

RECLAMATION

Managing Water in the West

Environmental Assessment

Installation of SatLink2 on Flow Measurement Devices in Truckee- Carson Irrigation District

16-08-MP

**WaterSMART: Water and Energy
Efficiency Grant No. R15AP00094**

**U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region**



March 2016

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated 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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Section 1 Introduction

1.1 Background

This Environmental Assessment (EA) examines the potential direct, indirect, and cumulative impacts to the affected environment associated with the U.S. Bureau of Reclamation (Reclamation) providing WaterSMART: Water and Energy Efficiency Grant funding to the Truckee-Carson Irrigation District (TCID) in Churchill County, Nevada (Figure 1) for the installation of 50 SatLink2 devices that allows remote monitoring of irrigation water deliveries. Reclamation provides WaterSMART funding to entities with water or power delivery authority that propose projects seeking to conserve and use water more efficiently.

TCID consists of the Carson Division and the Truckee Division. (Figure 2). The Carson Division consists of the water rights supported by the Lahontan Reservoir. The Truckee Division is supported entirely by diversions from the Truckee River into the Truckee Canal. The proposed action is within the Carson Division, which serves approximately 1800 water users.

1.2 Need for the Proposal

The proposed action would save water by increasing system efficiency. The installation of SatLink2 devices at the water meters would reduce spills or over-deliveries and ultimately the amount of water released from Lahontan Reservoir. The metered data is currently downloaded after the delivery, usually after several deliveries on the same lateral. A District employee drives to the meter and downloads the data onto a card that is brought back to the office and loaded onto a computer. The time lapse between delivery and download can be as much as a couple of weeks or more. There is no time to manage and analyze the data to fix inefficiencies until the end of the year. With the SatLink2, each delivery could be downloaded within an hour from a water delivery. This would help TCID analyze the data to determine the efficiency of a specific delivery system and the timing of deliveries on that system and thus significantly reduce the losses from spilling.

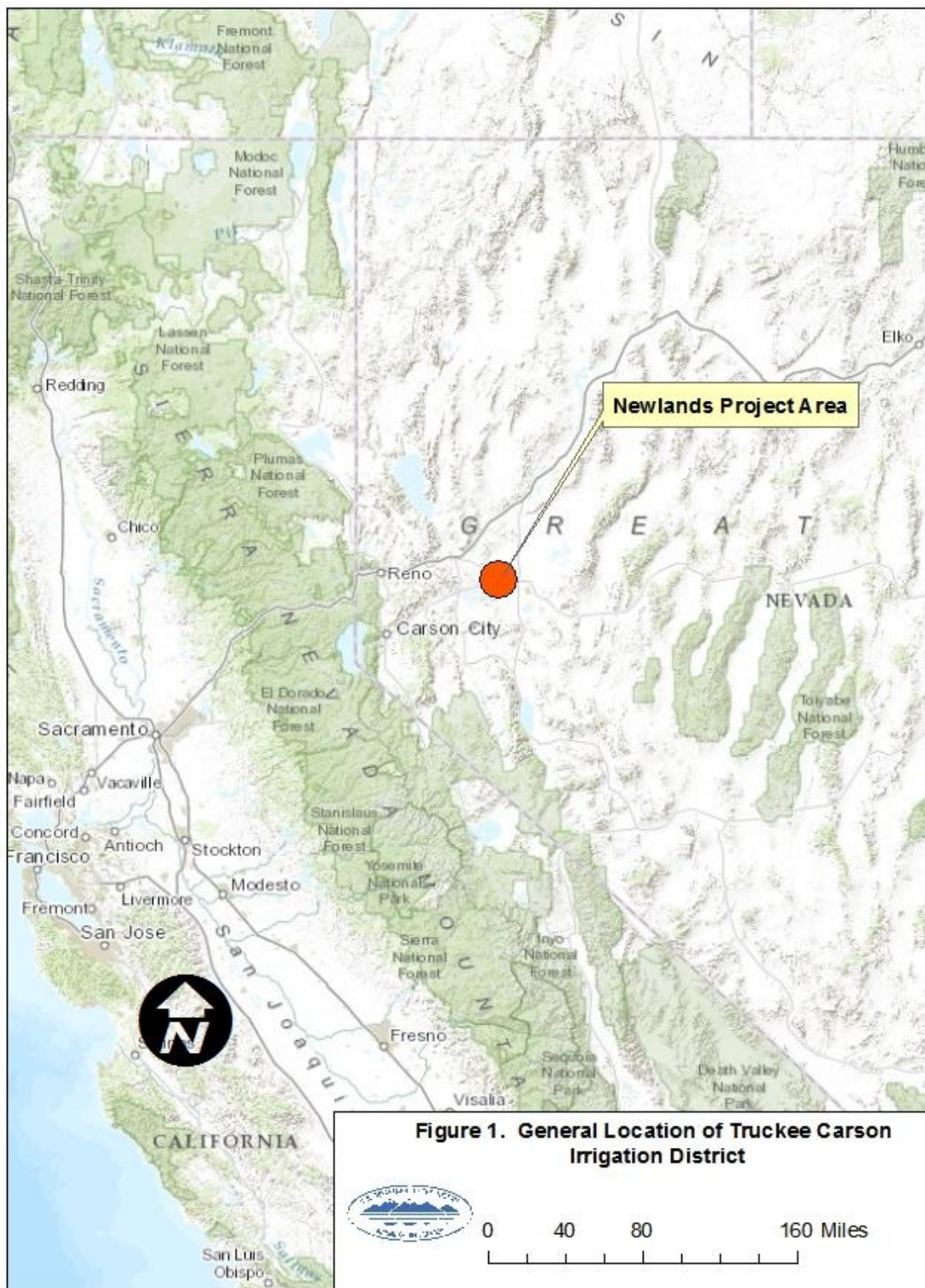


Figure 1. General Location Map

Section 2 Proposed Action and Alternatives

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award a WaterSMART Water and Energy Efficiency Grant to TCID to partially fund installing fifty SatLink2 devices to allow remote monitoring of irrigation water deliveries. If TCID could not get additional funds, devices would only be installed on some of the meters or none at all.

2.2 Proposed Action Alternative

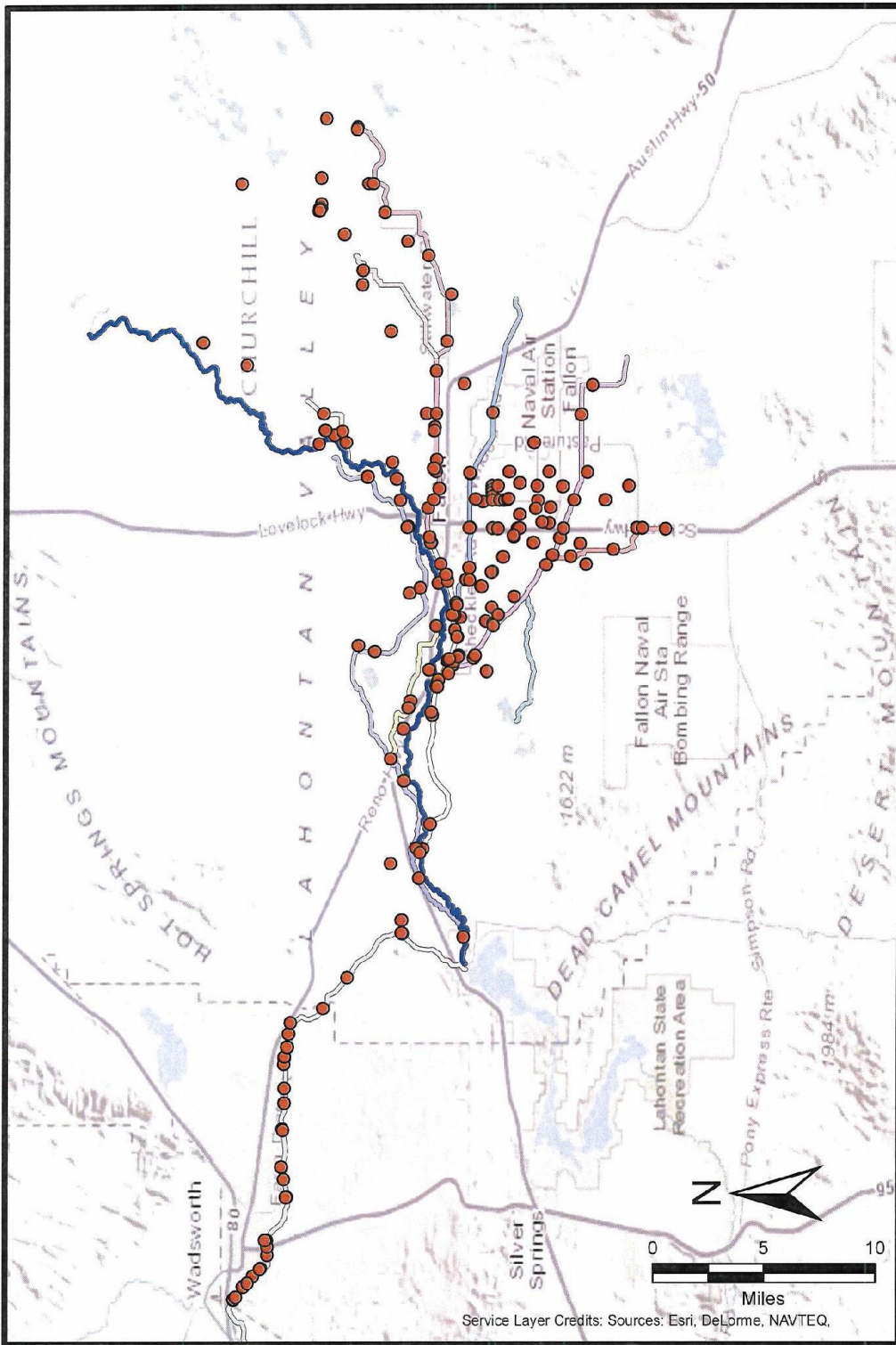
Under the Proposed Action Alternative, Reclamation would award a WaterSMART Water and Energy Efficiency Grant of \$97,769 to TCID to partially fund installing 50 SatLink2 devices to allow remote monitoring of irrigation water deliveries.

There are 130 meters in TCID. (See Figure 3). TCID would install SatLink2 devices at 50 of the meters in the Carson on lands under the jurisdiction of Reclamation. This would allow the District to monitor water deliveries and flows within an hour of the delivery. The devices would be solar powered. The automatic SatLink2 monitoring would replace the current use of a truck to drive to each of the 50 meters to manually download data each day. The fifty meters selected for the project measure deliveries for approximately 312 farms in the Newlands Project with a total of 17,340 irrigated acres.

The proposed action would allow TCID to manage the water delivered to the 312 farms served by these meters more efficiently and reduce spills, while using renewable energy to power the SatLink2. The SatLink2 devices would be installed as follows:

- Program each of the SatLink2's with GPS co-ordinates for each of the selected sites.
- Installation of SatLink2 hardware and GOES-YAGI antenna in each of the fifty water meters.
- Connection to the new equipment to the solar panels
- Download or check meter data from the GOES web site.
- Documentation of on-site changes to the original construction documents, to include photos, electrical schematics, programming, and drawings
- Integration of operation and maintenance into current standard operation procedures for meter delivery process training.
- Progress reports completed semi-annually.

The programming and installation would take about two man-hours per meter. Most of the installations could be conducted whether or not there is water in the canal. Installation could be completed in one year but documentation and training to operational personnel would extend this to greater than a year.



Approximate Location of Metering Devices

Figure 3. Approximate Locations of Metering Devices in TCID

Section 3 Affected Environment & Environmental Consequences

3.1 No Action Alternative

The No Action Alternative would consist of Reclamation not providing financial assistance to the TCID for installing 50 SatLink2 devices. If TCID could not get additional funds, devices would only be installed on some of the meters at this time, postponing installation on other meters. If installed on some of the meters, the improvements to water supply and fish discussed in Section 1.2 would only partially occur at this time.

3.2 Proposed Action

3.2.1 Water Resources

The Proposed Action would improve operational efficiencies by reducing spills or over delivery. It would reduce the water released from Lahontan Reservoir by about 9,146 acre feet per year. The percentage of annual conserved water relative to total water supply would be about 4.5 percent.

3.2.2 Biological Resources

Listed or proposed threatened or endangered species in the project area are the threatened yellow-billed cuckoo (*Coccyzus americanus*), the endangered cui-ui (*Chasmistes cujus*), and the threatened Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*) (See appendix A). The proposed action would not adversely affect these species or any other biological resources because the SatLink2 devices would be installed within the easements and structures of the current canals, laterals and water meters. They would be installed on the current water measurement devices with no new construction.

The proposed action may benefit fish through reduced releases to the canal; therefore, less water would be required from the Truckee River. The increased flows of the Truckee River into Pyramid Lake may benefit the needs for habitat and spawning for the Lahontan cutthroat trout and cui-ui.

3.2.3 Cultural Resources

Portions of the Newlands Project are listed on the National Register of Historic Places (National Register), including Derby, Carson, and Lahontan dams. Additional properties associated with the Newlands Project, including segments of the Truckee Canal, L-Line Canal, and V-Line Canal have been determined eligible for listing on the National Register in consensus determinations with the State Historic Preservation Officer (SHPO). Following review of the proposed project, Reclamation has determined that the proposed action is the type of activity that does not have the potential to cause effects on historic properties pursuant to 36 CFR §800.3(a)(1). No new construction or ground disturbing activities are currently proposed for this project. If the

proposed action changes, additional review under Section 106 will be required. Based on this analysis, there will be no impacts to cultural resources (See Appendix B).

3.2.4 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. There are no Indian reservations, rancherias or allotments in the project area. The nearest ITA is the Fallon Reservation/Paiute-Shoshone Tribe of the Fallon Reservation and Colony approximately 9.62 miles northeast of the Proposed Action. The Proposed Action does not have a potential to affect ITAs. (See Appendix C).

3.2.5 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." The Proposed Action would not affect or prohibit access to and ceremonial use of Indian sacred sites.

3.2.6 Environmental Justice

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Reclamation has not identified adverse human health or environmental effects on any population as a result of implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area.

3.2.7 Energy

The proposed action would reduce the use of fossil fuels as TCID personnel would not have to drive to the fifty measuring devices to download the measurement data. This is currently being done about once every two weeks or following a water delivery using each meter.

Section 4 Consultation and Coordination

Reclamation consulted with the Truckee-Carson Irrigation District for the preparation of this EA.

Reclamation is making the EA available for public review for a 15-day comment period. Additional analysis would be prepared if substantive comments identify impacts that were not previously analyzed or considered.

Appendix A. Endangered Species List



United States Department of Interior
Fish and Wildlife Service

Project name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson
Irrigation District

Official Species List

Provided by:

Nevada Fish and Wildlife Office
1340 FINANCIAL BOULEVARD, SUITE 234
RENO, NV 89502
(775) 861-6300
<http://www.fws.gov/nevada/>

Consultation Code: 08ENV D00-2016-SLI-0047

Event Code: 08ENV D00-2016-E-00043

Project Type: Federal Grant / Loan Related

Project Name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson
Irrigation District

Project Description: Bureau of Reclamation proposes to provide a WaterSMART: Water and
Energy Efficiency Grant grant to the Truckee-Carson Irrigation District (TCID) in Churchill
County, Nevada for the installing 50 SatLink2 devices that allows remote monitoring of irrigation
water deliveries to conserve and use water more efficiently.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it
may be different from what was submitted in your previous request. If the Consultation Code
matches, the FWS considers this to be the same project. Contact the office in the 'Provided by'
section of your previous Official Species list if you have any questions or concerns.

<http://ecos.fws.gov/ipac>, 10/28/2015 02:37 PM



United States Department of Interior
Fish and Wildlife Service

Project name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson
Irrigation District

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-119.31015014648438 39.65328414777011, -119.35409545898436 39.579231826349016, -118.87069702148436 39.436192999314066, -118.76220703125001 39.29285986803579, -118.63861083984376 39.40967202224426, -118.65646362304688 39.45634219194744, -118.47244262695312 39.55382422395819, -118.48480224609375 39.61626788999701, -118.73611450195312 39.49662308526199, -118.66744995117186 39.58029027440865, -118.74710083007814 39.600397716215824, -118.82125854492186 39.5146359327835, -118.82125854492186 39.512517016596355, -119.31015014648438 39.65328414777011)))

Project Counties: Churchill, NV | Lyon, NV | Storey, NV | Washoe, NV

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United States Department of Interior
Fish and Wildlife Service

Project name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson
Irrigation District

Endangered Species Act Species List

There are a total of 3 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>) Population: Western U.S. DPS	Threatened	Proposed	
Fishes			
cui-ui (<i>Chasmistes cujus</i>) Population: Entire	Endangered		
Lahontan cutthroat trout (<i>Oncorhynchus clarkii henshawi</i>) Population: Entire	Threatened		

<http://ecos.fws.gov/ipac>, 10/28/2015 02:37 PM



United States Department of Interior
Fish and Wildlife Service

Project name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson
Irrigation District

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Appendix B. Cultural Resources Compliance

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 15-LBAO-204

Project Name: Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson Irrigation District

NEPA Document: EA

NEPA Contact: Doug Kleinsmith, Natural Resources Specialist

MP-153 Cultural Resources Reviewer: BranDee Bruce, Architectural Historian

Date: October 27, 2015

Reclamation proposes to provide TCID grant monies for the installation of SatLink2 on existing flow measurement devices through the Newlands Project. The proposed action will include the installation of SatLink2 at 50 of the existing 130 meters that are already situated throughout the Newlands Project and their connection to already existing solar power at each location. No new construction or ground disturbing activities at existing facilities will take place as part of the proposed action.

Reclamation has determined that the proposed action is the type of undertaking that does not have the potential to cause effects on historic properties, should such properties be present, pursuant to 36 CFR § 800.3(a)(1). As such, Reclamation has no further obligations under 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA).

This document conveys the completion of the cultural resources review and NHPA Section 106 process for this undertaking. The proposed action would result in no impacts to cultural resources. Please retain a copy with the administrative record for the proposed action. Should the proposed action change, additional review under Section 106, possibly including consultation with the State Historic Preservation Officer, may be required.

Appendix C. Indian Trust Assets Compliance

**Indian Trust Assets
Request Form (MP Region)**

Submit your request to your office's ITA designee or to MP-400, attention Deputy Regional Resources Manager.

Date:

Requested by (office/program)	Doug Kleinsmith
Fund	15XR0680A1
WBS	RY30180006TCINV0E
Fund Cost Center	2015200
Region # (if other than MP)	
Project Name	Installation of SatLink2 on Flow Measurement Devices in Truckee-Carson Irrigation District
CEC or EA Number	
Project Description (attach additional sheets if needed and include photos if appropriate)	Reclamation would provide \$97,769.13 to TCID to partially fund installing fifty SatLink:2 devices to allow remote monitoring of irrigation water deliveries. This project would improve operational efficiencies by reducing spills or over-delivery of water. Improved efficiency ultimately reduces releases of stored water in Lahontan Reservoir. All work would be conducted within the easements and structures of the current canals, laterals and water meters. The SatLink2 would be installed in the current water measurement devices with no new construction.
*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)	Metering devices extend from Wadsworth to vicinity of Fallon with the center at: Long: -118.7 Lat: 39.4

/s/Doug Kleinsmith
Signature

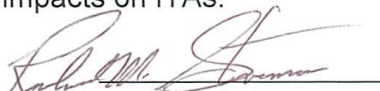
Doug Kleinsmith
Printed name of preparer

9/24/15
Date

ITA Determination:

The closest ITA to the proposed SatLan:2 Installation sites activity is the Fallon Reservation/ Paiute-Shoshone Tribe of the Fallon Reservation and Colony, Nevada about 9.62 miles to the northeast (see attached image).

Based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action will not have any impacts on ITAs.


Signature

Richard M. Stevenson
Printed name of approver

Sept 24, 2015
Date

