

# RECLAMATION

*Managing Water in the West*

## Categorical Exclusion Checklist

### Additional San Luis Drainage Feature Reevaluation Data Gathering within Westlands Central

CEC-12-097

Prepared by:

  
\_\_\_\_\_  
Rain Healer  
Natural Resources Specialist  
South-Central California Area Office

Date: 04/16/2013

Concurred by:

  
\_\_\_\_\_  
Shauna McDonald  
Wildlife Biologist  
South-Central California Area Office

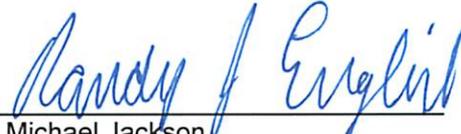
Date: 4/16/13

Concurred by:

  
\_\_\_\_\_  
Chuck Siek  
Supervisory Natural Resources Specialist  
South-Central California Area Office

Date: 4/17/13

Approved by:

for   
\_\_\_\_\_  
Michael Jackson  
Area Manager  
South-Central California Area Office

Date: 4/22/13





## Background

In August 2012, the Bureau of Reclamation (Reclamation) completed a categorical exclusion checklist (CEC-12-013) entitled *San Luis Drainage Feature Reevaluation Data Gathering within Westlands Central* for subsurface data collection within the Westlands Central Drainage Service Areas G and H as well as within the proposed Treatment Plant and evaporation pond/mitigation area in order to complete designs for drainage treatment installation within these areas. Data provided by recent subsurface hydraulic conductivity has indicated that the previously identified Reuse Area H2 and portions of Reuse Area G would not be suitable for reuse and would require reconfiguration; consequently, new locations for Reuse Area H and additional areas for Reuse Area G are needed.

## Purpose and Need for Action

Reclamation needs to determine the suitability of proposed sites for Reuse Areas H and G. The purpose of the Proposed Action is to gather data on the characteristics of the subsurface soil, depth to water, presence of a barrier layer (slow permeable layer), and hydraulic conductivity within the newly proposed Reuse Areas H3 and G2 (Figure 1). Additional geotechnical data is also needed in these areas to determine potential structural footprints.

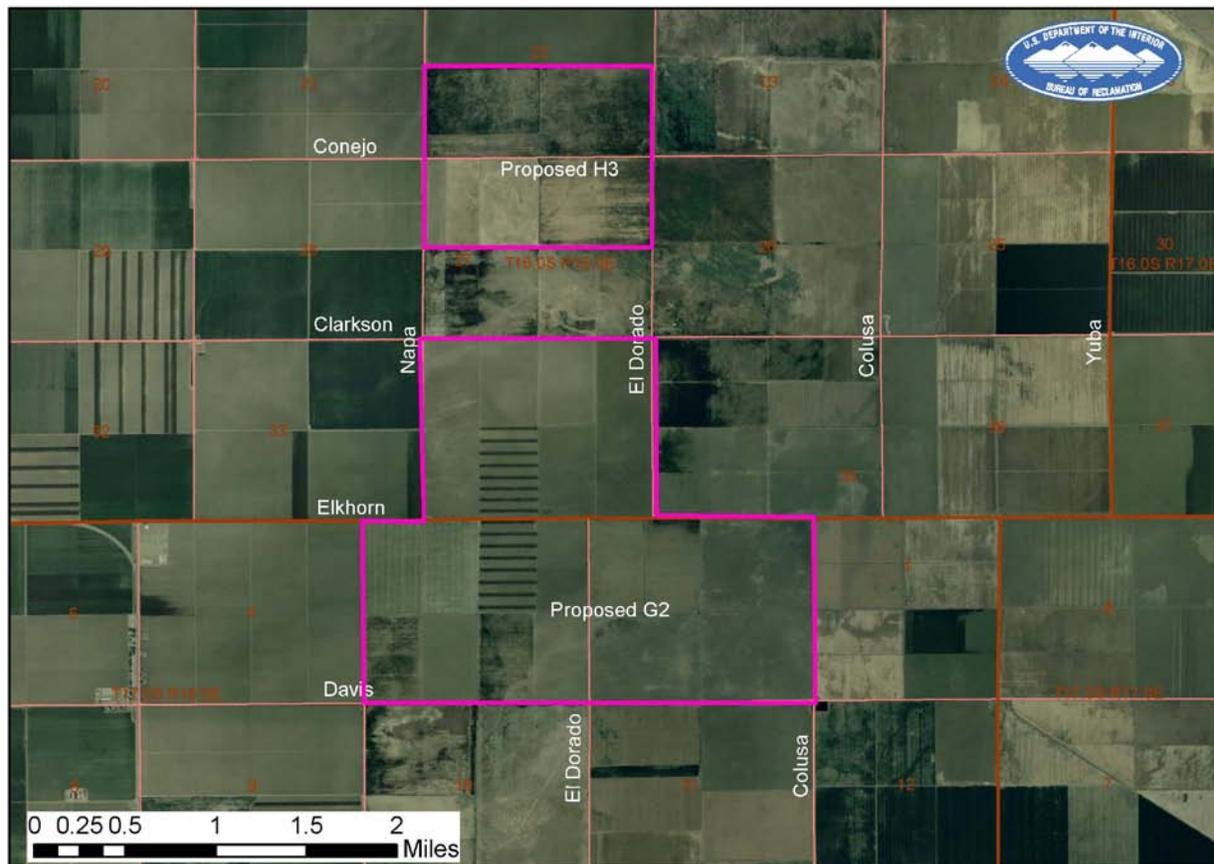


Figure 1 Proposed Reuse Areas H3 and G2

## Proposed Action

Reclamation proposes to conduct subsurface data collection as well as soil resistivity testing within the following proposed Reuse Areas in Westlands Central (see Figure 1):

- Proposed Reuse Area H3<sup>1</sup>
  - (T16S, R16E, southern half of Section 22 and northern half of Section 27)
- Proposed Reuse Area G2
  - (T16S, R16E, Section 34)
  - (T17S, R16E, Section 2 and Section 3)

Data collection would include: hydraulic conductivity testing, standard penetration resistance testing (SPT), hollow stem auger (HSA) testing, test pits, and soil resistivity testing. Methods for conducting these tests are included below. Although, SPT, HSA, and test pit locations are dependent on results of the hydraulic conductivity testing, all proposed test locations would occur within the areas shown in Figure 1. Test locations within this area are subject to change dependent on field conditions; however, relocation of proposed sites would be done within 200 feet of their initial locations within the areas shown in Figure 1.

### Hydraulic Conductivity Tests

Test drilling would involve drilling up to five holes within 50 feet of each other with a truck mounted auger. The first test drill would test the characteristics of the subsurface soil, depth to water, and determine the presence of barrier layer (slow permeable layer). This hole would be between 4.5 and 7.5 inches in diameter and between 20 and 40 feet deep. The other drill holes would be used to test hydraulic conductivity of the soil. These holes would be between 4.5 and 7.5 inches in diameter and up to 15 feet deep. All holes would be backfilled with the excavated native soil. Initial testing would be done over a one-half mile grid at each potential site. Additional testing would be done on a one-quarter mile grid if the initial testing determines that soil conditions vary within the reuse areas.

### Standard Penetration Tests

Eight SPT holes would be drilled by a truck-mounted drill rig. Drill holes would be up to 40 feet deep and approximately 8.5 inches in diameter. Five of the SPT holes would be backfilled with two-inch poly-vinyl chloride slotted pie and sand in order to function as groundwater observation wells. The remaining holes would be backfilled with drill cuttings.

### Hollow Stem Auger Tests

Three HSA holes would be drilled by a truck-mounted drill rig. Drill holes would be up to 20 feet deep and approximately 8.5 inches in diameter. Holes would be backfilled with drill cuttings.

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<sup>1</sup> Please note that what is currently referred to as Reuse Area H3 under the Proposed Action, if found to be suitable, will be re-named Reuse Area H2 in final designs, as it would replace the previous Reuse Area H2 that was found to be unsuitable. If an area found within the proposed Reuse Area G2 is found suitable, this will remain Reuse Area G2 as the previous Reuse Area G that was found suitable has been re-named G1.

### Test Pits

Three test pits would be dug by backhoe. Test pits would be approximately 2.5 feet wide, 20 feet long and up to 17 feet deep. All pits would be backfilled with the excavated native soil.

### Soil Resistivity Testing

Soil resistivity testing would involve inserting transmitter electrodes several inches into the ground to measure the electric potential of the soil.

Proposed test locations would occur within the areas shown in Figure 1; however, test locations are subject to change dependent on field conditions. Relocation of proposed test sites would be done within 200 feet of the proposed locations.

## Environmental Commitments

Reclamation shall implement the following environmental protection measures:

Resource	Protection Measure
Biological Resources	Preconstruction surveys and implementation of avoidance and minimization measures for burrowing owl (CDFG 2012).
Biological Resources	Preconstruction surveys and implementation of avoidance and minimization measures for San Joaquin kit fox (USFWS 2011).
Cultural Resources	If human remains or previously unidentified cultural resources are discovered during the implementation of this action, Reclamation has additional responsibilities pursuant to the Native American Graves Protection and Repatriation Act and/or Section 106 responsibilities pursuant to §800.13. If these resources are identified, please stop work immediately in the area of the discovery and contact Reclamation Regional Archaeologist, Laureen Perry, on how to proceed.

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

## Exclusion Category

516 DM 14.5 paragraph B (3): *Data collection studies that involve test excavations for cultural resources investigations or test pitting, drilling, or seismic investigations for geologic exploration purposes where the impacts will be localized.*

## Evaluation of Criteria for Categorical Exclusion:

- |   |    |                                     |           |                          |     |                          |
|---|----|-------------------------------------|-----------|--------------------------|-----|--------------------------|
| 1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3).   | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).  | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <input type="checkbox"/> |
| 3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)).  | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)). | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).   | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).  | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).  | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).  | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <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)).   | No | <input checked="" type="checkbox"/> | Uncertain | <input type="checkbox"/> | Yes | <input type="checkbox"/> |

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)). No  Uncertain  Yes
11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993). No  Uncertain  Yes
12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)). No  Uncertain  Yes
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)). No  Uncertain  Yes
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)). No  Uncertain  Yes

Regional Archeologist concurred with Item 8. Their determination has been attached.

ITA Designee concurred with Item 11. Their determination has been attached.

Area Office Biologist concurred with Item 9. Their determination has been placed within the project file.



## United States Department of the Interior

BUREAU OF RECLAMATION  
Mid-Pacific Regional Office  
2800 Cottage Way  
Sacramento, California 95825-1898

IN REPLY  
REFER TO:  
MP-153  
ENV-3.00

VIA ELECTRONIC MAIL ONLY

April 12, 2013  
MEMORANDUM

To: Rain Healer  
Natural Resources Specialist – Central California Area Office

From: Amy J. Barnes /S/  
Archaeologist – Division of Environmental Affairs

Subject: 12-SCAO-103.1: Additional San Luis Drainage Feature Reevaluation Data Gathering within Westlands Central (CEC12-097)

This proposed undertaking by Reclamation to conduct subsurface geologic and hydrologic data collection within the Westlands Water District (WWD) Central Drainage Service Areas G and H located about 20 miles southwest of Fresno, California was determined to be the type of action that has the potential to cause effects to historic properties pursuant to 36 CFR §800.3 of the Section 106 implementing regulations. As a result of this determination, Reclamation implemented the steps in the Section 106 process as outlined at §800.3 to §800.6.

The proposed geotechnical investigation will involve drilling a series of approximately 100 bore holes and excavating 3 test pits at 90 locations in WWD reuse areas G2 and H3 to collect information regarding hydraulic conductivity and soil characteristics. Ninety bore holes (measuring 4.5 inches and 6.5 inches in diameter), and 7 standard penetration test holes and three hollow stem auger holes (all measuring 8.5 inch in diameter), will be drilled to depths between 20 and 40 feet. All of the test drilling will be done by a truck-mounted auger. The test pits will be excavated by a backhoe and will measure approximately 2.5 feet wide, 20 feet long, and up to 17 feet deep. All holes will be backfilled with the excavated native soil. A ground water observation well, consisting of a pipe and locking cap, will be installed in four of the test holes. Each site will be accessed by established roads and/or driving over existing fields. Reclamation determined that the area of potential effects (APE) for this undertaking includes a 200-foot diameter work area at each of the 90 geotechnical test sites, totally approximately 65 acres. These testing locations are located in sec. 22, 27, 34, and 35 in T. 16 S., R. 16 E. and sec. 2 and 3 in T. 17 S., R. 16 E., Mount Diablo Meridian, as depicted on the San Joaquin and Westside 7.5' U.S. Geological Survey topographic quadrangle maps.

The historic property identification efforts included a cultural resources survey report prepared by Reclamation for the proposed project, which documented no cultural resources identified within the APE. Based on the information provided in the Reclamation cultural resources reports, Reclamation determined that no historic properties will be affected by this undertaking. Utilizing these identification efforts, Reclamation entered into consultation with the California State Historic Preservation Officer (SHPO) on March 29, 2013, seeking their concurrence on a finding of “no historic properties affected §800.4(d)(1).” SHPO concurred with Reclamations’ findings and determination on April 5, 2013 (consultation attached).

I have reviewed CEC-12-097, dated March 2013, and I concur with item 8 which states that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places. Please keep in mind that there is the potential for inadvertent discoveries. If human remains or previously unidentified cultural resources are discovered during the implementation of this action, Reclamation has additional responsibilities pursuant to the Native American Graves Protection and Repatriation Act and/or Section 106 responsibilities pursuant to §800.13. If these resources are identified, please stop work immediately in the area of the discovery and contact Reclamation Regional Archaeologist, Laureen Perry, on how to proceed.

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 additional consultation with the SHPO, may be necessary. Thank you for providing the opportunity to comment.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150), Rain Healer – Natural Resources Specialist (SCC-413), Sheryl Carter – Land Resource Management Division Chief (SCC-105), William R Vanderwaal – Project Manager/Civil Engineer (CO-122), Rodger Burnett – Civil Engineer (TSC 86-68210), Steve Dalton – Geologist (MP-230)

BUREAU OF RECLAMATION  
EDMUND G. BROWN, JR.,

APR 11 2013

CODE	150	✓ Barnes
DATE		4-12-13

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

1725 23<sup>rd</sup> Street, Suite 100  
SACRAMENTO, CA 95816-7100  
(916) 445-7000 Fax: (916) 445-7053  
calshpo@parks.ca.gov / www.ohp.parks.ca.gov

Reply in Reference to: **BUR120817A**

April 5, 2012 / 2013?

Anastasia Leigh - Regional Environmental Officer  
United States Department of the Interior  
Bureau of Reclamation, Mid-Pacific Regional Office  
2800 Cottage Way  
Sacramento, CA 95825-1898

Re: Section 106 consultation for the *Geotechnical Investigations for the San Luis Drainage Feature Re-evaluation (SLDFR) Project, Fresno County, California (12-SCAO-103.1)*

Dear Ms. Leigh:

Thank you for your letter of 29 March 2013 continuing consultation pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act. BUR determined the above cited action is a Federal undertaking and is requesting my comments on the Area of Potential Effect (APE), historic property identification efforts, and concurrence on a finding of "No Historic Properties Affected."

As requested in your initial 17 August 2012 consultation for the proposed geologic and hydrologic study; my comments on the APE and historic property identification efforts, and concurrence on a finding of "No Historic Properties Affected" were provided in a letter of 23 August 2012 (BUR120817A). Presently, BUR proposes to expand the undertaking by 90 test locales laid out on an approximate 0.25-mile grid within the (agricultural) Westlands Water District (WWD) G2 and H3 areas. The study resulted from a court order for BUR to achieve a long-term sustainable balance of salt and water in the root zone of irrigated lands and will aid in the design of the San Luis Drainage Feature Re-evaluation (SLDFR) Project. Project work involves drilling 100 bore holes to depths between 20 and 40-ft with auger bits ranging between 4.5 and 8.5-in in diameter, and digging three test trenches approximately 2.5-ft wide by 20-ft long by 17-ft deep. All equipment will be transported on trucks and tractors using existing roads or moving cross-country over agricultural fields for project access. BUR determined the APE includes a 200-ft diameter work area encompassing each of the 90 test locales. The APE is depicted in Figures 2 and 3 of the following study you provided as evidence of historic property identification and evaluation work:

- *Reclamation, Managing Water in the West, MP-153 Cultural Resources Post Field Summary Record (BUR/Barnes 2013)*

The above study relied on work completed for the aforementioned 2012 submittal, field-survey of approximately 73% of the APE (with 18-acres inaccessible due to active crop production), and consultation with BUR identified Native American (NA) contacts. Based on the negative results of geotechnical work completed in 2012, BUR determined the APE has low potential for buried deposits. BUR did not fully describe the nature of the 2012 geotechnical work. BUR has received no responses from NA contacts and will take into consideration any comments they may provide. This work identified no cultural resources.

My following comments are based on a review of submitted materials:

Classification	ENV-3.00
Project	214
Control No.	13016351
Folder I.D.	1222172
Date Input & Initials	4-11-13 RM

SCANNED

1. Pursuant to 36 CFR Parts 800.4(a)(1), I have no objections to the *APE* delineation;
2. Pursuant to 36 CFR Part 800.4(b)(1), I find the *Level of Effort* identifying historic properties appropriate but add the following remarks;
  - In future submittals to my office, BUR should either consult with contacts identified by the Native American Heritage Commission (NAHC) or provide evidence why contacts identified by your agency take precedence in Native American (NA) consultation efforts.
  - Testing methodologies from prior submittals are not archived in my office. As such, in future submittals please provide or summarize quantitative data and geographical relevance of referenced studies, such as the 2012 geotechnical work discussed in the current submittal.
3. Pursuant to 36 CFR Part 800.4(d)(1), I concur with "*No Historic Properties Affected*" but add the following remark;
  - BUR should monitor a sample of geotechnical work in the 18-acres of the APE that could not be surveyed due to active crop production.

I look forward to reviewing future consultations on the proposed undertaking and be aware you may have additional responsibilities under Section 106 with conditions such as changes in the project scope or unanticipated discoveries. Thank you for including historic properties and my comments in your project planning. Please direct questions to Jeff Brooke at (916) 445-7003/[jbroke@parks.ca.gov](mailto:jbroke@parks.ca.gov).

Sincerely,



Carol Roland-Nawi, PhD  
State Historic Preservation Officer



Healer, Rain &lt;rhealer@usbr.gov&gt;

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## CEC-12-097 For Review

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RIVERA, PATRICIA <privera@usbr.gov>  
To: "Healer, Rain" <rhealer@usbr.gov>

Mon, Apr 15, 2013 at 12:53 PM

Rain,

I reviewed the proposed action to conduct subsurface data collection within the following proposed Reuse Areas in Westlands Central:

- Proposed Reuse Area H3
  - (T16S, R16E, southern half of Section 22 and northern half of Section 27)
- Proposed Reuse Area G2
  - (T16S, R16E, Section 34)
  - (T17S, R16E, Section 2 and Section 3)

Data collection would include: hydraulic conductivity testing, standard penetration resistance testing (SPT), hollow stem auger (HSA) testing, test pits, and soil resistivity testing. Methods for conducting these tests are included below. Although, SPT, HSA, and test pit locations are dependent on results of the hydraulic conductivity testing, all proposed test locations would occur within the areas shown in Figure 1. Test locations within this area are subject to change dependent on field conditions; however, relocation of proposed sites would be done within 200 feet of their initial locations.

### Hydraulic Conductivity Tests

Test drilling would involve drilling up to five holes within 50 feet of each other with a truck mounted auger. The first test drill would test the characteristics of the subsurface soil, depth to water, and determine the presence of barrier layer (slow permeable layer). This hole would be between 4.5 and 7.5 inches in diameter and between 20 and 40 feet deep. The other drill holes would be used to test hydraulic conductivity of the soil. These holes would be between 4.5 and 7.5 inches in diameter and up to 15 feet deep. All holes would be backfilled with the excavated native soil. Initial testing would be done over a one-half mile grid at each potential site. Additional testing would be done on a one-quarter mile grid if the initial testing determines that soil conditions vary within the reuse areas.

### Standard Penetration Tests

Eight SPT holes would be drilled by a truck-mounted drill rig. Drill holes would be up to 40 feet deep and approximately 8.5 inches in diameter. Groundwater observation wells would be installed in five of the holes. The remaining holes would be backfilled with drill cuttings.

### Hollow Stem Auger Tests

Three HSA holes would be drilled by a truck-mounted drill rig. Drill holes would be up to 20 feet deep and approximately 8.5 inches in diameter. Holes would be backfilled with drill cuttings.

**Test Pits**

Three test pits would be dug by backhoe. Test pits would be approximately 2.5 feet wide, 20 feet long and up to 17 feet deep. All pits would be backfilled with the excavated native soil.

**Soil Resistivity Testing**

Soil resistivity testing would involve inserting transmitter electrodes several inches into the ground to measure the electric potential of the soil.

Proposed test locations would occur within the areas shown in Figure 1; however, test locations are subject to change dependent on field conditions. Relocation of proposed test sites would be done within 200 feet of the proposed locations.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Santa Rosa Rancheria approximately 29 miles southeast of the project location.

Patricia Rivera  
Native American Affairs Program Manager  
US Bureau of Reclamation  
Mid-Pacific Region  
2800 Sacramento, California 95825  
(916) 978-5194