

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist

Land Use Authorization to U.S. Geological Survey for Seismic Station at Live Oak Camp, Lake Cachuma

CEC-18-028

Prepared by:

Brian Lopez
Brian Lopez
Natural Resources Specialist
South-Central California Area Office

Date: 12/10/2018

Concurred by:

See Attachment A
Archaeologist
Mid-Pacific Regional Office
Regional Archeologist concurred with Item 8. Their determination has been placed within the project file.

Date: See Attachment A

Concurred by:

Lisa Buck
Lisa Buck
Wildlife Biologist
South-Central California Area Office

Date: 12/17/2018

Concurred by:

Rain L. Emerson
Rain L. Emerson
Environmental Compliance Branch Chief
South-Central California Area Office
ITA Designee concurred with Item 11. Their determination has been placed within the project file.

Date: 12/18/2018

Approved by:

Michael P. Jackson
Michael P. Jackson, P.E.
Area Manager
South-Central California Area Office

Date: 12/18/2018



U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

December 2018

Background

The United States Geological Survey (USGS), in collaboration with the California Institute of Technology (Caltech), operates the Southern California Seismic Network to report on earthquake activity. Recently, the USGS has embarked on a multi-year project to install additional seismic sensor stations to enhance earthquake monitoring and early warning in less well-instrumented parts of southern California. The goal is to acquire and transmit real-time, high quality, continuous ground motion data to the processing center at Caltech in Pasadena.

USGS is planning to install seismic stations across the west coast of California as part of a USGS Earthquake Early Warning System (EEWS), and has requested approval from the Bureau of Reclamation (Reclamation) to construct a station on the federally-owned property at Lake Cachuma. The proposed station under review is located near Live Oak Camp (34.5558N, -119.8838W) in Santa Barbara County, California (Figure 1).

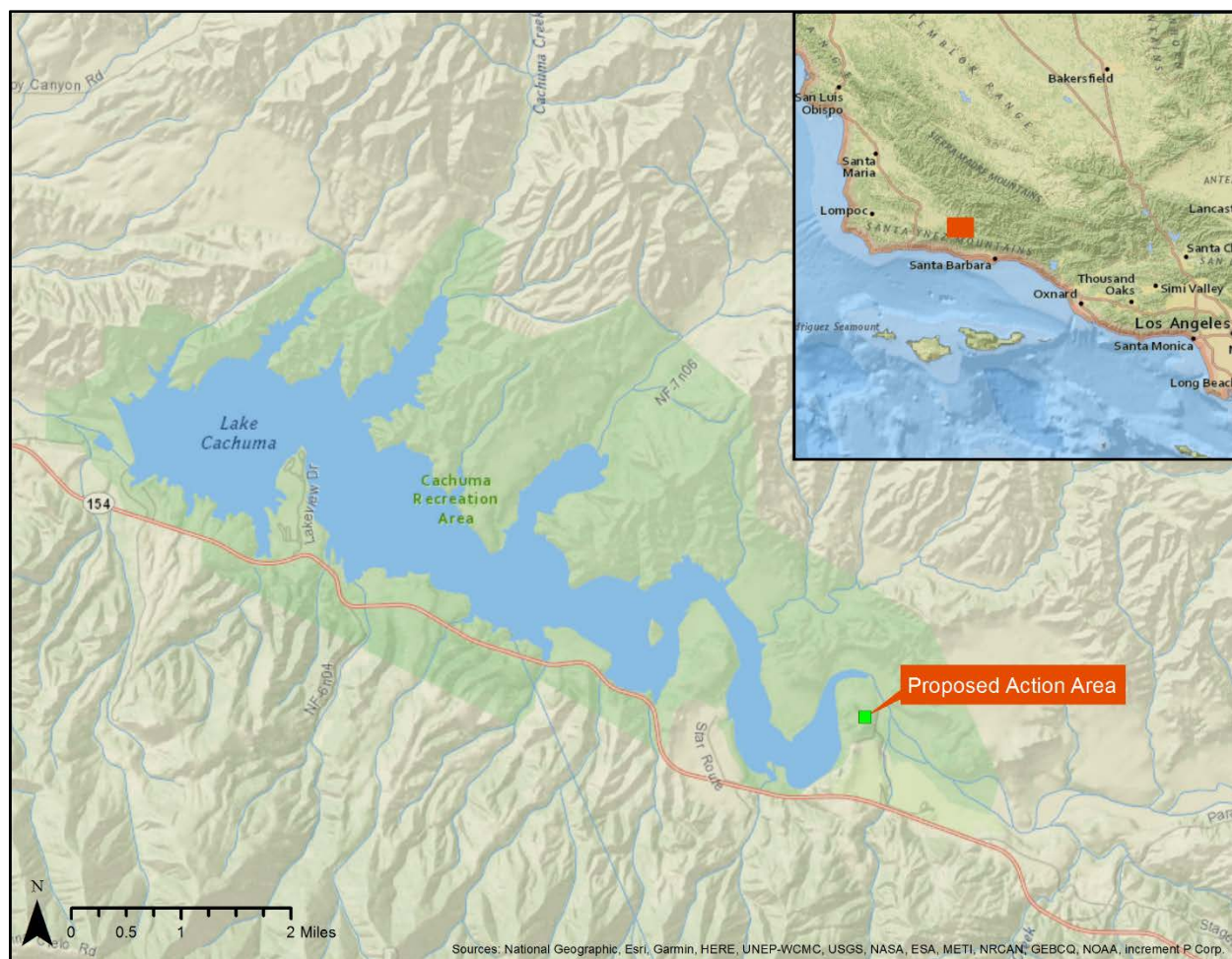


Figure 1 General Vicinity of the Proposed Action

Nature of the Action

Reclamation proposes to issue a 25-year land use authorization to the USGS to install, operate, and maintain a seismic sensor station near Live Oak Camp at Lake Cachuma. The Proposed Action is located within Reclamation's fee-owned property boundary and is located 6.0 miles from Bradbury Dam.

The construction site will be accessed using an existing road and no trees or large shrubs will be disturbed. The solar array will be mounted to a steel enclosure that will house batteries and telemetry equipment, as well as a radio or cell antenna (Figure 2). Concrete pads will be poured for both the steel enclosure and the sensor vault, with concrete mixed onsite.

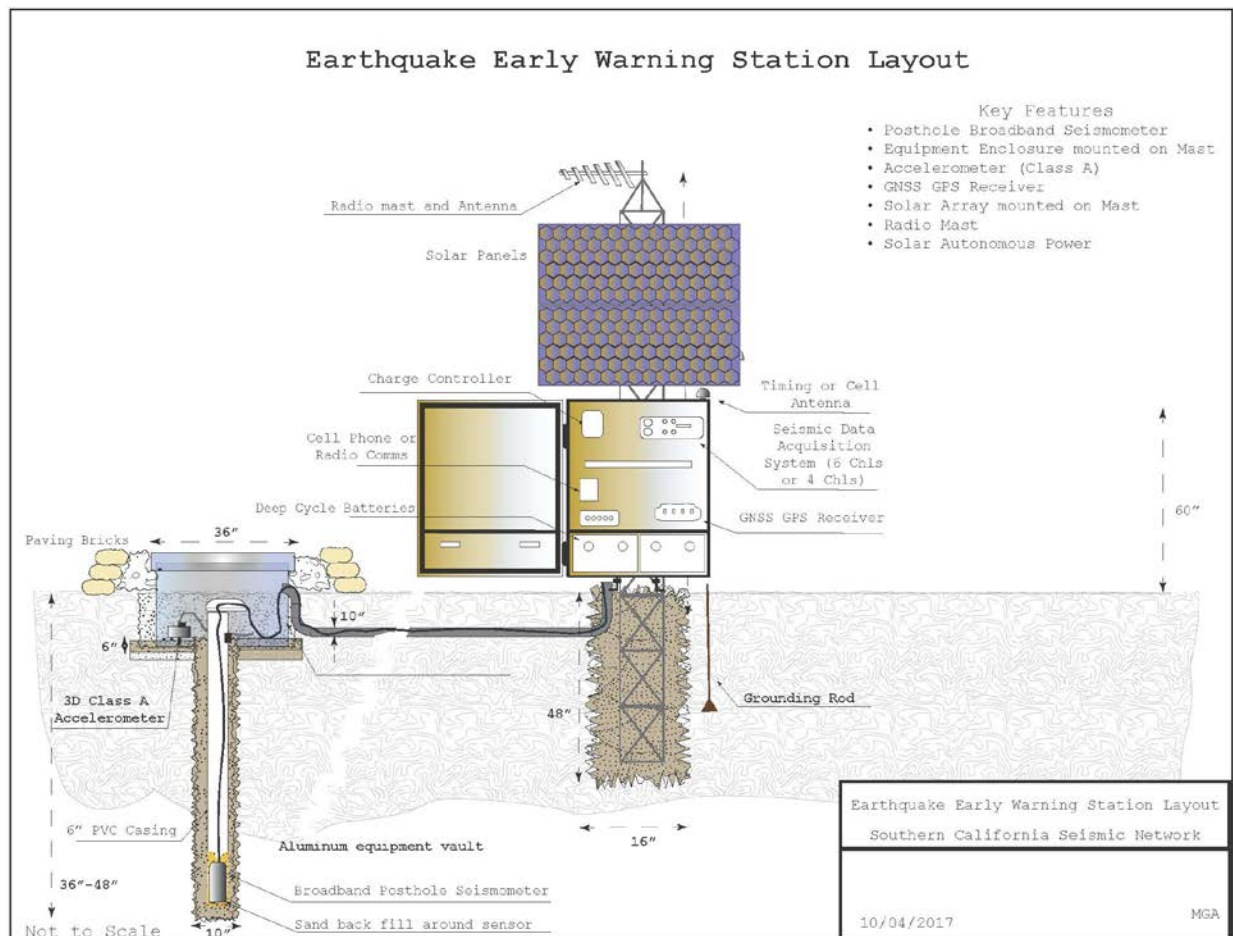


Figure 2 Conceptual Drawing of Sensor Station Layout

Construction will involve minor ground disturbance activities from excavating the sensor vault, anchoring a radio antenna mast and grounding rods, and running a shallow conduit trench between the solar array and the sensor vault. A six-foot tall fence is also proposed to be built around the completed seismic sensor station, with five posts and a gate to allow authorized access to the installed equipment. All excavation will be performed by hand or using a 6-inch

motorized auger in order to minimize ground disturbance. All spoil and excess materials will be removed and disposed of or recycled off-site.

Total excavation dimensions include:

- 1) Approximately 9 feet of conduit trenching at 10 to 12 inches deep.
- 2) A 16-by-16-inch hole at approximately 4 feet deep for anchoring the antenna mast.
- 3) A 10 to 12 inch deep pit by 3 feet in diameter for the sensor vault.
- 4) A narrow pit (10 inch diameter) at the center of the vault to a depth of about 4 feet for the posthole seismometer.
- 5) Five 2-foot deep, 6-inch diameter holes for the fence posts.

Construction is expected to take no more than two days, at which time operation of the seismometer will only require infrequent maintenance or repair while the health of the sensor system is monitored remotely.

Environmental Commitments

The USGS shall implement the following environmental protection measures to avoid environmental consequences associated with the Proposed Action:

- a. In the case that any cultural resources, either surface or subsurface, are inadvertently discovered during Project operations, activities in the area of the inadvertent discovery will cease, and a Reclamation Mid-Pacific Regional archaeologist must be notified. Work will not resume at that location until approved by Reclamation to proceed.
- b. All Project-related vehicle traffic shall be restricted to established access roads and other designated areas.
- c. Work will be avoided during or after significant rainfall. Work shall not begin during rain or when the forecast probability of rain for a workday is 30% or greater. If rainfall greater than 0.5 inches has occurred in the 24 hour period prior to any planned work activity, work shall not begin until the work area has been surveyed to the extent possible for dispersing California red-legged frogs and none have been found present. If rainfall greater than 0.5 inches occurs after work has begun, the work shall be suspended until the rain stops and until after the work area has been re-surveyed to the extent possible for dispersing California red-legged frogs and none have been found present.
- d. Work on the Project shall begin no earlier than a half hour before sunrise and shall cease at least a half hour before sunset.
- e. To prevent inadvertent entrapment of listed species and other wildlife during construction, all excavated steep-walled holes or trenches more than 1 foot deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such trenches or holes are filled, they must be thoroughly inspected for trapped animals.

- f. If the Proposed Action occurs during the nesting season (February 15th – September 15th), then prior to the start of work on the Proposed Action a qualified biologist shall survey the Proposed Action Area, and any areas of suitable nesting habitat immediately adjacent to the Proposed Action, for active nests. If an active nest is found, an appropriate non-disturbance buffer shall be established around the nest until the young have fledged or until the qualified biologist determines that the nest is no longer active.

Environmental consequences for resource areas assume the measures specified would be fully implemented.

Exclusion Category

516 DM 14.5 D (10). *Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where action does not allow for or lead to a major public or private action.*

Evaluation of Criteria for Categorical Exclusion

Below is an evaluation of the extraordinary circumstances as required in 43 CFR 46.215.

Extraordinary Circumstance	No	Uncertain	Yes
1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Extraordinary Circumstance	No	Uncertain	Yes
10. This action would violate a Federal, tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, EO 13112, and 43 CFR 46.215 (l)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NEPA Action: Categorical Exclusion

The Proposed Action is covered by the exclusion category and no extraordinary circumstances exist. The Action is excluded from further documentation in an EA or EIS.

Attachment A: Cultural Resources Determination

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 18-SCAO-119

Project Name: Land Use Authorization to USGS for Installation, Operation, and Maintenance of a Seismic Station at Live Oak Camp, Lake Cachuma, Santa Barbara County, California

NEPA Document: 18-028

NEPA Contact: Brian Lopez

MP-153 Cultural Resources Reviewer: Mark Carper, Archaeologist

Date: November 28, 2018

This proposed undertaking by Reclamation is to authorize the USGS to install, operate, and maintain a seismic sensor station near Live Oak Camp at Lake Cachuma in Santa Barbara County. The proposed project will be constructed on Reclamation-owned land. Reclamation determined that the approval of construction on Reclamation property is an undertaking as defined in 36 CFR § 800.16(y) and a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a).

The proposed installation would entail construction of a steel enclosure which would house batteries and telemetry equipment. A solar array and radio/cell antennae would be mounted to the enclosure. A six-foot-tall fence would be placed around the equipment for security. Construction would involve ground disturbance activities from excavating the sensor vault, anchoring a radio antenna mast and grounding rods, and running a shallow conduit trench between the solar array and the sensor vault. Excavation dimensions include:

1. Approximately 9 feet of conduit trenching at 10 to 12 inches deep;
2. A 16- by 16-inch hole approximately 4 feet deep for anchoring the antenna mast;
3. A 10- to 12-inch-deep by 3-foot-diameter pit for the sensor vault;
4. A 10-inch-diameter pit at the center of the vault to a depth of about 4 feet for the posthole seismometer; and,
5. Five 2-foot-deep by 6-inch-diameter augur borings for the fence posts.

Section 36, Township 6 N., Range 29 W. as depicted on the Lake Cachuma, California, 7.5' USGS topographic quadrangle map. The APE for the proposed project includes the project footprint and staging areas. The proposed APE is approximately 400 square feet (20 feet by 20 feet) in size. The vertical APE will vary, but will have a maximum depth of 4 feet for the seismometer.

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

In an effort to identify historic properties in the APE, Mr. Mark Carper, Reclamation Archaeologist, reviewed the comprehensive records Reclamation retains for the Lake Cachuma Reservoir and adjacent Reclamation-owned lands. In addition, Mr. Jeremy Foin, Reclamation Archaeologist, conducted a pedestrian survey of the proposed APE in September 2018. No cultural resources were identified within the APE.

Pursuant to the regulations at 36 CFR § 800.3(f)(2), Reclamation identified the Santa Ynez Band of Chumash Mission Indians as an Indian tribe who might attach religious and cultural significance to historic properties within the APE. Reclamation sent a letter to the tribe inviting their participation in the Section 106 process, and requesting their assistance in the identification of sites of religious and cultural significance or historic properties that may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(4). To date there have been no concerns expressed, or responses to the letter.

Reclamation initiated consultation with the California State Preservation Office (SHPO) by letter dated October 27, 2018 notifying SHPO of Reclamation's determination of no historic properties affected for the proposed project. SHPO responded by letter dated November 27, 2018 expressing no objection to the proposed APE nor the determination.

Reclamation has concluded the NHPA Section 106 process for this undertaking. After reviewing CEC-18-028 for the proposed project Reclamation concurs with item #8 and finds that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places

This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

Attachment B: State Historic Preservation Office Concurrence



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer

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November 27, 2018

In reply refer to: BUR_2018_1029_001

VIA ELECTRONIC MAIL

Ms. Anastasia T. Leigh, Regional Environmental Officer
U.S. Bureau of Reclamation, Mid-Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825-1898

Subject: Section 106 Consultation: Land Use Authorization to the U.S. Geological Survey;
(USGS) for Installation, Operation, and Maintenance of a Seismic Station at
Live Oak Camp, Lake Cachuma, Santa Barbara County, California (18-SCAO-119).

Dear Ms. Leigh:

The State Historic Preservation Officer (SHPO) received on October 29, 2018 your letter initiating consultation on the above referenced undertaking to comply with Section 106 of the National Historic Preservation Act of 1966 (as currently amended) and its implementing regulations found at 36 CFR Part 800. The U.S. Bureau of Reclamation (Reclamation) proposes to authorize the installation, operation, and maintenance, on federal lands, of a USGS seismic sensor station near Live Oak Camp at Lake Cachuma in Santa Barbara County. Reclamation has reached a finding of *no historic properties affected* and seeks concurrence. The following documentation was provided:

- *USGS Seismic Station Installation at Live Oak Camp, Lake Cachuma Project, Santa Barbara County, California, Project Tracking No: 16-SCAO-119, (M. Carper, September 2018). [US Bureau of Reclamation Mid-Pacific Region, Sacramento, CA].*

Reclamation proposes to issue a 25-year land use authorization to the USGS to place a seismic sensor station within Live Oak Camp at Lake Cachuma. Required work items are construction of a steel enclosure to house batteries and telemetry equipment, which will have a solar array and radio/cell antennae mounted to it. A six-foot-tall fence will surround the equipment for security. Ground disturbance activities are excavating the sensor vault, anchoring a radio antenna mast and grounding rods, and running a shallow conduit trench between the solar array and the sensor vault. Excavation dimensions include:

1. About 9 feet of conduit trenching at 10 to 12 inches deep;
2. A 16- by 16-inch hole around 4 feet deep for anchoring the antenna mast;
3. A 10- to 12-inch-deep by 3-foot-diameter pit for the sensor vault;
4. A 10-inch-diameter pit at the center of the vault to a depth of about 4 feet for the posthole seismometer; and,
5. Five 2-foot-deep by 6-inch-diameter auger borings for the fence posts.

Reclamation has determined that the area of potential effects (APE) is the project footprint and staging areas totaling about 400 square feet (circa 20-by-20 feet in area). The vertical APE will vary by component, but is a maximum of 4 feet for the seismometer pit.

Efforts to identify historic properties included a records search, pedestrian archaeological survey, and consultation with Native Americans. The records search indicated that, while sites have been previously identified in the general vicinity of the project area, no sites had been previously recorded within the project's APE. A comprehensive cultural resources

pedestrian survey, conducted in September 2018, did not identify any potential historic properties within or adjacent to the undertaking's APE.

Reclamation initiated consultation with the Santa Ynez Band of Chumash Mission Indians to request assistance in identifying any properties that may be of cultural or religious significance. Reclamation initially contacted Mr. Freddie Romero, Cultural Resources Coordinator for, and a member of, the Santa Ynez Band Elders Council, by telephone to inform him of the proposed project on August 14, 2018, and sent a letter to the tribe on August 17, 2018, inviting their participation in the Section 106 process. To date there have been no concerns expressed, or responses to the letter. Reclamation will work with the tribe to address any concerns that may arise regarding the proposed undertaking and will make notifications as required.

No historic properties were identified in the APE through the efforts described above and, pursuant to 36 CFR 800.4(d)(1), Reclamation finds that there will be *no historic properties affected* for the undertaking and requests comments on the delineation of the APE and the appropriateness of the historic properties identification efforts. Should any historic property be subsequently discovered during construction, Reclamation states it will comply with 36 CFR 800.13 and consult as required.

After OHP review of the documentation, the following comments are offered:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the APE as defined;
- Pursuant to 36 CFR 800.4(b), Reclamation has documented a reasonable and good faith effort to appropriately identify historic properties;
- Reclamation finds that the proposed undertaking will result in *no historic properties affected*. Pursuant to 36 CFR 800.4(d)(1)(i), **I do not object**.

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800 (as currently amended). Should you require further information, please contact Jeanette Schulz at Jeanette.Schulz@parks.ca.gov or her desk phone is: (916) 445-7031.

Sincerely,



Julianne Polanco
State Historic Preservation Officer