

The action area has three components: a linear segment and two proposed non-linear activities. The action areas are located in Klamath, CA just north of the Klamath River and west and south of U.S Highway 101, adjacent to the existing boat launch facility. The action area is located along a regularly maintained Caltrans ROW, disturbed floodplain fields, and within a floodplain riparian forest.

The Caltrans ROW action area contains clover, brambles, Italian ryegrass, vetch, filaree, and field geranium. The disturbed floodplain meadow was previously cleared of most woody vegetation and is bordered by floodplain forest. Typical ground cover within this area include wild radish, black mustard, Italian ryegrass, brambles, spearmint, sword fern, filaree, milk thistle, dock, and curly dock. The floodplain forest within the action areas is found adjacent to a small overflow channel and includes vegetation such as cottonwood, white alder, salmonberry, elderberry, stinging nettle, and poison hemlock. The majority of the action area occurs within the 100-year floodplain of the Klamath River and in some instances, is immediately adjacent to the river.

At the time of the site visit, there was no water within the overflow channel, or in any other areas besides the defined banks of the Klamath River (that were not part of the action area). The site soils are sediments from the regular flooding and deposition of the soil material from upstream and likely consist of sand and silty sand. The action area within the Caltrans ROW is composed of fill material.

The action areas are adjacent to a floodplain forest, the Klamath River, and low-density residential housing. Coniferous forests are found in the distant proximity of the action area. The topography of the action area is relatively flat; however, there are several significant steep slopes associated with the distance proximity of the site. Topography onsite includes an approximately 19-foot grade difference between the Caltrans ROW and the proposed leach field locations. Additionally, there is an approximately 8-foot grade change adjacent to the over flow channel. Songbirds and wading birds are expected to be present within, and immediately adjacent to, the action areas, as are amphibians. No aquatic resources were observed in the action area, except for the overflow channel. The Klamath River supports aquatic resources immediately adjacent to the action area.

### *Ethnography*

The project area is located within the ethnographic boundaries of the Yurok tribe. The ancestral territory of the Yurok people is comprised of a narrow strip along the Pacific Ocean stretching north from the village on the Little River in Humboldt County to the mouth of Damnation Creek in Del Norte County. The Yurok people utilized a large and diverse cultural landscape that extended inland up the Klamath River approximately 45 miles and into the surrounding mountains. There are approximately 70 known villages within this ancestral territory, which are situated along the banks of the Klamath River and along the ocean shores and lagoons (Kroeber 1925:8; Pilling 1978; Waterman 1920). Each village had its own geographic boundaries as well as its own leaders, who governed various sites and activities within the village. These sites included permanent home sites, fishing and hunting spots, seasonal sites, gathering areas, training grounds, and spiritual power sites (Lindgren 1991).

Rivers and riverine resources were of great importance to the Yurok. The river was a primary source of subsistence, providing salmon, sturgeon, eel, and steelhead. Acorns were another primary food source, and acorns gathering grounds are found throughout the hills that surrounded the villages.

The Yuroks depended heavily on wood as an industrial material, particularly redwood, with which they built their split-plank houses and dugout canoes. The plank house was built over an essentially square pit, and the front of the house usually had a "porch" made of rocks where people could sit and work. Yurok houses were passed from generation to generation and were often named so that a given house bore the name of the family's reputation, and would be known by people outside of a particular village. Redwood canoes were used mainly on the rivers, but also in the ocean, to gather shellfish and hunt sea lions. Fishing and gathering of surf smelt, seaweed, eels, and abalone often took place from the shore with special dipping nets. These were constructed with a long triangular wooden frame, and the net was strung around this frame.

The Yurok also developed an elaborate trail system. Trails were treated with respect and travelers had to stay within the trail. Heavily utilized trails, or trails that were deemed "important", had many resting spots. If a traveler stopped somewhere else along the trail other than a resting spot, it was considered bad luck (Waterman 1920:185).

Initial contact between the Yurok and Europeans was a result of Spanish expeditions spanning the mid 1500s to the late 1700s. However, no proven contact between Yuroks and Europeans predates

1775, when a Spanish expedition traded with the Yuroks for pelts (Pilling 1978: 139-140). By 1828, the Klamath River had been documented and visited by ships from Britain, Spain, Russia, and America (McBeth 1950:2, 3; Bearss 1969). Introduced diseases and other factors led to the decline of the Yurok population. Today, however, the Yurok tribe is currently the largest Native American tribe in California, with nearly 5,000 enrolled members.

### *Prehistory*

The "North Coast Range" region of California, as it is classified by archaeologists, played a prominent role in the development of archaeological research in California. From early investigations at Borax Lake (Harrington 1948) to the refinement of the California Taxonomic Sequence (Fredrickson 1974, 1984), the rich prehistoric resources of the region have provided significant information towards the understanding of California prehistory. Much of what is known about this area comes from the work of Hildebrandt and Hayes. They proposed a chronology for this region based largely on their work and on paleoenvironmental data gathered in the area, including several excavations in the Pilot Ridge/South Fork Mountains (1983, 1984).

The earliest solid evidence of human habitation in the region comes from the high elevation interior of the North Coast Mountain Range approximately 5,000 years ago, a time associated with the Borax pattern (~8000 to 3000 BP) (Fredrickson 1984; Keter 1995; Hildebrandt and Hayes 1993, Fitzgerald and Hildebrandt 2001). These early humans lived in small, highly mobile bands and subsisted primarily through big game hunting (e.g., elk and deer). Assemblages associated with the Borax pattern are documented in both high and low elevation sites in Northern California, and are most likely associated with adaptive strategies affiliated with the post-glacial early Holocene period. Artifacts associated with this pattern include wide-stemmed projectile points, milling slabs, hand stones, large serrated bifaces, edge flaked spall tools, and cobble tools.

Around 3,000 years ago, the climate began to cool, and archaeological sites from this time period show a corresponding shift in subsistence strategies. Known as the Willits pattern, or locally, as the Mendocino pattern, this was attributed to the Middle Period, ranging from 3,000 to 1,000 BP (Hildebrandt and Hayes 1983, 1984). Coastal settlement for this period is evident, and extensive middens reflect the use of riverine, coastal, and marine resources near the confluence of rivers throughout the region (Eidsness and McConnell 2001). This period evidenced a greater use of food storage and processing. Seasonally available resources, such as acorns, hard seeds, and deer were gathered and/or hunted, and processed at specialized camps, then transferred back to the village. Artifacts associated with this pattern include a variety of projectile points (e.g., Willits Series, Mendocino corner-notched, and McKee projectile points), bifaces, flake tools, mortars, and pestles.

Between 1,000 to 1,500 years BP, a complex cultural tradition developed in the region. This tradition was uniquely adapted to the coastal plain and coastal redwood zone and to the abundance of marine and riverine resources in the area (Eidsness and McConnell 2001:24; Kroeber 1925; Loud 1918). This pattern is known regionally as the Gunther Pattern. It dates to the Late Period (1,100 BP to the period of historic contact). Archaeological sites from this time period evidence continuing population growth and density and intensified use of lowland resources, such as fish and acorns.

Greater emphasis was placed on processing and storing foods for the winter. Artifacts characteristic of this period include a variety of projectile points (Trinity corner-notched, Trinity diamond-shape, and Gunther Series projectile points), as well as milling stone equipment (the hopper mortar and pestle). European-manufactured materials began to appear during this period.

### *History*

Ocean exploration of the northern coast of California included Spanish, Russian, and British ships, with the first recorded Humboldt landing at Trinidad by the Spanish in 1775. The first entrance to Humboldt Bay was in 1806 by an American with Aleut hunters, all in the employ of the Russian-American Company out of Sitka. In December 1849, the Gregg-Wood Party traveled through Humboldt County by land. Spring 1850 brought the first ships to Humboldt and Trinidad bays, where men, generally from the States, disembarked on their way to the gold mining districts on the Klamath, Salmon, and Trinity rivers (Van Kirk 1999). On April 9, 1850, sailors from the *Laura Virginia* entered the Bay, and named it after the renowned German scientist, Alexander von Humboldt (Clark Museum 2007).

The influx of gold seekers and settlers often led to conflict with Native American populations. Mining disrupted fishing streams, and land clearing and livestock destroyed hunting grounds and wild plants. Skirmishes and massacres in the 1850s and '60s were referred to as "the Indian Wars". When Arcata journalist Bret Harte criticized the 1860 massacre of Wiyot Indians by local citizens, he was run out of town (Clark Museum 2007).

Eureka, Union (Arcata), and Trinidad were first settled as points of arrival and supply centers for the interior mines. As the excitement and rush for gold subsided, the prospects for economic well-being and wealth shifted to the region's premiere resources - big trees, salmon, and land. This redirection resulted in the settlement of Humboldt County by new groups of people from foreign shores and different cultures (Van Kirk 1999).

Up to and through the Second World War, this demographic and occupational structure prevailed, as the natural resources of the North Coast continued to provide livelihoods for most of Humboldt County's residents. Large timber companies kept people employed. The close of the war, however, changed that stability. A new Douglas fir/plywood industry brought woods and mill workers from Oregon and Washington, and Gypo loggers and mills appeared overnight. Timber dominated the economic and political life of the county well into the 1970s, but times changed. College students, back-to-the-land refugees, and environmentalists brought a new perspective to resource use. What had once been a resource-extractive economy became more diverse, incorporating education, health and social services, and resource protection and restoration (Van Kirk 1999).

### **Survey Results**

The APE was surveyed on March 13, 2007 by NISTAC Archaeologist Brian Hatoff, a Registered Professional Archaeologist who meets the Secretary of the Interior's Standards for Principal Investigator. Most of the linear portion of the project will be constructed in the slope of the

Thomas Gates  
June 7, 2007  
Page 7

embankment west of U.S. Highway 101. This area is largely composed of imported fill. The length of the linear alignment was walked over using a 10-meter wide pedestrian transect. The leach field area was walked over in a series of 10 meter wide pedestrian transects. The leach field contained a number of rodent burrows. The tailings from these burrows were inspected for any evidence of archaeological deposits. No cultural materials were observed. The natural drainage channel embankment to be covered with riprap was also walked over using a 10-meter wide pedestrian transect. The archaeological survey was negative for cultural resources at all project components.

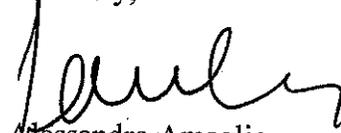
### **Conclusion**

Pursuant to the revised implementing regulations of the NHPA found at 36 CFR 800.11(d), this letter provides a description of the proposed undertaking, an APE determination, accompanying maps, and the steps FEMA has taken under Section 800.4(b) to identify historic properties. As described above, no properties eligible to the National Register of Historic Places were identified through a literature review of the project area. Based on this information and the nature of the proposed undertaking, no effect to historic properties is anticipated from the proposed project.

Pursuant to 36 CFR 800.13(b), FEMA requests that this provision be invoked for unanticipated discoveries. It is FEMA's opinion that the inclusion of this option under 36 CFR 800.13 will satisfy issues related to unanticipated discoveries for this project. Should human remains be encountered, work in the vicinity must halt and the County Coroner will be notified immediately.

In accordance with 36 CFR 800.4(2)(d), FEMA may authorize funding for the project unless you object to this determination within 30 days of your receipt of this documentation. If you have questions, you can contact me at (510) 627-7230.

Sincerely,



Alessandro Amaglio  
Environmental Officer

Enclosure

Cc: Doug Lashmett, OES  
Dennis Castrillo, OES  
Fred Stockett, Klamath Community Services District

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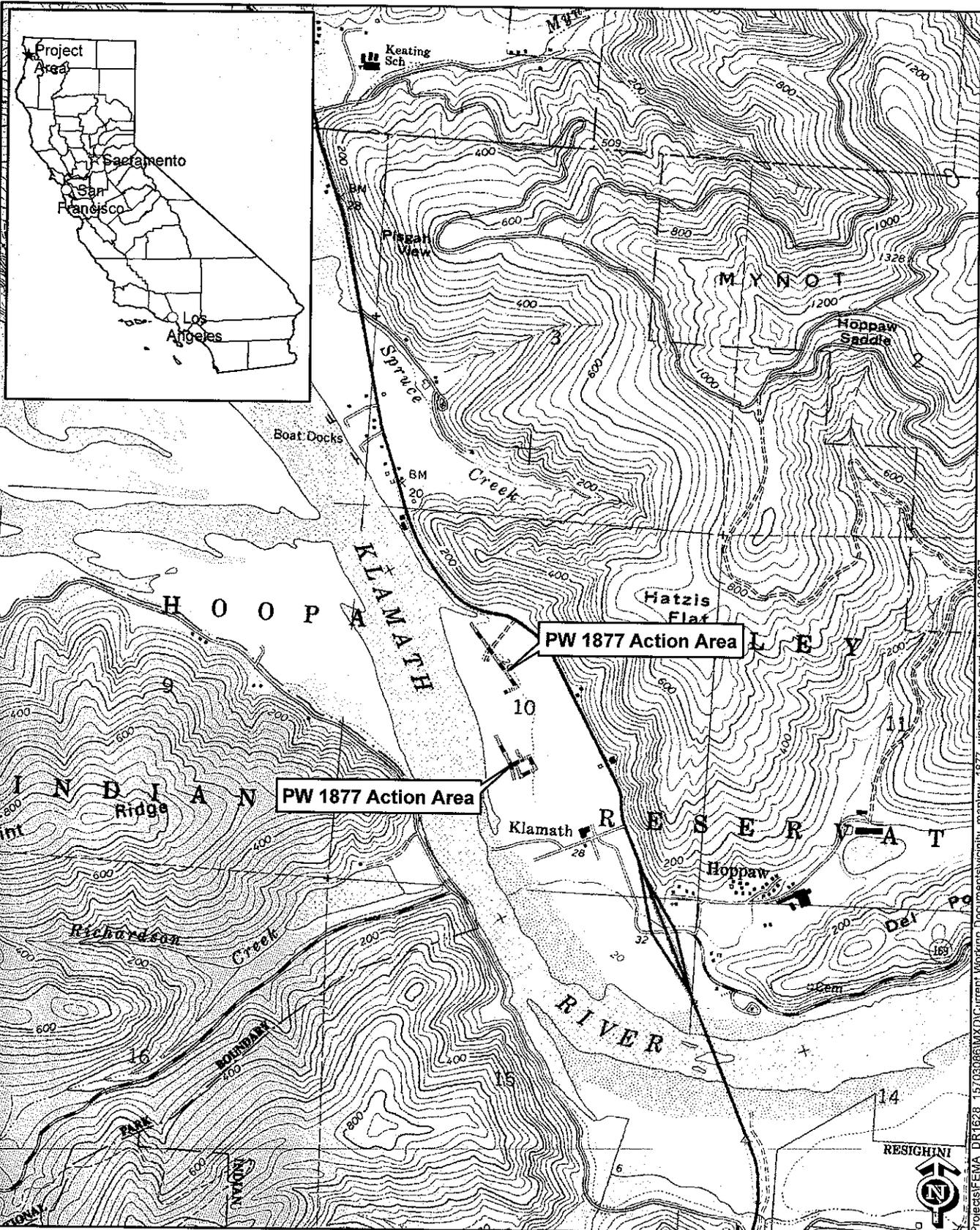
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Klamath Community Service District,  
Leach Field & Main Sewer  
Line Replacement

Project Location  
and  
Vicinity Map

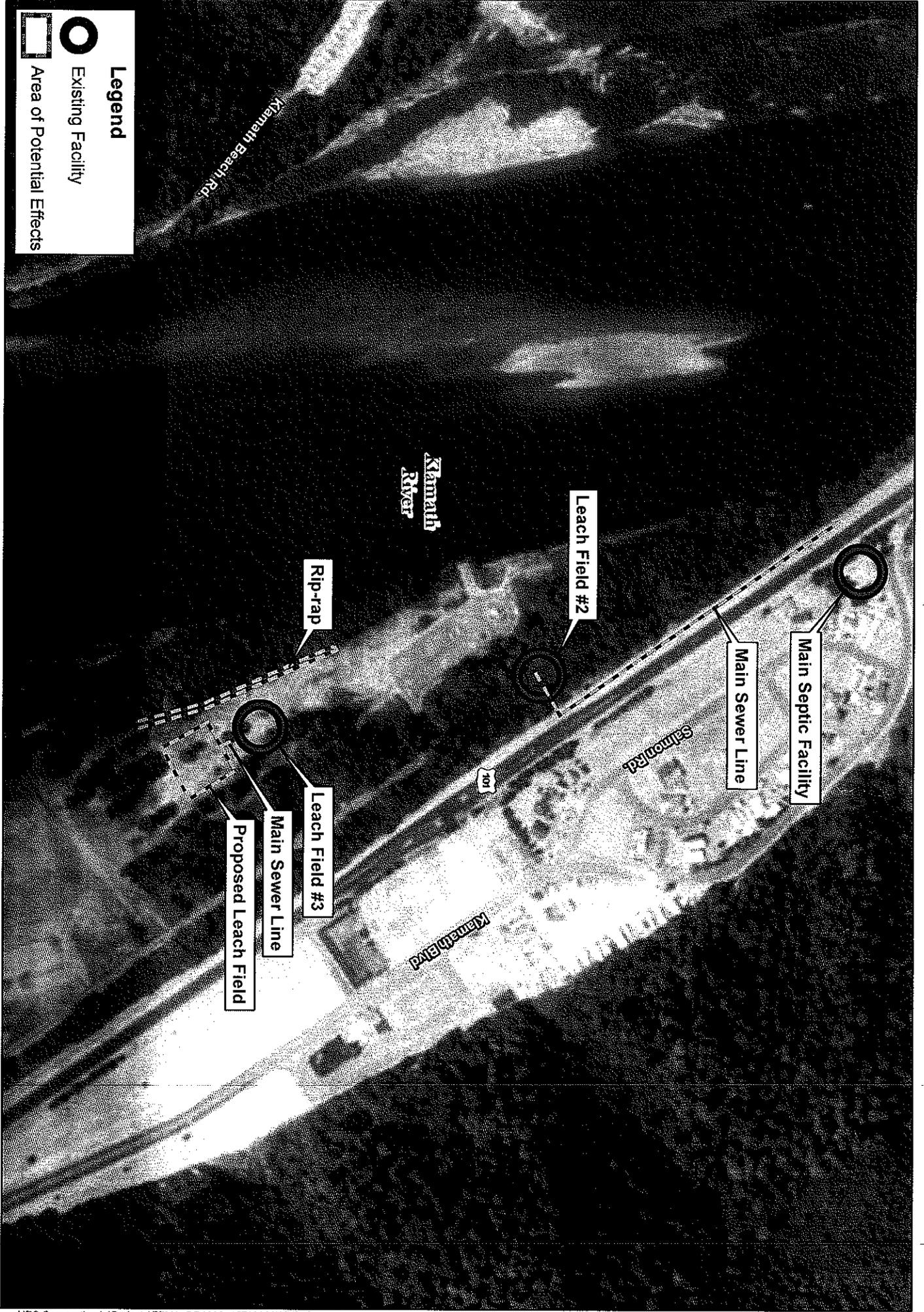
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Source: USGS 7.5 Minute Topo Quad, 1966, Requa, CA

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**Legend**

-  Existing Facility
-  Area of Potential Effects



 15708016	FEMA DR-1628 PW #1877 Leach Field and Main Sewer Line Replacement	<b>Area of Potential Effects</b>	Figure 2
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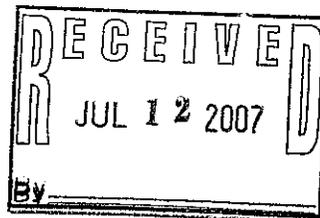
# YUROK TRIBE

## HERITAGE PRESERVATION OFFICE



July 9, 2007

Alessandro Amaglio  
Environmental Officer  
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1111 Broadway, Suite 1200  
Oakland, CA 94607-4052



RE: FEMA-CA-DR-1628, PW#1877, Leach Field, 2-Inch Sewer Main Line  
Yurok Tribal Heritage Preservation Officer Concurrence – No Historic Properties  
Affected

Dear Alessandro,

Please receive this letter indicating my concurrence of No Historic Properties affected for the proposed project to Replace the main line PVC pipe, re-install a leach field and rip-rap the project area along the overflow channel.

I also concur that the Area of Potential Effect is adequately determined.

Please be advised that future projects requiring tribal consultation are to be conducted through my office with the Tribe Culture Committee. FEMA, consultants working for FEMA, or Tribal staff with prior preparatory information can conduct such committee consultations. Culture Committee meets every month on the fourth friday. Agendas are set and posted one week in advance of meetings.

If a cultural resources survey report has been prepared separate from your correspondence of June 7, 2007, then please make sure your office or the consultant responsible for writing the report forwards a copy of the report on to my office for accession into the Yurok Tribal Heritage Preservation Inventory.

Sincerely,

Dr. Thomas Gates



707 482 1822

15900 HWY 101 N  
Klamath, CA  
95548

[ythpo@yahoo.com](mailto:ythpo@yahoo.com)



Fax 707 482 1722