

Final Environmental Assessment

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Blue Lake Rancheria Water Resources Development Project



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Regional Office
Sacramento, CA

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.



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List of Acronyms, Abbreviations, and Definition of Terms

APE	Area of Potential Effect
ARRA	American Recovery and Reinvestment Act
BLR	Blue Lake Rancheria
CFR	Code of Federal Regulations
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FWCA	Fish and Wildlife Coordination Act
GHG	Greenhouse Gas Emission
ITA	Indian Trust Assets
MBTA	Migratory Bird Treaty Act
MRFZ	Mad River Fault Zone
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
Reclamation	Bureau of Reclamation
RV	Recreational Vehicle
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Office
Service	U.S. Fish and Wildlife Service

Section 1 Purpose and Need for Action

1.1 Introduction

Under the Bureau of Reclamation (Reclamation) States Emergency Drought Relief Act of 1991, as amended (Drought Act), and other authorities, Reclamation is planning to use \$40 million from the American Recovery and Reinvestment Act (ARRA) to fund emergency drought relief projects that can quickly and effectively mitigate the consequences that have resulted from drought conditions in California.

2009 was the third consecutive year of drought conditions in the State of California. Governor Schwarzenegger declared a drought emergency for the entire state. The Blue Lake Rancheria (BLR) Tribe is suffering from the prolonged drought and experiencing severe effects to the health and safety of tribal members. In compliance with Section 104 of the Drought Act, the BLR has declared a drought emergency and requested Reclamation's assistance for the purpose of installing a combination community/irrigation well to provide a dependable source of water on the BLR for future use as irrigation for a green belt to reduce fire risk to Tribal Housing units as well as provide a potable water source for the proposed campground/RV park and existing and planned future housing on the BLR.

The BLR is a federally recognized, Sovereign Indian nation located on 77 acres adjacent to the small town of Blue Lake in Humboldt County, California (Figure 1). Humboldt County is a rural county in Northern California located 225 miles north of San Francisco. Under normal weather conditions, the area has moderate temperatures and considerable precipitation. According to the California Drought Update dated July 31, 2009, the last three years have been abnormally dry weather conditions (DWR 2009). The recent dry conditions have resulted in the BLR's need for an alternative dependable source of water.

The Proposed Action would supply water to a 40-acre area on the BLR (Figure 2). The proposed project area was originally a mobile home park consisting of older model mobile homes (17 acres) and fallow grassland used for horse pasture rental (23 acres) in the dormant area of the site which is now wild land. The mobile home park had debilitated infrastructure with outdated piping and inadequate and unsafe potable water. Due to this problem, the mobile home park was discontinued as replacement of infrastructure costs would have far exceeded income generated by space rental. The original two wells that serviced the mobile home park were hand dug, shallow and exhibited surface water influence since the soils are all river bed and percolate rapidly.

The 23-acre fallowed pasture area of the Proposed Action area is encompassed by overgrown vegetation that is dry most of the year due to current and previous drought conditions and therefore has been designated a high severity fire risk by the County of Humboldt (HCFSC 2006). One way to reduce fire risk and possible losses of Tribal

Housing on the BLR is to obtain an adequate dependable water source. A dependable source of water would maintain the green belt status and help to keep fire risk to a minimum. In addition from the benefits of fire prevention, the Tribe is in need of a clean potable water source for the proposed campground/RV park as well as existing and planned future housing on the BLR.



Figure 1. The project is located west of Blue Lake, California.

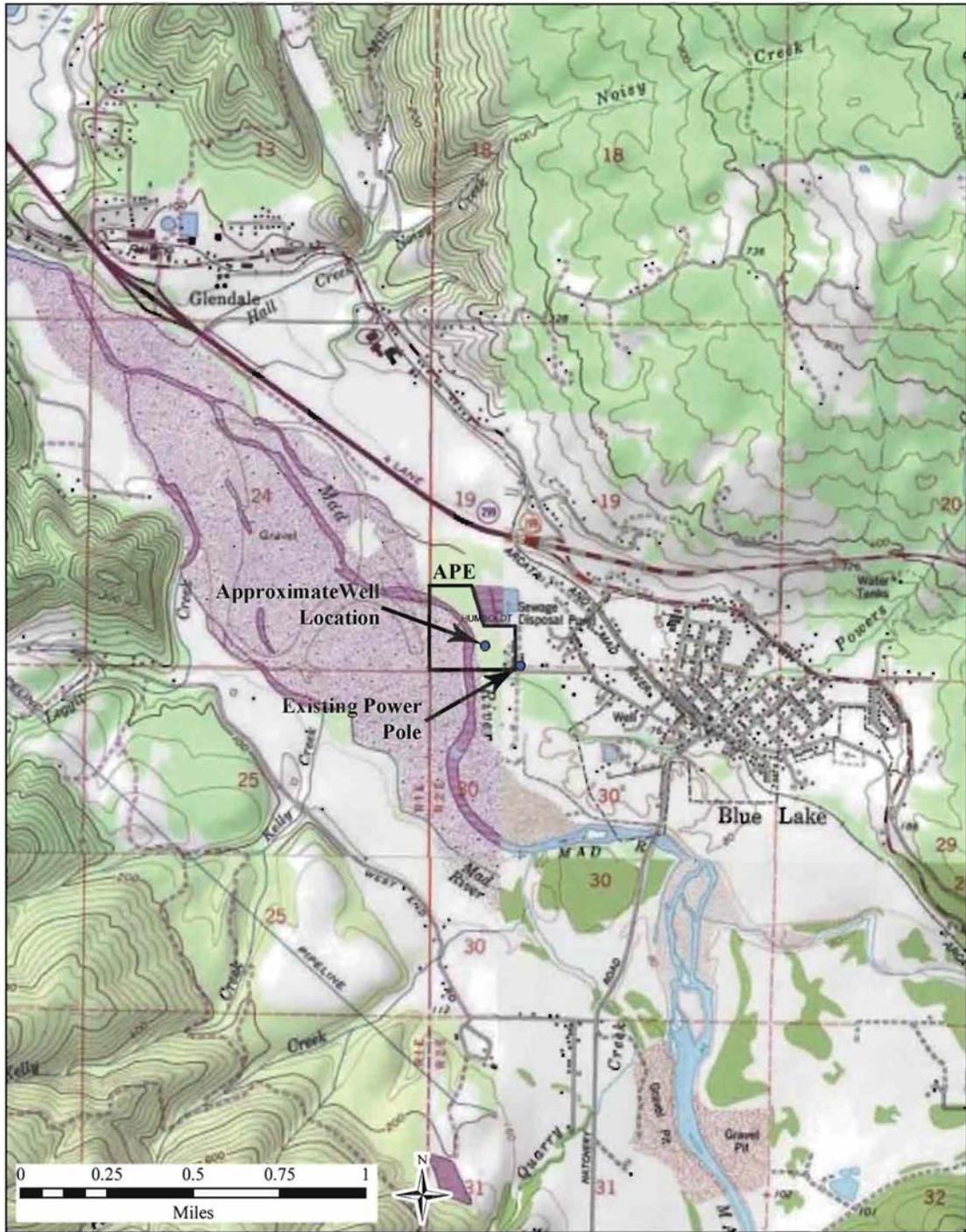


Figure 2. The area of potential effects (APE) is located we of Blue Lake, California in sec. 19, T. 6 N., R. 2 E., Mount Diablo Meridian, as depicted on the Arcata North 7.5' USGS topographic quadrangle. Scale 1:24,000.

1.2 Purpose and Need

In response to the ongoing drought and the BLR's request for assistance, Reclamation proposes to provide ARRA funding for the installation of a community/irrigation well on the BLR. The purpose of the Proposed Action is to provide a dependable source of water for future use as irrigation for a green belt to reduce fire risk to Tribal Housing units as well as provide a potable water source for the proposed campground/RV park and existing and planned future housing on the BLR. The wild land area of the Proposed Action area has been designated a high severity fire risk by the County of Humboldt. After floods and earthquakes, wildfire is the hazard to which the BLR is most vulnerable and could generate the next greatest losses, up to \$15.3 million. The last fire at BLR occurred in the summer of 2003 when grasslands north of the Blue Lake Casino burned (HOAHMP 2007). The Tribe is in need of a dependable source of water to reduce fire risk to Tribal Housing units as well as to provide a potable water source for the proposed campground/RV park and existing and planned future housing on the BLR.

1.3 Potential Resource Issues

The resource areas listed below have the potential to be affected by the Proposed Action and are discussed in Sections 3.1 through 3.10.

- Surface Water Resources
- Groundwater Resources
- Geology and Soils
- Land Use
- Biological Resources
- Cultural Resources
- Indian Trust Assets
- Environmental Justice
- Climate Change
- Cumulative Impacts

1.4 Resources Not Analyzed in Detail

Based on review of the Proposed Action, it was determined that the Proposed Action would not impact the following resources: water quality, recreation, air quality, visual, transportation, noise, hazards and hazardous materials, and socioeconomics. Hence, impacts to these resources are not analyzed in this environmental assessment (EA).

Section 2 Alternatives Including Proposed Action

2.1 No Action Alternative

The No Action Alternative would include Reclamation not providing funding to the BLR for the installation of a combination community/irrigation well to provide a dependable source of water on the BLR for future use as irrigation for a green belt to reduce fire risk to Tribal Housing units as well as provide a potable water source for the proposed campground/RV park and existing and planned future housing.

2.2 Proposed Action Alternative

The Proposed Action Alternative would include ARRA funding provided by Reclamation to install a combination community/irrigation well to provide a dependable source of water on the BLR for future use as irrigation for a green belt to reduce fire risk to Tribal Housing units as well as provide a potable water source for the proposed campground/RV park and existing and planned future housing.

The initial phase of well development would involve drilling a test well to determine appropriate placement of the well and distribution systems. Once the well site is determined the development of the well and associated distribution systems would include the following steps:

1) Construction of the well

- Drill a nominal 20 inch diameter hole from 0 to 50 feet; install and grout 16 inch diameter steel conductor casing from 0 to 50 feet.
- Drill a nominal 15 inch diameter hole from 50 to 300 feet and geophysically log the drill hole.
- Sample and test water from various intervals to determine if water quality changes with depth and place screened interval accordingly.
- Install 10 inch diameter screen or perforated casing with a 10 foot long blank sump and end cap attached to the bottom for approximately 190 to 300 feet deep (110 feet long including sump).
- Install 10 inch diameter blank casing from the top of the screened interval to the surface.
- Install filter pack from the bottom of the drill hole to the bottom of the conductor casing.
- Install bentonite and grout plug to seal from top of filter pack to surface.
- Conduct 24 hour minimum pump test or other appropriate pump tests depending on groundwater conditions, including eight hours of recovery.

- Furnish and install a submersible pump capable of delivering sustainable yield as determined from the pump test, motor, controller, drop pipe, sounding tube and related infrastructure necessary for the operation of the well.
- Perform water quality tests by an Environmental Protection Agency certified laboratory. The water sample would be collected after the well was pumped long enough to ensure that water from the producing formation has entered the well.
- Construct a minimum 4 inch thick concrete pad around the well head that extends at least two feet laterally in all directions.

2) Power Connection

- Excavate a utility trench three feet deep, six inches wide, and approximately 600 feet long beginning at the corner of Blue Lake Ranch Road and Rancheria Road and ending at the new well house.
- Furnish and install 600 feet of one-quarter inch electrical conduit in the trench for Pacific Gas and Electric to run electrical service.
- Furnish and install one meter enclosure on exterior of well house.
- Furnish and install one National Electrical Manufacturers Association 3R, 20 Amp/3 Pole Circuit Breaker Enclosure and circuit breaker.
- Furnish and install American Wire Gauge wire necessary to meet all pump loads and connect from electrical service to meter, breaker, and pump.
- Furnish and install necessary conduit and wire for light and receptacle to be in well house.

3) Construction of well house

- Pour a 6 x 12 foot concrete foundation that would be eight inches thick.
- Install A98 steel mesh that would have a minimum of two inches of top cover (not exceeding three inches below the top of the concrete slab).
- Install (at minimum) three J bolts on each side of the structure to the concrete foundation.
- Construct a six foot wide, 10 foot high enclosure to protect the hydro pneumatic tank and chlorination system.

4) Installation of a Hydro Pneumatic Tank and Chlorination System

- Furnish and install a 240 gallon (at minimum) hydro pneumatic tank that meets all American Society of Mechanical Engineers standards. The dimensions of the tank would allow for installation after the well house was constructed.
- Furnish and install a five gallon (at minimum) tank for liquid sodium hypochlorite.
- Furnish and install a metering pump that would be capable of creating four parts per million chlorine solution to meet federal drinking water standards.
- Furnish and install all hosing necessary to meter liquid sodium hypo chlorite.

5) Water Connection

- Excavate a utility trench three feet deep, six inches wide and approximately 500 feet long.

- Extend a three inch polyvinyl chloride (PVC) line out of the well house and turn underground for connection to the 40 inch PVC waterline.

Construction equipment that would potentially be used includes; a drill rig, grader, backhoe, loader, dozer, aerial lift truck, line trucks, pole and cable trucks, and utility trucks. The proposed well site is accessible by Blue Lake Rancheria Road and all equipment and construction materials would be staged adjacent to the well site in an area that has previously been disturbed. If a well site is determined not suitable, the well will be capped with gravel and concrete and abandoned in place per the County Health Department requirements.

The typical construction season for ground-disturbing activities in Humboldt County is April 1 through October 31. Well drilling and development have a very limited footprint and can be done year-round. However, trenching for electrical connection would result in ground disturbance and should only occur during the construction season window. In addition, it is also desirable to drill during dry weather for a number of reasons, including: (1) to minimize erosion damage to the site and site access due to the heavy drilling equipment, (2) to take advantage of the longer amount of daylight for the drillers to work each day, (3) to minimize adverse impacts of rain and mud on the drilling samples used to determine the various underground formations, and (4) to provide better site conditions for the drilling crew and inspectors rather than wet weather conditions.

Section 3 Affected Environment & Environmental Consequences

The Proposed Action area was originally a mobile home park consisting of older model mobile homes (17 acres) and fallow grassland used for horse pasture rental (23 acres) in the dormant area of the site which is now wild land. The mobile home park had debilitated infrastructure with outdated piping and inadequate and unsafe potable water.

3.1 Surface Water Resources

3.1.1 Affected Environment

Surface water resources in the Proposed Action area include the Mad River and its tributary, Dave Powers Creek. The Mad River flows for 95 miles (150 km) in a roughly northwest direction through Trinity County and then Humboldt County, draining a 497 square mile (1,290 km²) watershed into the Pacific Ocean near Arcata-Eureka Airport in McKinleyville. The river's headwaters are in the Coast Range near South Kelsey Ridge. The Mad River flows from south to north through the parcel and Dave Powers Creek flows from the southeast across the southwest corner, entering the Mad River within the parcel. The entire Proposed Action area is within the historic 100-year flood plain of the Mad River (Zone A) (HCGPU 2008).

The climate is humid with cool, foggy summers and cool, rainy winters. Mean annual precipitation is 58 inches. The mean January temperature is about 48 degrees F. The mean July temperature is about 57 degrees F. The mean annual air temperature is 53 degrees F. The frost free season is about 275 to 330 days.

3.1.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Under the No Action Alternative, surface water use would not increase or decrease and, therefore, would have no impacts to surface water.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Currently the Mad River is a major source of water for the City of Blue Lake and the BLR. The original two wells that serviced the mobile home park on the BLR were shallow and exhibited surface water influence since the majority of the soils are river bed materials and percolate rapidly. The Proposed Action would include drilling the well to a depth that would not result in surface water influence and therefore would not increase or decrease surface water use. The Proposed Action would not result in short-

term or long-term significant impacts to surface water or the resources dependent on surface water.

3.2 Groundwater Resources

3.2.1 Affected Environment

The BLR is located within the Mad River Groundwater Basin; Dows Prairie Subbasin (#1-8.02) which is located on the coast north of the Mad River Lowland Subbasin and is bounded by Little River to the north and Mad River to the south. The Dows Prairie Subbasin is bounded to the east by the Franciscan Formation. The region is an elevated terrace drained by Mill Creek, Strawberry Creek, and White Creek. Development of groundwater is primarily in the western portion of the subbasin. The Hookton Formation is the main geologic unit in the area. The Franciscan Formation underlies the Hookton Formation and is essentially nonwater-bearing. The Quaternary Hookton Formation is the water-bearing formation in the subbasin. The Hookton Formation consists of clay, sand, and thin gravel beds.

The usable groundwater storage capacity for the western portion of the basin is estimated to be 10,500 acre-feet. This estimate is based on a saturated depth interval of 10 to 150 feet, a surface area of 6,500 acres, and a specific yield of 11 to 12 percent.

Estimates of groundwater extraction are based on a survey conducted in 1996 (DWR 2002). The survey included land use and sources of water. Estimates of groundwater extraction for agricultural and municipal/industrial uses are 2,100 and 80 acre-feet respectively. Deep percolation from applied water is estimated to be 500 acre-feet (DWR 2002).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Under the No Action Alternative, the BLR would carry on with current practices and therefore no additional groundwater resources would be affected.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Groundwater features of the Rancheria are defined by a quickly percolating, unrestrained aquifer that is associated with seasonal fluctuations of the Mad River. Groundwater levels in most of the basin depend upon river stage, precipitation and the season. Monthly data, collected from five monitoring wells located around the BLR lands show an average annual fluctuation in groundwater level between 15-20 feet. The Proposed Action would include drilling the well to a depth that would not result in

surface water influence fluctuation. The limited amount of groundwater (40 gallons per minute) that would be utilized by the BLR would not result in measurable fluctuations in groundwater levels or exceed the daily amount that would result in overdraft of the Dows Prairie Groundwater Subbasin. Under California Water Code Section 231, DWR developed a set of well standards to protect the integrity of California's groundwater. DWR Bulletin 74-90, which is the supplement to Bulletin 74-81, outlines the minimum requirements for constructing, altering, maintaining, and destroying water wells (DWR 2001). These standards and requirements would be incorporated into the Proposed Action by the contractor and the BLR. In addition, the five groundwater monitoring wells in close proximity to the Proposed Action area would show any measureable fluctuation in groundwater levels potentially caused by the Proposed Action. The Proposed Action would not result in short-term or long-term significant impacts to groundwater resources in the Dows Prairie Groundwater Subbasin.

3.3 Geology and Soils

3.3.1 Affected Environment

Structurally, the Mad River area is composed of an inferred syncline within uplifted and subsided blocks of the Mad River Fault Zone (MRFZ). The MRFZ, a prominent zone of imbricate thrust faults and associated folds, extends along the Mad River about 50 km from the coast inland to the vicinity of Maples Creek. The MRFZ is about 15 km wide and contains five principle thrusts (Trinidad, Blue Lake, McKinleyville, Mad River, and Fickle Hill Faults) and numerous minor ones. The Fickle Hill anticline, the Jacoby Creek syncline, and the Blue Lake anticline constitute major folds within the zone. At its southeast end, near Maple Creek, compressional structures of the MRFZ merge with strike slip faults of the Eaton Roughs Fault Zone, a part of the San Andreas system. The dips of MRFZ faults range from 15 degrees to 25 degrees northeast at the coast to 35 degrees to 45 degrees northeast near Maple Creek. The folds are asymmetrical, with northern anticlinal limbs dipping northeast 20 degrees to 30 degrees, and southern limbs near vertical and locally overturned. Their axis parallels the trend of the thrusts and they plunge very gently northwest (Carver 1982).

The late Quaternary slip rate for this fault is estimated to be about 1.5-2.0 mm/yr. This evidence suggests that there have been two or three earthquakes that caused rupture of the Mad River fault in the last 10,000 years. The geological stability is classified as "low instability".

The surface soils present are defined as Ferndale Loam, Ferndale silt loam, and Ferndale course materials. Subsurface soils are relatively uniform, and consist of loose to dense clean poorly graded sand, sand and gravel, silty sand, medium stiff silts, and very stiff to hard clays. The Ferndale soils are on high flood-plain steps on alluvial plains near the Pacific Ocean. Slopes are zero to two percent.

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR resulting in no significant impacts to geology or soils.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Slopes in the Proposed Action area are zero to two percent and do not pose an erosion problem though erosion control measures would be in place during the trenching process associated with the construction of the pipe and power line distribution systems to avoid any impacts to resources in the surrounding area. In addition the area that would be disturbed during installation of distribution systems would be temporary and returned to the existing conditions following the completion of construction activities. The Proposed Action would not result in short-term or long-term significant impacts to geology or soils.

3.4 Land Use

3.4.1 Affected Environment

The proposed project area is one parcel resembling a square with the northeast quarter removed and covering an area of 40 acres. The elevation of the proposed project site is approximately 70 feet above mean sea level, being similar to the surrounding area, which is flat river terrace.

Historical use of the 40-acre parcel was only agricultural (pasture) prior to approximately 1946, when the mobile home park was constructed. The two land uses continued until the BLR purchased the parcel in August 2002.

Currently the parcel includes a former 17-acre mobile home park that is adjacent to a 23-acre fallow pasture. The mobile home park had debilitated infrastructure with outdated piping and inadequate and unsafe potable water. Due to this problem, the mobile home park was discontinued as replacement of infrastructure costs would have far exceeded income generated by space rental. The 23-acre fallowed pasture area of the proposed project area is encompassed by overgrown vegetation that is dry most of the year due to current and previous drought conditions and therefore has been designated a high severity fire risk by the County of Humboldt.

The parcel is currently within the limits of the City of Blue Lake and zoned Planned Development Residential with a land use designation of Moderate Low Density Residential.

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. Under the No Action Alternative, land use activities would not change which would result in the continuation of fire risk on the BLR and surrounding areas.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. The proposed community/irrigation well would provide a dependable source of water to the BLR for Tribal community use and for irrigation that would sustain a green belt area and thereby reduce fire danger to the BLR and surrounding area. Historical use of the parcel was only pasture prior to approximately 1946. The two land uses continued until the BLR purchased the parcel in August 2002, when the pasture use was discontinued and the mobile home park closed. The potential future Tribal housing and RV Park would be constructed on previously disturbed land which would not impact current land use and would also concentrate growth and keep the developed area of the BLR limited. In addition, the Proposed Action would aid in reducing fire risk by sustaining a green belt within the BLR which would provide beneficial effects to the BLR residences as well as the surrounding area. The Proposed Action would not result in short-term or long-term significant impacts to land use in the proposed project area.

3.5 Biological Resources

3.5.1 Affected Environment

The BLR is surrounded on all but one side by wild lands or former agricultural lands consisting of infrequently maintained grasslands and heavily wooded riparian corridors, beyond which are heavily forested slopes of Redwood trees. To the north and east the BLR is bounded by roads and to the south and west the BLR interfaces with vegetation rooted along the Mad River and Powers Creek.

Currently the parcel includes a former 17-acre mobile home park that is adjacent to a 23-acre fallow pasture. The Proposed Action area historically has been heavily modified by agricultural activities and as a result largely lacks native habitats.

Vegetation in undeveloped areas on the BLR consists of mostly grasses with interspersed small native shrubs, except directly adjacent to the Mad River, which has a sparse cottonwood tree overstory and dense alder/willow understory.

Potentially Affected Listed and Proposed Species for the Blue Lake Rancheria Area

The following table includes federally listed, proposed and candidate species potentially occurring within the Proposed Action area. The list was generated on June 24, 2010

(Document # 469793254-95626 and 469793254-95725) by accessing the U.S. Fish and Wildlife Service (Service) Arcata Field Office’s website (<http://www.fws.gov/arcata/specieslist>) Database.

Table 1: Species Identified as Potentially Occurring in the Korbel and Blue Lake USGS 7.5-minute Quadrangles

Scientific Name	Common Name	Federal Status	Habitat in Proposed Action Area
FISH			
<i>Acipenser medirostris</i>	green sturgeon	T	No
<i>Eucyclogobius newberryi</i>	tidewater goby	E	No
<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	No
<i>Oncorhynchus mykiss</i>	N. CA steelhead	T	No
<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	No
BIRDS			
<i>Brachyramphus marmoratus</i>	marbled murrelet	T	No
<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	No
<i>Strix occidentalis caurina</i>	northern spotted owl	T	No
MAMMALS			
<i>Martes pennanti</i>	fisher, West Coast DPS	C	No

Key:

- (PE) Proposed Endangered – Proposed in the Federal Register as being in danger of extinction
- (PT) Proposed Threatened – Proposed as likely to become endangered within the foreseeable future
- (E) Endangered– Listed in the Federal Register as being in danger of extinction
- (T) Threatened – Listed as likely to become endangered within the foreseeable future
- (C) Candidate – Candidate which may become a proposed species

3.5.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR resulting in no significant impacts to biological resources.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. The Proposed Action would not include activities that would be located within, or in close proximity to, waters of the U.S. or their associated riparian habitat and therefore, the Proposed Action would not impact federally listed fish species that have the potential to occur in the Mad River and Powers Creek. Bald eagles have been sited on an infrequent basis perched in the cottonwood trees along the river, but no evidence of nest building in any area of the parcel has been observed or documented. The construction

activities would be short in duration and the area that would be disturbed during installation of distribution systems would be temporary and returned to the existing conditions following the completion of construction activities. The proposed combination community/irrigation well would be located on previously disturbed land and would not disturb associated habitat utilized for foraging or nesting activities and therefore would not impact bird species. The Proposed Action would not result in short-term or long-term significant impacts to biological resources in the project area or surrounding area. In addition, due to the Proposed Action area being previously disturbed, no wilderness designations or unique ecosystem, biological community or its inhabitants are expected to be impacted by the project.

3.6 Cultural Resources

3.6.1 Affected Environment

A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (NRHP). Those resources that are on, or eligible for inclusion on, the NRHP are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Officer (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

In an effort to identify historic properties, Reclamation reviewed its archaeological site index and project data. A Reclamation Archaeologist also searched the cultural resources files located at the Bureau of Indian Affairs. The entire APE was surveyed by Rohde and Roscoe (2005). No cultural resources were identified. Reclamation sent a letter to the Blue Lake Rancheria on May 24, 2010 to invite their assistance in identifying sites of religious and cultural significance pursuant to the regulations at 36 CFR 800.3(f)(2) and 36 CFR Part 800.4(a)(4). Reclamation consulted with the Tribal Historic Preservation Officer (THPO) on June 2, 2010 regarding a finding that the proposed action will result in no historic properties affected pursuant to 36 CFR Part 800.4(d)(1). The THPO concurred with Reclamations' findings and determination on June 10, 2010.

3.6.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. There are no impacts to cultural resources since there would be no change in operations and no ground disturbance. Conditions related to cultural resources would remain the same as existing conditions.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR. The proposed community/irrigation well would provide a dependable source of water to the BLR for Tribal community use as well as irrigation that would sustain a green belt area and thereby reduce fire danger to the BLR and surrounding area. A cultural resources survey and Tribal consultation failed to identify any historic properties within the project area. Since no historic properties will be affected, no cultural resources will be impacted as a result of implementing Proposed Action.

If previously unidentified cultural resources are discovered during the implementation of this undertaking, the Reclamation Regional Archaeologist would be immediately notified. Reclamation will follow the post review discovery process as outlined in the regulations at 36 CFR Part 800.13.

3.7 Indian Trust Assets

3.7.1 Affected Environment

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individuals. Trust status originates from rights imparted by treaties, statutes, or executive orders. These rights are reserved for, or granted to, tribes. A defining characteristic of an ITA is that such assets cannot be sold, leased, or otherwise alienated without Federal approval.

Indian reservations, rancherias, and allotments are common ITAs. Allotments can occur both within and outside of reservation boundaries and are parcels of land where title is held in trust for specific individuals. Additionally, ITAs include the right to access certain traditional use areas and perform certain traditional activities.

It is Reclamation policy to protect ITAs from adverse impacts resulting from its' programs and activities whenever possible. Types of actions that could affect ITAs include an interference with the exercise of a reserved water right, degradation of water quality where there is a water right or noise near a land asset where it adversely affects uses of the reserved land.

3.7.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR and would not adversely affect ITAs.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well to provide a dependable source of water to the BLR. The nearest ITA is the BLR and therefore, the Proposed action does not have a potential to affect ITAs.

3.8 Environmental Justice

3.8.1 Affected Environment

Executive Order 12898 requires each Federal agency to achieve environmental justice as part of its mission, by identifying and addressing disproportionately high adverse human health or environmental effects, including social and economic effects, of its programs and activities on minority populations and low-income populations of the United States.

3.8.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR and would continue their current operation resulting in no significant impacts to environmental justice.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well to provide a dependable source of water to the BLR. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations. In fact, the Proposed Action would address existing negative effects upon a minority population and improve the standard of living by providing a water source that is of better quality and dependability than their previous source.

3.9 Global Climate Change

3.9.1 Affected Environment

On December 7, 2009, the EPA Administrator found that current and projected concentrations of greenhouse gases (GHGs) threaten the public health and welfare. The Council on Environmental Quality (CEQ) also has issued a memorandum providing guidance on the consideration of the effects of climate change and GHG emissions under NEPA (Sutley 2010). The Draft Guidance suggests that the effects of projects directly emitting GHGs in excess of 25,000 tons annually be considered in a qualitative and quantitative manner.

The State of California also has several programs in place that reduce and minimize GHG emissions. The most stringent of these are EO S-3-05 and Assembly Bill 32 (AB 32). EO S-3-05 is designed to reduce California's GHG emissions to: (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below 1990 levels by 2050. AB 32 sets the same overall reduction goals as EO S-3-05 while further mandating that ARB create a plan, which could include market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

While these federal and state actions represent important GHG reduction efforts, no specific thresholds have been published for determining NEPA effects related to climate change.

3.9.2 Environmental Consequences

No Action

Under the No Action Alternative, BLR would not install a combination community/irrigation well along with associated distribution systems to provide a dependable source of water to the BLR and would have no effect on climate change.

Proposed Action

Under the Proposed Action, the BLR would install a combination community/irrigation well to provide a dependable source of water to the BLR. Construction activities associated with the Proposed Action would generate short-term emissions of ROG, NO_x, CO, PM₁₀, PM_{2.5}, and GHGs. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, and dust from site grading. GHG emissions from construction activities are primarily the result of fuel use by construction equipment and worker trips. These emissions are minuscule compared to state, national, and federal GHG emissions and would cease once construction activities are complete. Moreover, GHG emissions are more appropriately evaluated on a regional, state, or even national scale rather than on an individual project level. The Proposed Action would not result in significant GHG emissions and therefore would not have an individually discernable effect on global climate change.

3.10 Cumulative Effects

The Proposed Action would not result in significant cumulative impacts to surface water resources, groundwater resources, geology and soils, land use, biological resources, cultural resources, ITAs, environmental justice, or global climate change.

Section 4 Consultation and Coordination

While no impacts to endangered species or to historic/cultural resources have been indicated by the Proposed Action, Reclamation is required to comply with various federal laws as part of the Proposed Action.

4.1 Endangered Species Act (16 USC. 1531 et seq.)

Section 7 of this Act requires Federal agencies to ensure that all federally associated activities within the United States do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. Action agencies must consult with the Service, which maintains current lists of species that have been designated as threatened or endangered, to determine the potential impacts a project may have on protected species.

Reclamation determined that the Proposed Action would have no effect on federally proposed or listed threatened and endangered species or their proposed or designated critical habitat. No further consultation is required under Section 7 of the Endangered Species Act.

4.2 Migratory Bird Treaty Act (16 USC § 703 et seq.)

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns. The Proposed Action will be located in an area that would not be utilized by migratory birds. If migratory birds were observed within the proposed project area, construction activities would halt and a biologist would be contacted.

4.3 National Historic Preservation Act (16 USC 470 et seq.)

Section 106 of the National Historic Preservation Act requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological and cultural resources. Due to the nature of the Proposed Action, there would be no impacts to any historical, archaeological or cultural resources, and no further compliance actions are required.

Section 5 List of Preparers and Reviewers

Carolyn Bragg, Natural Resources Specialist, Mid-Pacific Region
Shelly Hatleberg, Natural Resources Specialist, Mid-Pacific Region
Patricia Rivera, Indian Trust Assets, Mid-Pacific Region
Amy Barnes, Archaeologist, Mid-Pacific Region

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USFWS

2010 Species list of threatened or endangered species (candidates included) that have the potential to occur in the Korbel and Blue Lake, California USGS 7.5 minute quadrangle. Accessed on June 24, 2010 from the following website: <http://www.fws.gov/arcata/specieslist/search.asp>

Appendix – A



Photo 1. View of agriculture (pasture) area facing east.



Photo 2. View of agriculture (pasture) area facing northeast.



Photo 3. View of agriculture (pasture) area facing west-southwest.