

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist

San Joaquin River Restoration Program: Installation Of Piezometers in the Restoration Area to Measure Groundwater Levels Adjacent to Established Vegetation Monitoring Transects in 2014

MP-CEC-14-03

Prepared by:

Douglas Kleinsmith

Date: 7/25/14

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Natural Resources Specialist
Mid-Pacific Regional Office

Concurred by:

See Appendix A

Date: _____

Mark Carper
Archaeologist
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Concurred by:

See Appendix C

Date: _____

Patricia Rivera
Native American Affairs Program Manager
Mid-Pacific Regional Office

Concurred by:

Erin Rice for

Date: 29 July 14

Erin Rice
Natural Resources Specialist
San Joaquin River Restoration Program

Approved by:

Alicia Forsythe
Acting

Date: 7-29-14

Alicia Forsythe
Program Manager
San Joaquin River Restoration Program



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

July 2014

Proposed Action

The Bureau of Reclamation proposes to install 20 additional piezometers in the San Joaquin River Restoration Area to measure groundwater levels adjacent to established vegetation monitoring transects. (See Attachment A for location maps.)

Exclusion Category

516 DM 14.5 A.3: Research activities, such as nondestructive data collection and analysis, monitoring, modeling, laboratory testing, calibration, and testing of instruments or procedures and nonmanipulative field studies.

Background

Friant Dam operations, agricultural development, and construction, operation, and maintenance of the flood control system modified riparian vegetation adjacent to the San Joaquin River. In Water Year 2010, the San Joaquin River Restoration Program began releasing Interim Flows which rewetted several dry portions of the channel and contributed to near-river groundwater.

The SJRRP Physical Monitoring and Management Plan (PEIS/R, Appendix D, Part 1) describes vegetation surveys to obtain information on the establishment and recruitment of vegetation. Information gained through surveys would inform future actions related to fisheries habitat establishment, channel capacity management, and flood control system operations and maintenance needs.

Reclamation installed 8 piezometers in other locations in 2013.

Scope of Work

The 20 piezometers (Table 1) would be constructed from 2-inch diameter PVC pipe, steel drive-points, and PVC caps and would contain a sensor to measure water temperature, pressure, and electro-conductivity. Each piezometer would be screened between 1 to 6 feet below the streambed so it can be sample subsurface conditions. Installation would consist of manually driving the piezometers with a hand-held slide hammer 3 to 7 feet into the floodplain adjacent to the San Joaquin River streambed and established vegetation transects.

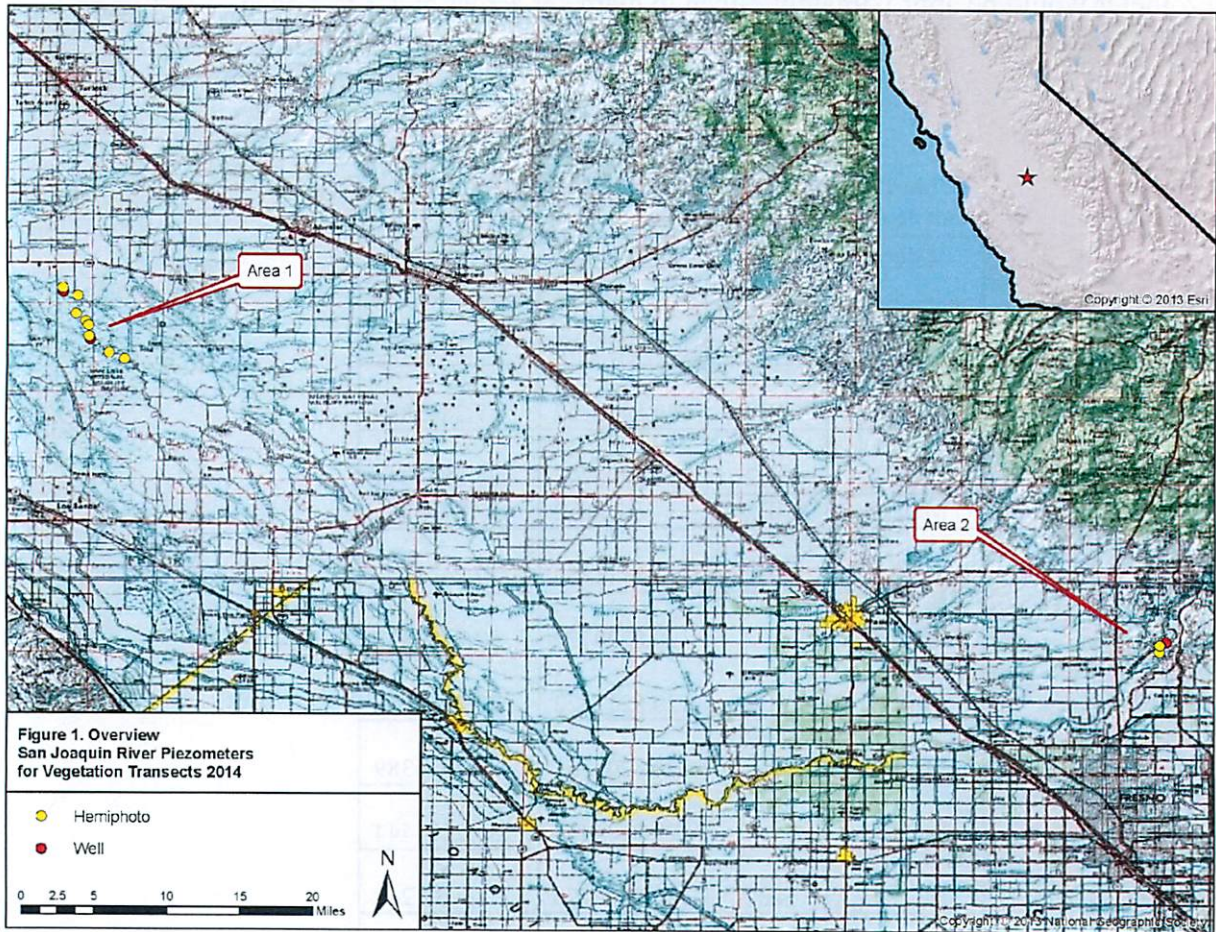
A drive point method would be used to install piezometers by hand in floodplain areas inaccessible to drilling equipment. The drive point would be threaded directly onto the PVC or steel casing. The steel drive rod would be inserted into the middle of the PVC and would be long enough so that it sticks out the top of the PVC casing. Using the post drive hammer, the steel rod would be hammered against the steel drive point pulling the PVC casing with it as it is driven.

Access to the sites for maintenance and data retrieval would occur approximately every six months using existing roads. No vegetation would be removed in association with this action nor would earth be excavated or filled at the sites. The staging area for each installation would be a 20 by 20-foot area located next to each site. The total area of ground disturbance for each

piezometer would be approximately 2-inch in diameter across and 7 feet deep. See Figure 1 for map of locations.

Table 1. Piezometer Coordinates Proposed for the San Joaquin River in 2014.

<u><i>Label</i></u>	<u><i>SJR Reach</i></u>	<u><i>Longitude</i></u>	<u><i>Latitude</i></u>
MC1-V	4B2	- 120.8442778	37.2878333
MC1-O	4B2	- 120.8439722	37.2843889
MC2-V	4B2	- 120.8294722	37.2801944
MC2-O	4B2	-120.832	37.2798889
MC3-V	4B2	- 120.8311389	37.2621111
MC3-O	4B2	- 120.8329722	37.2683333
MC4-V	4B2	- 120.8217222	37.2545556
MC4-O	4B2	- 120.8206361	37.2526389
MC5-V	4B2	- 120.8184444	37.2504444
MC5-O	4B2	- 120.8202778	37.243
MC6-V	4B2	- 120.8183056	37.2398333
MC6-O	4B2	- 120.8167778	37.2365833
MC7-V	4B2	- 120.7830556	37.2168611
MC7-O	4B2	- 120.7763611	37.2066111
MC8-V	4B2	- 120.7980833	37.2231389
MC8-O	4B2	- 120.8018056	37.2271389
MC9-V	1A	- 119.7503611	36.9291667
MC9-O	1A	- 119.7508056	36.9314722
MC10-V	1A	- 119.7502222	36.93625
MC10-O	1A	-119.744	36.9395833



Environmental Commitments

The following environmental protection measures will be implemented by Reclamation and their representative(s) to avoid potential environmental consequences associated with the proposed action. *At all piezometer locations:*

- a. Project-related vehicles shall observe a 20 MPH speed limit in all project areas, except on county roads and State and federal highways.
- b. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a week from a construction or project site.
- c. To prevent harassment, mortality of wildlife or destruction of habitat by dogs or cats, no pets would be permitted on project sites.
- d. Construction would be limited to daytime hours.

- e. If any listed species are observed on or near the project area, the project would be moved to avoid all impacts to species. Scheduled operations and maintenance activities would be rescheduled or postponed to avoid impacts to listed species.

Evaluation of Criteria for Categorical Exclusion

- | | | |
|----|---|--|
| 1. | This action or group of actions will have a significant effect on the quality of the human environment. | No <u>X</u> Uncertain___ Yes___ |
| 2. | This action or group of actions will involve unresolved conflicts concerning alternative uses of available resources. | No <u>X</u> Uncertain___ Yes___ |
| 3. | This action will have significant adverse effects on public health or safety. | No <u>X</u> Uncertain___ Yes___ |
| 4. | This action will have an adverse effect on unique geological features such as wetlands, wild or scenic rivers, rivers placed on the nationwide river inventory, refuges, floodplains, or prime or unique farmlands. | No <u>X</u> Uncertain___ Yes___ |
| 5. | This action will have highly controversial effects. | No <u>X</u> Uncertain___ Yes___ |
| 6. | This action will have highly uncertain environmental effects or involve unique or unknown environmental risk. | No <u>X</u> Uncertain___ Yes___ |
| 7. | This action will establish a precedent for future actions. | No <u>X</u> Uncertain___ Yes___ |
| 8. | This action is related to other actions with individually insignificant but cumulative significant environmental effects. | No <u>X</u> Uncertain___ Yes___ |

9. This action will adversely affect properties listed or eligible for listing in the National Register of Historical Places.

No **X** Uncertain___ Yes___

**** Please See Attachment A – Section 106 Consultation and Concurrence**

10. This action will adversely affect a species listed or proposed to be listed as endangered or threatened.

No **X** Uncertain___ Yes___

**** Please see Attachment B – ESA Effects Analysis**

11. This action threatens to violate Federal, state, local, executive or Secretarial orders, or tribal law or requirements imposed for protection of the environment.

No **X** Uncertain___ Yes___

12. This action will affect Indian Trust Assets.

No **X** Uncertain___ Yes___

**** Please See Attachment C – Confirmation of No Effect on ITAs**

13. This action will have a disproportionately high and adverse human health or environmental effects on low income or minority populations.

No **X** Uncertain___ Yes___

14. This action will 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.

No **X** Uncertain___ Yes___

15. This action will contribute to the introduction, continued existence, or spread of noxious weeds or nonnative invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species.

No **X** Uncertain___ Yes___

NEPA Action: Categorical Exclusion <u>X</u> EA___ EIS___
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Attachment A: Cultural Resources Concurrence

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

MP-153 Tracking Number: 14-SCAO-164

Project Name: San Joaquin River Restoration Program Piezometer Installation 2014

NEPA Document: CEC

NEPA Contact: Douglas Kleinsmith, MP-152

MP 153 Cultural Resources Reviewer: William Soule, Archaeologist

Date: April 17, 2014

The undertaking by Reclamation is to install eight piezometers in portions of the San Joaquin River Restoration Project (SJRRP) area in the floodplain adjacent to the San Joaquin River. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such historic properties be present, pursuant to the National Historic Preservation Act (NHPA) Section 106 regulations codified at 36 CFR Part 800.3(a)(1).

Piezometers will be constructed from 2-inch diameter PVC pipe, steel drive-points, and PVC caps and will contain a sensor to measure water temperature, pressure, and electro-conductivity. Each piezometer will be screened between 1 to 6 feet below the streambed so it can be sample subsurface conditions. Installation will consist of manually driving the piezometers with a handheld slide hammer 3 to 7 feet into the floodplain adjacent to the San Joaquin River streambed and established vegetation transects.

After reviewing the materials submitted for this project, I concur with a determination in the CEC which states that it would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation. With this determination, Reclamation has no further NHPA Section 106 obligations. 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.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150)

Attachment B: Endangered Species Act Effects Analysis

ESA Effects Analysis

1. Background and Description of the Proposed Action

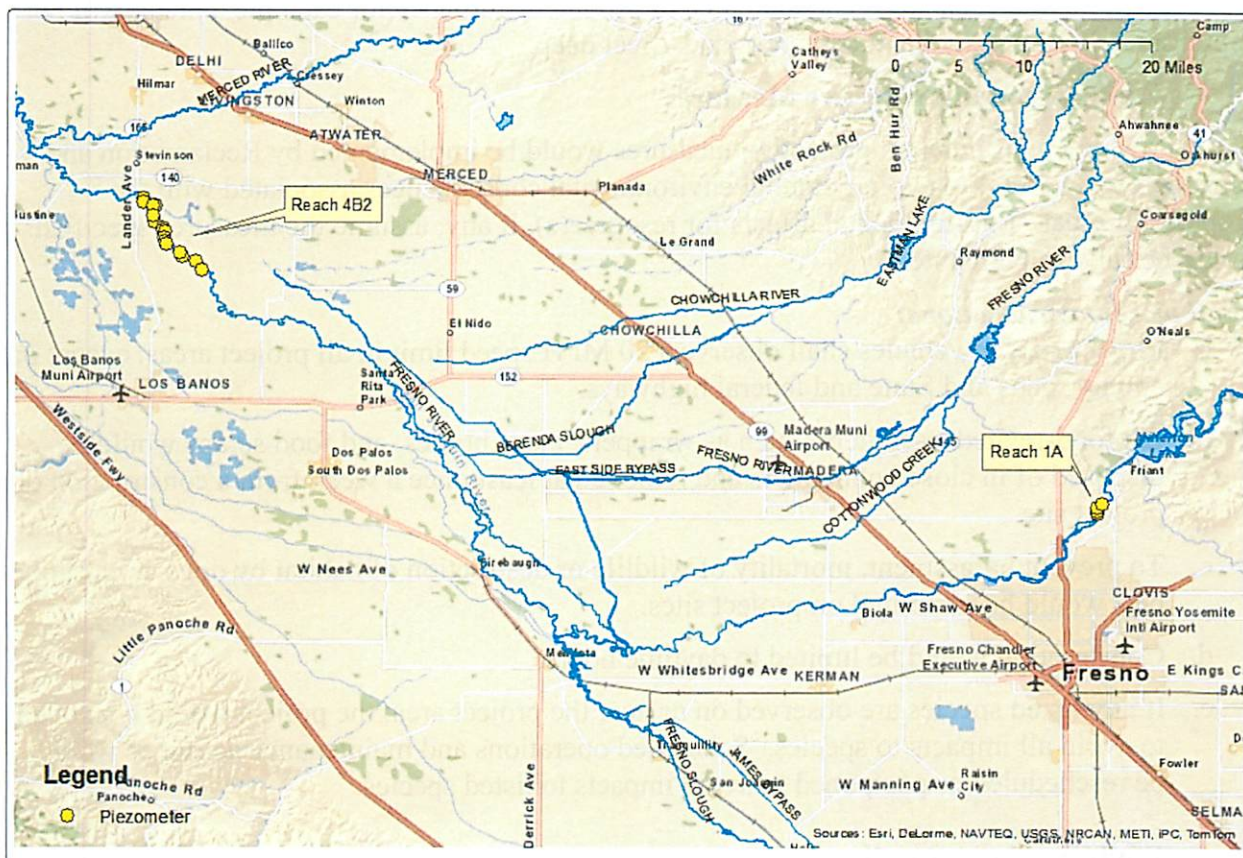
As part of The San Joaquin River (SJR) Restoration Program, the U. S. Bureau of Reclamation (Reclamation) proposes to install 20 piezometers (Table 1) to measure groundwater levels adjacent to established vegetation monitoring transects located in Fresno, Madera, and Merced Counties (Figure 1).

Table 1. Piezometer Coordinates Proposed for the San Joaquin River.

<u>Label</u>	<u>SJR Reach</u>	<u>Longitude</u>	<u>Latitude</u>
MC1-V	4B2	-120.8442778	37.2878333
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Piezometers will be constructed from 2-inch diameter PVC pipe, steel drive-points, and PVC caps and will contain a sensor to measure water temperature, pressure, and electro-conductivity. Each piezometer will be screened between 1 to 6 feet below the streambed to sample subsurface conditions. Installation will consist of manually driving the piezometers with a hand-held slide hammer 3 to 7 feet into the floodplain adjacent to the SJR streambed and established vegetation transects.

A drive point method would be used to install piezometers by hand in floodplain areas inaccessible to drilling equipment. The drive point would be threaded directly onto the PVC or steel casing. The steel drive rod would be inserted into the middle of the PVC and would be long enough so that it sticks out the top of the PVC casing. Using the post drive hammer, the steel rod would be hammered against the steel drive point pulling the PVC casing with it as it is driven.



San Joaquin River Restoration Program Piezometers for Vegetation Transects



FIGURE 1: General Location for installation of piezometers in Fresno, Madera, and Merced Counties.

Access to the sites for maintenance and data retrieval will occur approximately every six months using existing roads. No vegetation will be removed in association with this action nor will earth be excavated or filled at the sites. The staging area for each installation will be a 20 by 20-foot area located next to each site. The total area of ground disturbance for each piezometer will be approximately 2-inch in diameter across and 7 feet deep.

2. Environmental Protective Measures

The following environmental protection measures would be implemented by Reclamation and their representative(s) to avoid potential environmental consequences associated with the proposed Project. Environmental affects for resource(s), if any, assume the measures specified would be fully implemented.

At all piezometer locations:

- a. Project-related vehicles shall observe a 20 MPH speed limit in all project areas, except on county roads and State and federal highways.
- b. All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once a week from a construction or project site.
- c. To prevent harassment, mortality of wildlife or destruction of habitat by dogs or cats, no pets would be permitted on project sites.
- d. Construction would be limited to daytime hours.
- e. If any listed species are observed on or near the project area, the project would be moved to avoid all impacts to species. Scheduled operations and maintenance activities would be rescheduled or postponed to avoid impacts to listed species.

3. Environmental Baseline and Status of the Species

The Proposed Action area includes Reach 1A and Reach 4B2 of the SJR Restoration Area. Reach 1A supports some continuous riparian vegetation (cottonwood [*Populus* spp.], willow [*Salix* spp.], mixed, and oak riparian forest; willow and riparian scrub and elderberry savanna) and is also associated with invasive plants (giant reed [*Arundo donax*] and scarlet wisteria [*Sesbania punicea*]) (DWR 2002, Reclamation 2014). The most common habitat in Reach 4B2 is herbaceous cover, followed by willow riparian forest, wetland/marsh, and willow scrub (DWR 2002, Reclamation 2014).

Special-status wildlife species with the potential to occur in the study area were identified through review of existing information, including queries of California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) and U. S. Fish and Wildlife Service (USFWS) databases for Friant, Lanes Bridge, San Luis Ranch, and Stevinson 7.5-minute USGS quadrangle maps (CNDDB 2014; USFWS 2014). This information was compiled, in addition to information within Reclamation's files, to determine the likelihood for the occurrence of protected species within Reach 1A and Reach 4B2 drill sites (Table 2).

Table 2. Special-Status Wildlife Species with Potential to Occur in the Project Area of Reach 1A and Reach 4B2.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u> ^Δ	<u>Effects</u> [#]	<u>Occurrence in the Study Area</u> [*]
Amphibians				
California red-legged frog	<i>Rana draytonii</i>	T	NE	Absent. No individuals or habitat in either area of effect.
California tiger salamander, central population	<i>Ambystoma californiense</i>	T, X	NE	Absent. No individuals or habitat in either area of effect.
Fish				
Central Valley spring-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	T (NMFS)	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	T, X (NMFS)	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
delta smelt	<i>Hypomesus transpacificus</i>	T	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
winter-run Chinook salmon, Sacramento River	<i>Oncorhynchus tshawytscha</i>	E (NMFS)	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
Invertebrates				
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	E, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	NE	Absent. No individuals recorded in area of effect. All elderberry shrubs are at least 100 feet away from the project footprint, including access roads, and therefore there would be no effect.
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
Mammals				
Fresno kangaroo rat	<i>Dipodomys nigratoides exilis</i>	E	NE	Absent. No individuals or habitat in area of effect. Disturbed agricultural lands do not provide habitat.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	NE	Possible. There are CNDDB-recorded occurrences (from >15 years ago) in the vicinity of Reach 4B. Due to rodent control, prey items would also be absent. However; no dens or den-like crevices would be disturbed by the proposed action.
Plants				
fleshy owl's-clover	<i>Castilleja campestris ssp. succulenta</i>	T, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
hairy Orcutt grass	<i>Orcuttia pilosa</i>	E, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	E	NE	Absent. No individuals recorded and suitable habitat absent from area of effect.

Hoover's spurge	<i>Chamaesyce hooveri</i>	X	NE	Absent. CNDDDB-recorded occurrences and seasonally flooded areas, including vernal pools, with alkaline soils are absent in area of effect.
San Joaquin Valley Orcutt grass	<i>Orcuttia inaequalis</i>	T, X	NE	Absent. No individuals recorded and vernal pools absent in area of effect.
Reptiles				
blunt-nosed leopard lizard	<i>Gambelia sila</i>	E	NE	Absent. No individuals or habitat in either area of effect.
giant garter snake	<i>Thamnophis gigas</i>	T	NE	Absent. Suitable habitat absent due to agricultural practices. Small mammal burrows in area of effect are absent.
<p>Δ Status= Status of federally protected species protected under Endangered Species Act E: Listed as Endangered NMFS: Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. T: Listed as Threatened X: Critical Habitat designated for this species # Effects = Effect determination NE: No Effect anticipated from the Proposed Action to federally listed species * Definition Of Occurrence Indicators for Reach 1A and Reach 4B2. Possible: Species recorded (>15 years ago) in vicinity of drill sites Absent: Species not recorded in study area and/or habitat requirements not met</p>				

4. Special-Status Species Effects and Conclusion

Many of the special-status species have no potential to be present in the Action Area due to a lack of suitable habitat (Tables 2). There are no vernal pools or wetland type features within either Reach 1A or Reach 4B2 that could support listed species (R. Siegle, Reclamation, *in litt.* 2014). However, of the proposed drilling locations, federal protected species with the potential to be in the Action Area includes possibly the San Joaquin kit fox (*Vulpes macrotis mutica*).

San Joaquin kit fox, which is federally listed as endangered, is presumed to have historically ranged from Contra Costa and San Joaquin counties in the north to Kern County in the south, and along the coast in Monterey, Santa Clara, and Santa Barbara counties (USFWS 2010). They currently inhabit western and southern San Joaquin valley in grassland and scrubland communities on the valley floor and surrounding foothills (Warrick et al. 2007). For a complete review, please refer to the San Joaquin Kit Fox (*Vulpes macrotis mutica*) 5-Year Review: Summary and Evaluation (USFWS 2010).

Reach 1A is identified as linkage habitat that could provide a travel corridor for north-south movement, as described in the *San Joaquin kit fox 5-Year Review: Status and Evaluation* (USFWS 2010). In contrast, Reach 4B2 area has been identified as a Satellite area (Satellite #3), or a resident San Joaquin kit fox subpopulation, which is presumed extirpated (USFWS 2010). Loss and degradation of habitat by agricultural, industrial, and urban development and associated practices continue to fragment remaining habitat and threatening kit fox survival in the area. Such losses contribute to kit fox declines through displacement, direct and indirect mortalities, introduction of barriers to movement, and reduction of prey populations. San Joaquin kit fox is also threatened by rodenticide use and by competitive displacement or predation by other species, such as the nonnative red fox (*Vulpes vulpes*), coyote (*Canis latrans*), domestic dog (*C. familiaris*), bobcat (*Felis rufus*), and large raptors.

Although there are San Joaquin kit fox CNDDDB records from within a 10-mile radius of the drill locations at Reach 4B2 (27 occurrences with the most recent from 1997), only adults have been observed (CNDDDB 2014). None of these occurrences included any natal dens or pups present. Also, there are no records for San Joaquin kit fox near Reach 1A, nor is there suitable habitat.

Preexisting roads would be used to access drill sites, work would only be conducted during daylight hours, and would be conducted only by hand without removing any vegetation. With the incorporation of the above Environmental Protective Measures, construction activities would have *No Effect* on San Joaquin kit fox. Reclamation has determined that the Proposed Action would have *No Effect* to any of the other species listed in Table 2 and *No Take* of species protected under the MBTA.

References

- CNDDDB (California Natural Diversity Database). 2014. California Department of Fish and Wildlife's Natural Diversity Database, Version 3.1.1. RareFind 3. Last Updated May 2014.
- DWR (Department of Water Resources). 2002. Riparian vegetation of the San Joaquin River. Technical Information Record SJD-02-1. San Joaquin District, Environmental Services Section. Fresno, California. Prepared for San Joaquin River Riparian Habitat Restoration Program, United States Bureau of Reclamation, Fresno, California. May.
- Reclamation (Bureau of Reclamation). 2014. Vegetation response to interim flows in the San Joaquin River. Annual Report 2013. Technical Service Center Denver, Colorado, April.
- Siegle, Rebecca. 2014. Electronic mail from Natural Resources Specialist, Bureau of Reclamation Technical Service Center, Denver, Colorado, to Jennifer L. Lewis, Wildlife Biologist, Bureau of Reclamation, South-Central California Area Office, Fresno, California. Providing information on the lack of vernal pools and wetland type features from the action area over the last three years. May 26, 2014.
- USFWS (U.S. Fish and Wildlife Service). 2010. San Joaquin kit fox, 5-year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, CA. 123 pp.
- USFWS (U.S. Fish and Wildlife Service). 2014. Sacramento Fish & Wildlife Office Species List. (document number: 140605015914). June 5, 2014. Sacramento Field Office's website: http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm.
- Warrick, G.D., H.O. Clark, Jr., P.A. Kelly, D.F. Williams, and B.L. Cypher. 2007. Use of Agricultural Lands by Kit Foxes. *Western North American Naturalist* 67: 270-277.

Attachment C: Confirmation of No Effect for Indian Trust Assets



KLEINSMITH, DOUGLAS <dkleinsmith@usbr.gov>

Re: ITA evaluation for San Joaquin River Groundwater Monitoring of Veg. Transects 2014

RIVERA, PATRICIA <privera@usbr.gov>

Tue, Apr 29, 2014 at 8:42 AM

To: "KLEINSMITH, DOUGLAS" <dkleinsmith@usbr.gov>

Doug,

I reviewed the proposed action to install eight piezometers in the Restoration Area to measure groundwater levels adjacent to established vegetation monitoring transects. This is a continuation of a program to measure groundwater levels along the San Joaquin River restoration area.

Piezometers will be constructed from 2-inch diameter PVC pipe, steel drive-points, and PVC caps and will contain a sensor to measure water temperature, pressure, and electro-conductivity. Each piezometer will be screened between 1 to 6 feet below the streambed so it can be sample subsurface conditions. Installation will consist of manually driving the piezometers with a hand-held slide hammer 3 to 7 feet into the floodplain adjacent to the San Joaquin River streambed and established vegetation transects.

The proposed action does not have a potential to impact Indian Trust Assets. The nearest Indian Trust Asset is the Table Mountain Reservation, approximately 7 miles northeast of the project location.

Patricia Rivera
Native American Affairs Program Manager
US Bureau of Reclamation
Mid-Pacific Region
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