

RECLAMATION

Managing Water in the West

Environmental Assessment

Natomas Central Mutual Water Company's Sankey Road Check Structure Automation Project Mid-Pacific Region

EA-14-06-NCAO



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

August 2015

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.

Table of Contents

Section 1	Introduction.....	1
1.1	Need for the Proposal.....	2
1.2	Resources Not Analyzed in Detail.....	4
1.2.1	Indian Sacred Sites.....	4
1.2.2	Indian Trust Assets	4
1.2.3	Environmental Justice.....	4
Section 2	Alternatives Including Proposed Action.....	5
2.1	No Action Alternative.....	5
2.2	Proposed Action.....	5
2.2.1	Administration, Management, and Final Design	5
2.2.2	Construction Activities	5
2.2.3	Surface Water Pollution Protection Plan	7
2.2.4	Performance Monitoring.....	8
2.2.5	Environmental Commitments	8
Section 3	Affected Environment and Environmental Consequences	10
3.1	Surface Water Resources	10
3.1.1	Affected Environment.....	10
3.1.2	Environmental Consequences.....	11
3.2	Biological Resources	12
3.2.1	Affected Environment.....	12
3.2.2	Environmental Consequences.....	15
3.3	Cultural Resources	16
3.3.1	Affected Environment.....	16
3.3.2	Environmental Consequences.....	16
Section 4	Consultation and Coordination	18
4.1	Endangered Species Act (16 USC § 1531 et seq.).....	18
4.2	Clean Water Act (CWA)(33 USC § 1311 et seq.).....	18
4.2.1	Section 404.....	18
4.2.2	Section 401.....	18
Section 5	References.....	20
Section 6	Personal Communications	20

List of Tables and Figures

Table 2-1.	Project Schedule	5
Table 3-1.	Species identified in the Verona, California USGS 7.5-minute Quadrangle. Source: the California Natural Diversity Database and the U. S. Fish and Wildlife Service websites.	12
Figure 1-1.	Project location within the Natomas Basin (outlined in red)	3
Figure 2-1.	Northern Main Canal and the existing Sankey Road check structure. Image is looking southwest from Sankey Road.	6
Figure 2-2.	Aerial view of Project area features.	7

Appendices

Appendix A. Indian Trust Assets Review.....	21
Appendix B. Hydra-LoPac Automated Gate Structure Design	22
Appendix C. Cultural Resource Review	24
Appendix D. Endangered Species Act Consultation	25

List of Acronyms and Abbreviations

APE	Area of Potential Effect
BMP	Best Management Practices
CALFED	California Department of Fish and Game
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
Company	Natomas Central Mutual Water Company
CWA	Clean Water Act
Delta	Sacramento San Joaquin Delta
EA	Environmental Assessment
ESA	Endangered Species Act
ft	Feet
GGS	Giant Garter Snake
ITA	Indian Trust Assets
NBC	Natomas Basin Conservancy
NCAO	Northern California Office
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NMC	Northern Main Canal
NPDES	National Pollution Discharge Elimination System
NWP	Nationwide Permit
RD 1000	Reclamation District No. 1000
Reclamation	Bureau of Reclamation
Board	Regional Board Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
Service	U.S. Fish and Wildlife Service
sf	Square Feet
SHPO	State Historic Preservation Office
SWPPP	Surface Water Pollution Prevention Plan
THPO	Tribal Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

Section 1 Introduction

This Environmental Assessment (EA) has been prepared by the Bureau of Reclamation (Reclamation) to examine the potential direct, indirect, and cumulative impacts to the affected environment associated with providing a CALFED Water Use Efficiency grant to the Natomas Central Mutual Water Company (Company) for the Sankey Road Check Structure Automation Project (Project) which is located just north of Sacramento, California (Figure 1.1).

Reclamation proposes to provide a Department of the Interior CALFED Bay-Delta Water Use Efficiency grant to the Natomas Central Mutual Water Company (Company) to support implementation of the Proposed Action. The CALFED Bay-Delta Program is a 30-year Program (2000 – 2030) among 25 Federal and state agencies with responsibility in the Sacramento San Joaquin Delta (Delta). The Program is based on four major resource management objectives that guide its actions to achieving a Delta that has a healthy ecosystem and can supply Californians with a reliable water supply. Those objectives are: levee system integrity; water quality; water supply reliability, and; ecosystem restoration. Reclamation plays a key role as the Federal lead agency for implementation of the water supply reliability actions in coordination with our state CALFED partner agencies.

Under the CALFED Bay-Delta Water Use Efficiency grant program, the Bureau may fund up to 50% of an approved pilot, demonstration-level, or full scale implementation project that promotes benefits to the California Bay-Delta through improved water use efficiency and conservation activities, in an amount not to exceed \$500,000. In addition to cash contributions, the grant recipient (State, Indian tribe, irrigation or water district or other party with water or power delivery authority) may fulfill their portion of the cost share with in-kind contributions (e.g. real property, equipment and supplies) and/or by incurring indirect costs. Reclamation's grant for this project, awarded through a competitive process, is in the amount of \$135,000: approximately 41% of the approximate \$330,000 project costs, as currently projected. (Funds would be made available to the Company pending successful completion of all necessary National Environmental Policy Act (NEPA) documentation.)

The Northern Main Canal (NMC) is operated by the Company for irrigation deliveries to farming operations. The existing Sankey Road check structure built in the 1920s controls water level of a 2.5-mile section of the NMC. Approximately 1.5 miles upstream from the check structure, a 48-inch flashboard riser was installed just upstream from the box culvert crossing under Highway 99/70. The flashboard riser provides an operational spill point to the drainage ditch crossing under the canal. Water deliveries through this section of the NMC are limited by the top of canal bank elevation just downstream of Highway 99/70. Presently, the ditch tender adjusts the manual slide gate at the Sankey Road check structure to maintain the water level as high as possible to provide adequate space to

accommodate fluctuations in the water level from upstream pumping operations but to avoid overtopping the canal. In order to provide additional assurance to prevent canal overtopping, the flashboard risers are set to provide spill during the irrigation season. Adjustments by the ditch tender are made periodically but are typically not timely enough to avert operational spills. Replacement of the existing structure with one of similar dimension with automated gate structures would allow continuous adjustments to all but eliminate operational spills and improve on water use efficiency.

1.1 Need for the Proposal

The existing Sankey Road Check Structure has manually controlled flow gates. This lack of automated control of the flow gates result in periodic uncontrolled spills (up to 400



Figure 1-1. Project location within the Natomas Basin (outlined in red)

acre-feet annually) that result in reduced water efficiency. Automating the water level and control of flow through the gates would minimize operational spills allowing for improved efficiency of available water and improved reliability of water supply, particularly in dry years. In addition, implementing this action would be consistent with past and present planning efforts to improve water use efficiency within the bounds of the lands served by the Company.

1.2 Resources Not Analyzed in Detail

Effects on several environmental resources were examined and found to be minor. Because of this, the following resource areas were eliminated from further review in this EA: Aesthetic Resources, Geology, Global Climate Change, Land Use and Agriculture, Air Quality, Noise, Socioeconomics, Population and Housing, Recreation, Transportation and Circulation, and; Utilities, Public Services, and Service Systems.

1.2.1 Indian Sacred Sites

No impacts to Indian sacred sites would occur as the Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites.

1.2.2 Indian Trust Assets

The proposed action does not have a potential to impact Indian Trust Assets (ITA). The nearest ITA is the Auburn Rancheria, approximately 15 miles north of the Project location.

1.2.3 Environmental Justice

No individuals or populations would be impacted by implementation of the Proposed Action and therefore minority or low income populations would not be adversely affected.

Section 2 Alternatives Including Proposed Action

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential impacts to Water Resources, Biological Resources, and Cultural Resources.

2.1 No Action Alternative

The No Action Alternative would consist of Reclamation not providing grant funding for the Project which would likely result in the Company continuing to operate and maintain their distribution system under the existing conditions.

2.2 Proposed Action

The Proposed Action is for Reclamation to award the Company with a grant in support of the Project, located approximately 13 miles north of Sacramento in Sutter County, California (Section 28, Township 11 North, Range 4 East; Figure 1-1). The Proposed Action includes funding an administrative, management, and final design component, construction activities, and performance monitoring. Details on each are provided below.

2.2.1 Administration, Management, and Final Design

The grant funding supports an administration and management task to assist in Project management and reporting requirements. The grant funding also supports development of the final design for the check structure from which the Company may solicit proposals for construction of the Project. Projected timelines are provided in Table 2-1.

2.2.2 Construction Activities

Construction activities include those related to removal of the existing check structure and installation of the new check structure that is automated with a Supervisory Control and Data Acquisition (SCADA) system. A summary of associated tasks and timelines for completion are provided in Table 2-1.

Table 2-1. Project Schedule

Work Item/Task	Timeline
Administration/Management	Oct 2013 – Jun 2016
Final Design	Oct 2014 – Apr 2015
Construction	
Procurement	Oct 2014 – Feb 2015
Electrical Service	Nov 2015 – Feb 2016
Site Construction	Jan 2016 – April 2016
Controls and SCADA Integration	Dec 2015 – Apr 2016
Project Performance Monitoring	Apr 2016 – Sep 2017
Project Closeout	By Dec 2017

Site Preparation

Demolition of the existing structure (Figure 2-1) would occur over a few days in the winter months when the canal is closed for typical canal maintenance activities. The process would include use of a 40-ton crane operating from the canal maintenance roads to remove large sections of the existing weir and an excavator/backhoe working from the canal access road to clean up remaining demolition debris. The estimated 30 tons of cement and unusable miscellaneous materials expected from demolition would be hauled to an appropriate landfill or recycled. The existing canal access roads and the shoulder of Sankey Road would be used for staging of heavy equipment (see Figure 2-3).



Figure 2-1. Northern Main Canal and the existing Sankey Road check structure. Image is looking southwest from Sankey Road.

Following removal of the demolition debris, the site would be prepared for the replacement structure. This would include minor excavation of the canal banks and bottom for the footprint of the replacement structure (estimated at 6 by 42 feet (ft) or 252 square feet (sf)). Less than 2 cubic yards of material would be removed from each bank area to ensure adequate working space to place the cement form boards. Approximately 128 sf areas (16 by 8 ft) on each of the canal banks, which are above the canal high water mark and below the canal access road shoulder, could be disturbed by this preparation step.

Existing rip-rap and soil/road base that is removed would be stockpiled nearby for reuse following new structure completion. Rip-rap removal above the high water mark (as determined by typical water levels during the month prior to the end of irrigation season) would be minimized to avoid potential impacts to upland areas representing possible overwintering habitat for the giant garter snake (GGS). Note: these areas would be cordoned off with exclusionary fencing prior to the inactive season for GGS to limit the potential for this species to occupy this habitat (See Section 2.2.5). Existing rip-rap, mainly along the downstream side of the existing structure can be viewed in Figure 2-2 and also in the aerial photo in Figure 2-2.

Check Structure Installation

Following site preparation, cement forms would be constructed to create the replacement structure that is shaped like an upside-down “T”. The dimensions of this structure would be 42 ft wide by 6 ft long by 9 ft tall (see Appendix B for more detail). The base of the structure would be 15 inches thick and the vertical headwall would be 12 inches thick. Cement trucks would deliver cement to the forms from the canal access road.

Once cement has cured for a few weeks, the areas around the structures would backfilled with acquired soils (likely clay) and rip-rap attained during site preparation. Excess soil, if any, would be hauled away. Rip-rap would be placed along each bank upstream of the new structure for approximately 5 ft. This rip-rap would serve to armor the banks from erosion.

The last steps in check structure completion would include installation of the automated Hydra-Lopac and slide gates and metal grating and guard rails for the walkway. Installation of these features would require two to three days.

Electric Power and SCADA

An electrical line from an existing Pacific Gas & Electric power pole would be used to supply power to the new check structure. The power pole is located in relatively close proximity to the NMC - Sankey Road intersection (Figure 2-2). From the power pole, an 18 to 24 inch deep trench, approximately 3 inches wide, would be dug along Sankey Road on the east bank of the NMC then continue south atop the canal access road for approximately 70 ft turning west and terminating at the check structure. This trenching could occur between August and April as this activity is not dependent on water being in the canal. Following conduit placement in the trench and inspecting to ensure no GGS are present in the trench, the trench will be filled with native material.

Supervisory Control and Data Acquisition (SCADA) equipment would be installed after the electrical line and check structure are completed. SCADA equipment to be installed includes a radio to communicate with the base station in the main office, electrical and controls equipment, conduit and wiring, water level sensors, gate controllers, control panel, and a SCADA antenna. This equipment would be attached to the new structure.

2.2.3 Surface Water Pollution Protection Plan

The contractor selected for the construction work would be required to prepare a Surface Water Pollution Prevention Plan (SWPPP) prior to commencing work. This SWPPP will include identifying potential pollutant sources and describing the design, placement and implementation of Best Management Practices

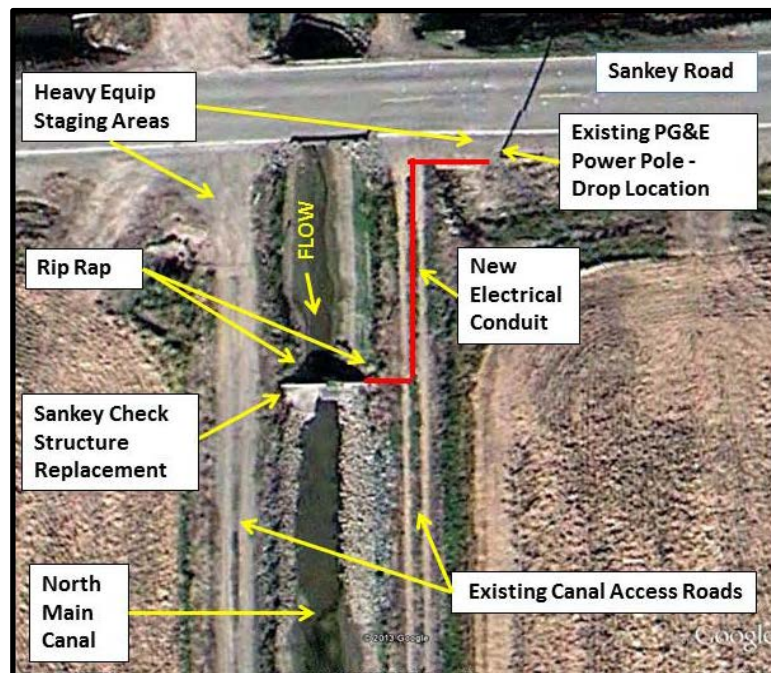


Figure 2-2. Aerial view of Project area features.

(BMPs) to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges during and following construction activities. (See Section 2.2.5.)

2.2.4 Performance Monitoring

Both pre- and post-project monitoring would occur to review Project performance, and, in particular, operational spill. Comparison of operational spills before and after implementation of the Project would be documented in a final performance report.

2.2.5 Environmental Commitments

The Company or its representatives shall implement the following environmental commitments to reduce environmental consequences associated with the Proposed Action. These include, in addition to environmental protections from the SWPPP and associated BMPs, implementing several Standard Avoidance and Minimization Measures as recommended by the U.S. Fish and Wildlife Service (Service; 1997) to reduce or eliminate potential impact to GGS or its habitat. These measures include:

- Movement of heavy equipment will be confined to existing roadways to minimize habitat disturbance;
- Clearing and grading will be confined to the minimum area necessary to facilitate construction activities, as determined by a qualified biologist. Habitat that will be avoided shall be cordoned off, clearly flagged, and designated as an “Environmentally Sensitive Area” by a qualified biologist. This area will be avoided by all construction personnel;
- Construction personnel will receive Service-approved worker environmental awareness training. This training instructs workers to recognize the snake and its habitat(s), and what to do if a snake is encountered during construction activities;
- Prior to construction and before the onset of the snake’s inactive season (October 1), an exclusionary fence will be installed in order to prevent snakes from entering the proposed project area. The interior side of the exclusionary fence will be routinely monitored for snakes stranded by the fence;
- Twenty-four-hours prior to construction activities, the Project area will be surveyed for the snake. A survey of the Project area will be repeated if a lapse in construction activity of two weeks or greater occurs. If a snake is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Any sightings will be reported to the Service immediately by telephone at (916) 414-6600;
- After completion of construction activities, any temporary fill and construction debris will be removed and the disturbed areas restored to pre-project conditions, wherever feasible; and
- No plastic, monofilament, jute, or similar erosion control matting that could entangle snakes will be placed on the proposed project site when working within 200 feet of

snake aquatic or rice habitat. Possible substitutions include coconut coir matting, tactified hydroseeding compounds, or other material approved by the Service. All trash will be properly removed and disposed.

BMPs would be used during all construction phases of this Project to ensure that this project is completed with minimal environmental impacts:

- Disturbance of vegetation shall be kept to a minimum.
- No debris, soil, etc., other than that already present within the canal shall be allowed to enter the water.
- No intentional harassment, killing, or collection of plants or animals shall occur at or around the work sites.
- No firearms are allowed on site, except for those used by peace officers or CDFG wardens.
- No pets are allowed.
- No off-road travel or work is permitted; all vehicles must be confined to existing levee roads.
- All trash, including food-related trash and cigarette butts, must be properly disposed of and removed.
- Storage of hazardous materials, such as fuel, oil, etc. shall not be allowed within 150 feet of waterways. Any chemical spills must be cleaned up immediately and reported as soon as possible.

Section 3 Affected Environment and Environmental Consequences

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternative.

3.1 Surface Water Resources

3.1.1 Affected Environment

The Company has a Bureau of Reclamation Settlement Contract for an annual water supply of 120,200 acre-feet. The actual amount used varies annually depending on farming requirements, weather conditions and several other factors. The average annual diversion over the last five years is approximately 58,800 acre-feet.

The Company receives its irrigation supply directly from the Sacramento River and through an extensive tail water recovery system. Existing joint use agreements with Reclamation District 1000 (RD 1000) allows the Company to operate and maintain the drainage canal system during the irrigation season (April 1 to October 30); RD 1000 is responsible for flood protection for the Natomas Basin for the public's health and safety by operating and maintaining the levees and the District's canals and pump stations in a safe, efficient, and responsible manner.

From the Sacramento River, water enters the NMC to flow through the Sankey Road check structure. The NMC is an earthen man-made high-line canal that is approximately 30 ft wide and 4 ft deep during the irrigation season. Its capacity is between 60 and 120 cubic feet per second. Water passed through this structure flows in over 20 miles of canal. From the canals it is delivered to the fields.

During the irrigation season, any water leaving the fields is typically recycled by the Company. The only time this is not the case is when water in excess of the needs for irrigation occur, which can include times of uncontrolled spill or reduced irrigation demand which typically occurs at the end of the irrigation season and winter. When this condition occurs, excess water is pumped back to the Sacramento River under a National Pollutant Discharge Elimination System (NPDES) permit held by RD 1000.

Presently the capacity of the distribution system is limited during startup in the spring such that water deliveries for rice flood up must be staggered.

During the winter months the NMC is shut down for permitted maintenance activities that can include inspections, mowing, vegetation control, rodent control, erosion repairs, access road maintenance, and small capital projects. In addition, when canal cleaning occurs the canal is isolated and all runoff is contained within the canal until it is acceptable by RD1000 for discharge (B. Gray pers. comm).

3.1.2 Environmental Consequences

No Action

Under the No Action alternative, Reclamation would not provide funding to the Company to replace and automate the Sankey Road Check structure. As a consequence, this Project would not likely be implemented and water delivery to downstream users would continue with manual operation of the control gates at the Sankey Check Structure. Status quo operation of the NMC would also allow uncontrolled spills of water at Sankey Check structure to continue.

Proposed Action

Under the Proposed Action, \$135,000 in cost share funding would be provided to the Company to manage, plan, finalize design, and construct new facilities to automate flow regulation at the present location of the Sankey Road check structure. Full integration of SCADA coupled with the automation of the gates would facilitate improved water management practices by maintaining a constant water level upstream of the Sankey Road Check Structure to avoid uncontrolled spills, in particular during drier years when water supplies are limited. In doing so, the Project would improve the Company's overall ability to balance the agricultural and environmental demands for water. For example, the greater flexibility in meeting early spring demand could lessen the need to stagger flood up of rice fields providing a mutual benefit to earlier habitat creation for the GGS (Section 3.2) while supporting rice production.

In years of greater water availability, water conserved as part of this action would result in less diversion from the Sacramento River allowing this water to be used for other uses such as environmental concerns in the Bay-Delta or elsewhere. In addition, the increased efficiency would result in a reduction of the need to pump drain water into the Sacramento River subject to conditions of the NPDES permit.

Construction activities would not result in any impact to erosion and turbidity that could affect any natural stream systems. This is because: the area impacted by the construction activities would be confined to about 700 sq ft; the contractor would be required to submit and adhere to conditions of an approved SWPPP that would limit the potential for erosion; the Project would not likely increase turbidity of any storm water relative to typical canal maintenance activities that could occur in several miles of canal in the same year; and any discharge to the Sacramento River would be subject to NPDES permit conditions of RD 1000.

Cumulative Impacts

The Company began a program to improve water management practices in 2007 by implementing SCADA systems throughout its service area. Since that time, the Company has been updating its infrastructure to further improve on water use efficiency. Presently, the Company has plans to also replace the R-Drain structure located 1.5 miles downstream of the Sankey Project for similar reasons. As a result, these projects will be complimentary in meeting water efficiency goals of the Company.

3.2 Biological Resources

3.2.1 Affected Environment

The Project area lies within the Natomas Basin but outside of the Natomas Basin Conservancy reserve areas. The combination of rice, other agricultural crops, drainage and irrigation channels, and ruderal lands has allowed wildlife populations to persist within the Basin, most notable among these being the Swainson's hawk and the GGS (Natomas Basin Habitat Conservation Plan 2003). A summary of Federal and State-listed species occurring in the Project area, the effects determination and summary basis for the determination are provided in Table 3-1. This table was generated from information attained from databases of the Service and the California Natural Diversity Database (CNDDDB) in July 2014. The U.S. Geological Survey (USGS) 7.5 minute quadrangle for Verona was used in each database search.

Table 3-1. Species identified in the Verona, California USGS 7.5-minute Quadrangle. Source: the California Natural Diversity Database and the U. S. Fish and Wildlife Service websites.

Species	Status ¹	Effect ²	Summary Basis for ESA Determination ³
AMPHIBIANS			
California tiger salamander, central population (<i>Ambystoma californiense</i>)	T, X	NE	Absent: No construction of new facilities in potential habitat and no conversion of lands from existing uses.
California red-legged frog (<i>Rana draytonii</i>)	E	NE	Absent: No construction of new facilities in potential habitat and no conversion of lands from existing uses.
BIRDS			
Bank swallow (<i>Riparia riparia</i>)	T (CA)	NE	Possible: No habitat exists in the Project area. No land use changes.
Swainson's hawk	T (CA)	NE	Possible: No habitat exists in the Project area. No land use changes.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	C	NE	Unlikely. No land use changes would occur to habitat for this species as a result of the action, no conversion of habitat.
INVERTEBRATES			
Valley elderberry longhorn beetle (<i>Desmoceris californicus dimorphus</i>)	T	NE	Absent. No habitat exists in the Project area. No land use changes.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T T (CA)	NE	Absent. No habitat exists in the Project area. No land use changes.

Species	Status ¹	Effect ²	Summary Basis for ESA Determination ³
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	E T (CA)	NE	Absent. No habitat exists in the Project area. No land use changes
REPTILES			
Giant garter snake (<i>Thamnophis gigas</i>)	T CA (T)	NLAA	Potential. Potential upland hibernacula within the narrow band of vegetation and rip rap that would be disturbed by the Project. The potential effects of constructing the replacement check structure on GGS is expected to be minor and minimal. This is because the area of impact to overwintering habitat is fairly small (perhaps up to 300 sq ft), and this area would not likely be using any available habitat because of the use of exclusionary fencing (i.e. silt fence), which would be verified as functional, prior to the hibernation period. In doing so, the main effect of this action is limited to a temporary disturbance of potential overwintering GGS habitat rather than direct harm to the species. In addition, additional avoidance and minimization measures as described in Section 2.2.5 would be used to ensure that no snakes are harmed and any adverse modifications to their habitat are minimized
<p>Key:</p> <p>1 - Status= Listing of Federally special status species, unless otherwise indicated. C - Candidate species; E - Listed as Endangered; T - Listed as Threatened; X - Critical habitat designated; CA - State listed species.</p> <p>2 - Effects: NE - No Effect determination; NLAA- “not likely to adversely affect”</p> <p>3 - Definition of Occurrence Indicators in Proposed Action Area: Present - Species observed and suitable habitat present; Possible -Species reported in area but suitable habitat suboptimal or entirely lacking; Unlikely - Species recorded in vicinity over 10-years ago but habitat suboptimal or entirely lacking.</p>			

The Project area on the NMC is bordered by canal access roads on both sides in close proximity to Sankey Road (Figure 2-2). Annual grasses and weedy species form a narrow band of vegetation on both sides of access roads in an otherwise heavily managed area. Rip-rap occurs on the upstream and downstream sides of the current check structure. Irrigated rice fields are found on each side of the canal access roads that parallel the NMC.

No visible trees, shrubs vernal pools or wetlands are apparent in the area affected by the action.

Reclamation has determined through this review of species, in addition to conversations with the Service, that the GGS is the species of primary concern with this Project.

Giant Garter Snake The GGS is listed as a threatened species under the Federal Endangered Species Act (ESA) and the California ESA. The giant snake is an endemic species of wetlands in the Central Valley of California. Historically, GGS were found from the vicinity of Butte County southward to Bakersfield in Kern County. Today, populations of the GGS are found in the Sacramento Valley and in isolated pockets of the San Joaquin Valley.

Loss or degradation of aquatic habitat resulting from agricultural and urban development is the primary cause of these declines. Other factors contributing to the decline of this species include predation of juvenile GGS by introduced predators, elimination of prey species by pesticides, road mortality, and maintenance and modification of agricultural water conveyance and infrastructure (Natomas Basin Conservancy [NBC] (2005).

Optimal or suitable habitat for the GGS requires the presence of the following attributes (Service 1999):

- Adequate water during the active season early spring through mid-fall (late March/Early April-October) to provide ample supply of food (e.g. tadpoles, frogs, small fish, small vertebrates)
- Emergent, herbaceous wetland vegetation providing cover during the active season and often found in rice fields, irrigation canals or drainage ditches, freshwater marshes, sloughs, and ponds.
- Upland habitat with grassy cover and openings in waterside vegetation for basking.
- Higher elevation upland habitats for cover and refuge (e.g. rodent burrows) from flood waters during the snake's inactive season in the winter (October – April).

The area affected by the Proposed Action is adjacent to rice fields that represent potentially suitable habitat for the GGS during the active season. According to the CNDDDB (accessed July, 2014), GGS were observed within a mile of this Project area in 1986. However a recent conversation with a consulting expert on GGS (Eric Hansen) working in this area, indicate that the Project area is a potential area for GGS and that the upland portions of the canal banks, including the rip-rap, could represent upland or overwintering habitat for this species as they are known to occur in the vicinity of this Project area.

3.2.2 Environmental Consequences

No Action

Under the No Action alternative, current biological resources conditions would continue.

Proposed Action

Implementing the Proposed Action would allow greater flexibility to water management for lands served by the Company. In turn, this increased flexibility improves the Company's ability to balance the agricultural and environmental demands (i.e. NBC mitigation properties) of the water to the benefit of the GGS and other water-dependent species. In other words, the improvements to water management and conservation that result from this Project would be expected to increase the reliability of water deliveries to the preserves sites managed by the NBC, which is essential to their long-term sustainability. Similarly, the Proposed Action could allow for conserved water to be used for other environmental purposes outside the Natomas Basin such as the Bay Delta region.

Presently, the capacity of the water distribution system is limited during startup in the spring such that water deliveries for rice flood up must be staggered. Automating the check structure would provide greater flexibility and lessen this pattern of flood up to allow earlier flood up to a greater proportion of the land planted in rice. In turn, this would afford earlier availability of this agricultural habitat for the GGS, which use this habitat routinely for cover and forage (Service and CDFG 2003).

The potential direct effects of constructing the replacement check structure on GGS is expected to be minor because: the potential area of impact to GGS habitat is small (up to 300 sq ft) and it would not likely be occupied by GGS because of the use of exclusionary fencing (i.e., silt fence) prior to the hibernation period that would prevent them from entering this habitat before construction; and, on check structure completion, the potential overwintering habitat would be restored. In doing so, the main effect of this action is limited to a temporary disturbance of potential overwintering GGS habitat rather than direct harm to the species. In addition, additional avoidance and minimization measures and BMPs, as described in Section 2.2.5, would be used to ensure that no snakes are harmed and any adverse modifications to their habitat are minimized during all aspects of project implementation.

On completion of the check structure and placement and backfilling around the structure, including placement of rip rap, the habitat types that were present prior to construction would be restored.

The installation of the electrical line to the structure would potentially occur during the active season because it is not dependent on a dry canal to complete. Because this activity would occur mainly on the access road, and active GGS monitoring would occur, there would be no impact to GGS. Additionally, no harm to GGS is anticipated for the associated increase in traffic or trenching because staff will use avoidance and minimization measures to ensure that snakes are not harmed during this activity, including inspection of the trench before installing the power line and back filling.

Cumulative Impacts

There are no adverse impacts associated with implementing the Proposed Action, and therefore there are no cumulative effects to consider.

3.3 Cultural Resources

Cultural resources is a term used to describe both *archaeological sites* depicting evidence of past human use of the landscape and the *built environment* which is represented in structures such as dams, roadways, and buildings. The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation which 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 historic properties included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Those resources that are included in, or eligible for inclusion in, the NRHP are referred to as *historic properties*.

The Section 106 process is outlined in the Federal regulations under 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify historic properties and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action it is undertaking has the potential to affect historic properties. If so, 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 Office (SHPO) or Tribal Historic Preservation Office (THPO), where applicable, 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 to consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.3.1 Affected Environment

The APE for the Project, as determined by Reclamation, consists of the old check structure, the canal embankments subject to re-contouring, and the areas on either side of the canal that may be used for construction access and staging. Additionally, automated control gates will be installed to provide continuous adjustments and eliminate operational spills resulting from periodic manual adjustments. The area of potential effects (APE) consists of approximately 0.25 acre located in Sections 21 and 28, T. 11 N., R. 4 E., Mt. Diablo Baseline and Meridian, on the Verona, California 7.5' USGS quadrangle (1967).

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be no impact to cultural resources from implementation of this Project.

Proposed Action

Reclamation sent a letter to the California SHPO on November 22, 2013, inviting the SHPO's comments on our delineation of an APE and the appropriateness of our identification efforts, and requesting concurrence with our finding of no adverse effect to historic properties. Reclamation received a letter from SHPO on December 17, 2013 concurring with this finding. (See Appendix C.)

Cumulative Impacts

There are no adverse impacts associated with implementing the Proposed Action, and therefore there are no cumulative effects to consider.

Section 4 Consultation and Coordination

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 sent a memorandum to the Service on July 21 requesting concurrence with the determination that the Proposed Action may affect, but is not likely to adversely affect, the GGS, based on implementation of the avoidance and minimization measures presented previously in Section 2.2.5. On August 22, 2014, the Service concurred with this determination. (See Appendix D.)

4.2 Clean Water Act (CWA)(33 USC § 1311 et seq.)

4.2.1 Section 404

Section 404 of the Clean Water Act (CWA) authorizes the U.S. Army Corps of Engineers (USACE) to issue permits to regulate the discharge of “dredged or fill materials into waters of the United States” (33 USC § 1344). Preliminary contact with the USACE has identified this canal as a “water of the US” which is subject to this Section of the CWA. As a consequence, a 404 permit was sought in support of implementing the Proposed Action. On February 24, 2015, the USACE provided a determination that the work to be performed is authorized by Nationwide Permit (NWP) Number 3 for Maintenance activities. All supplemental, project-specific Special Conditions outlined in the February 24 USACE correspondence will be followed in support of this project, including but not limited to: mitigation measures for Federal ESA compliance, and; construction sequencing and BMPs for sediment and erosion control.

4.2.2 Section 401

Section 401 of the CWA (33 USC § 1311) prohibits the discharge of any pollutants into navigable waters, except as allowed by permit issued under sections 402 and 404 of the CWA (33 USC § 1342 and 1344). If new structures (e.g., treatment plants) are proposed, that would discharge effluent into navigable waters, relevant permits under the CWA would be required for the Project applicant(s). Section 401 requires any applicant for an individual USACE dredge and fill discharge permit to first obtain certification from the State that the activity associated with dredging or filling will comply with applicable State effluent and water quality standards. This certification must be approved or waived prior to the issuance of a permit for dredging and filling. In conformance with this requirement, the Regional Water Quality Control Board (Board), Central Valley Region

issued a Technically-conditioned Certification for this project (Waste Discharger Identification Number 5A51CR00085).

Section 5 References

- Natomas Basin Conservancy. 2005. 2004 Annual Survey results for the giant garter snake in the Natomas Basin.
- U.S. Fish and Wildlife Service. 1997. "Programmatic Consultation with the U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo counties, California. Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (*Thamnophis gigas*) Habitat." November 13, 1997
(<http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/ggs%20appendix%20c.pdf>)
- U.S. Fish and Wildlife Service. 1999. Draft Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). Portland, Oregon, IX+192 pp.
- U.S. Fish and Wildlife Service and California Department of Fish and Game. 2003. Natomas Basin Habitat Conservation Plan. Prepared by City of Sacramento, Sutter County, Natomas Basin Conservancy in association with Reclamation District No. 1000, and the Natomas Central Mutual Water Company.

Section 6 Personal Communications

- Gray, B. District Manager, Natomas Central Mutual Water Company, Rio Linda, CA.
July 10, 2014
- Hansen, E. Consulting Environmental Biologist, Sacramento, CA

Appendix A. Indian Trust Assets Review

9/18/13

DEPARTMENT OF THE INTERIOR Mail - CR & ITA REview: NCAO Draft EA SankeyWeirProj 091713



Zedonis, Paul <pzedonis@usbr.gov>

CR & ITA REview: NCAO Draft EA SankeyWeirProj 091713

RIVERA, PATRICIA <privera@usbr.gov>
To: Paul Zedonis <pzedonis@usbr.gov>

Wed, Sep 18, 2013 at 12:10 PM

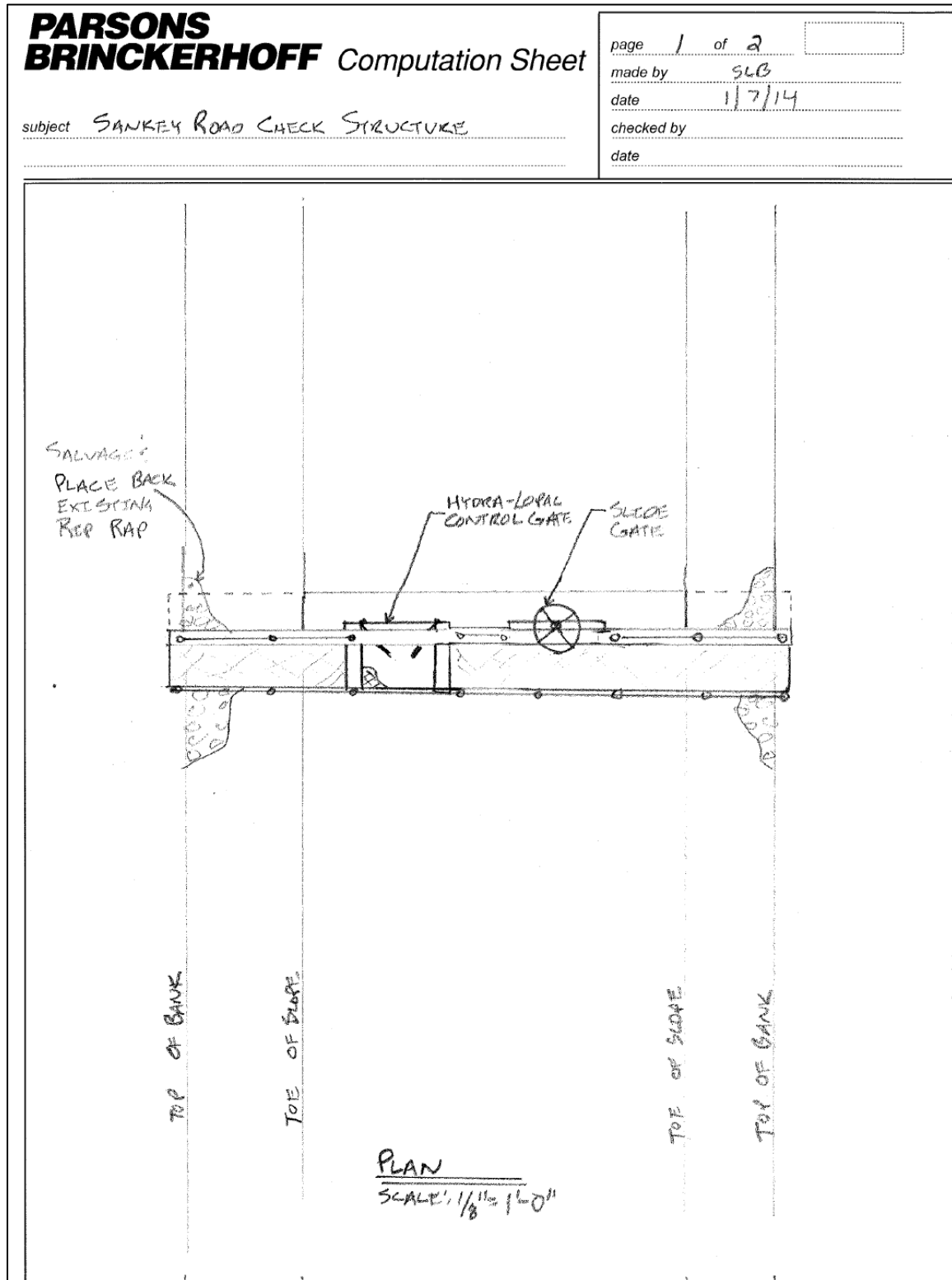
Paul,

I reviewed the proposed action to examine the potential direct, indirect, and cumulative impacts to the affected environment associated with providing a CALFED Water Use Efficiency grant to the Natomas Central Mutual Water Company (Company) for the Sankey Road Check Structure Automation Project (Project).

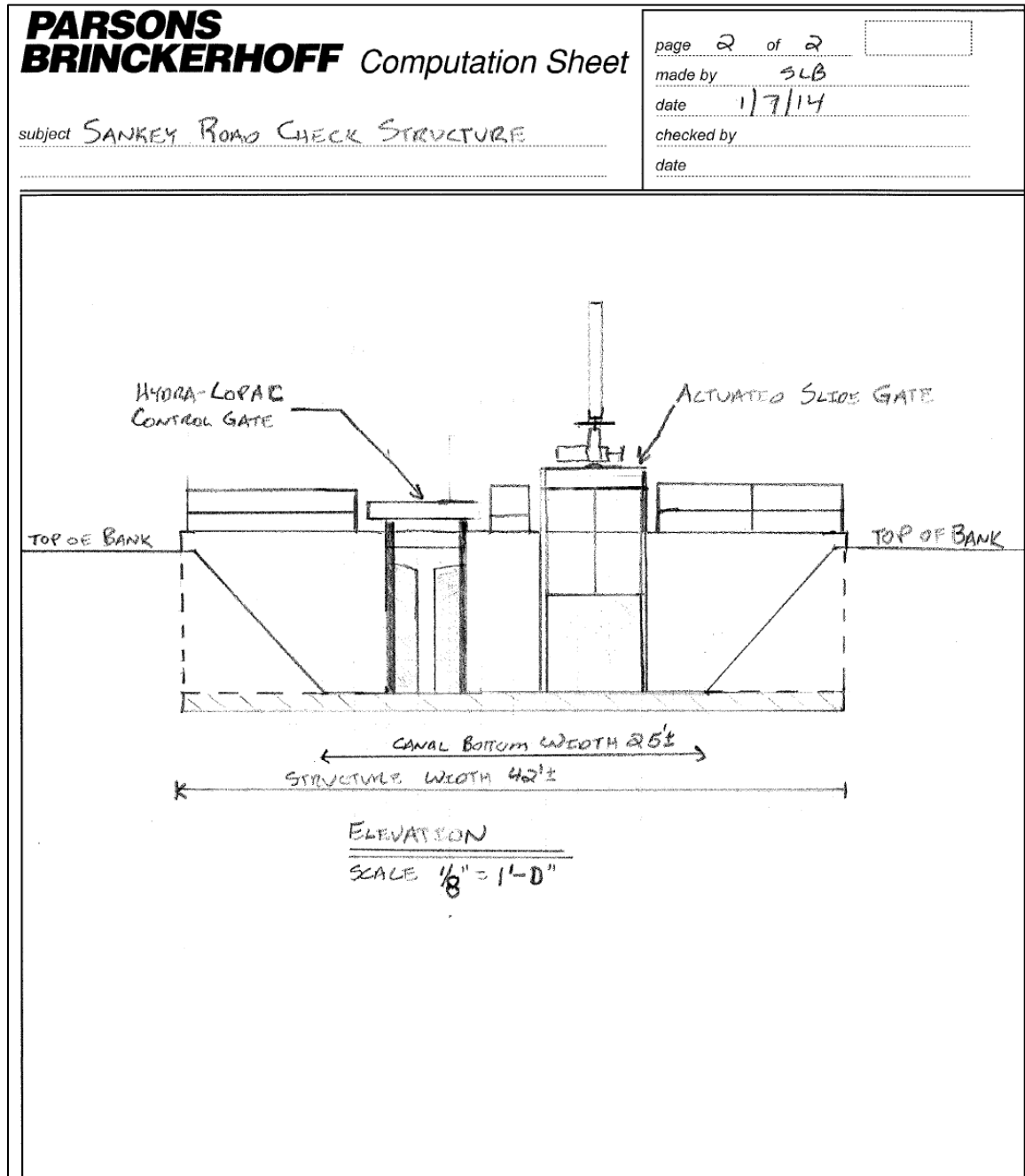
The proposed action does not have a potential to impact Indian Trust Assets. The nearest ITA is the Auburn Rancheria approximately 15 miles North of the project location.

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

Appendix B. Hydra-LoPac Automated Gate Structure Design (page 1 of 2)



Appendix B (cont'd). Hydra-LoPac Automated Gate Structure Design (page 2 of 2)



Appendix C. Cultural Resource Review

CULTURAL RESOURCE COMPLIANCE Reclamation Division of Environmental Affairs MP-153

MP-153 Tracking Number: 13-MPRO-173

Project Name: Natomas Central Mutual Water Company (NCMWC) Sankey Road Check Structure Automation Project

NEPA Document: EA

NEPA Contact: Elizabeth Vasquez, Natural Resource Specialist, MP-150, and Paul Zedonis, Natural Resource Specialist, NCAO

MP 153 Cultural Resources Reviewer: William Soule, Archaeologist

Date: 12/31/2013

Reclamation proposes to provide funding through its CALFED grant program to the NCMWC to reconstruct the existing Sankey Road check structure and add automated gates and controls. This Federal action constitutes an undertaking pursuant to Section 301(7) of the NHPA (16 USC 470) as amended, and as such requires compliance with Section 106 of the NHPA. This action was determined to be the type of undertaking that could cause effects to historic properties pursuant to 36 CFR Part 800.3 of the National Historic Preservation Act (NHPA).

This Project will replace the existing Sankey Road check structure with a long-crested weir to accommodate flow fluctuations in the Northern Main Canal. Additionally, automated control gates will be installed to provide continuous adjustments and eliminate operational spills resulting from periodic manual adjustments. The area of potential effects (APE) consists of approximately 0.25 acre located in sections 21 and 28, T. 11 N., R. 4 E., Mt. Diablo Baseline and Meridian, on the Verona, California 7.5' U.S. Geological Survey quadrangle (1967).

In an effort to identify historic properties, Reclamation reviewed its archaeological site index and project data, and researched information regarding the facilities from NCMWC, including information provided by NCMWC personnel. A records search for the APE and a 0.5-mile radius was completed by the Northeast Center of the California Historical Resources Information System on September 03, 2013. A Reclamation archaeologist conducted a pedestrian survey of the APE on July 17, 2013, to assess the extent of the built environment and to identify any other cultural resources which may have been present. Reclamation sent letters to the Cortina Band of Wintun Indians, the Estom Yumeka Maidu Tribe, the Ione Band of Miwok Indians, the United Auburn Indian Community of the Auburn Rancheria, the Shingle Springs Band of Miwok Indians, and the Yocha Dehe Wintun Nation as federally recognized Indian tribes who may attach religious and cultural significance to historic properties in the APE, requesting their assistance in the identification of sites of religious and cultural significance pursuant to 36 CFR

CULTURAL RESOURCE COMPLIANCE
Reclamation Division of Environmental Affairs
MP-153

§ 800.4(a)(4). The only response to date was from the Yocha Dehe Wintun Nation, who replied in a letter of July 30, 2013, stating that this project was not located within their aboriginal territories.

Reclamation sent a letter to the California State Historic Preservation Officer (SHPO) on November 22, 2013, inviting the SHPO's comments on our delineation of an APE and the appropriateness of our identification efforts, and requesting concurrence with our finding of no adverse effect to historic properties. The SHPO responded in a letter dated December 17, 2013, concurring with this finding.

Please retain a copy of this memorandum in the administrative record for this action. Should changes be made to this action, 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)

United States Department of the Interior

CODE	INT	DATE
2605		
51846		
312		
files		



Classification ENU--

The applicant proposes to replace the existing antiquated check structure on the NMC at Sankey Road. Construction activities will include demolition of the existing structure; removal of rip-rap and grading of approximately 128 square feet of the banks of the NMC; installation of the new cement check structure (42 feet wide by 6 feet long by 9 feet tall); placement of rip-rap on slopes 5 feet upstream and downstream of the new structure; and approximately 70 feet of trenching for installation of a new electrical line. The demolition and grading will occur during the winter months, when the NMC is closed for typical maintenance activities. Rip-rap will be composed of 15-inch minus or 18-inch minus angular rock. No geotechnical backing or aggregate base will be used. Staging of heavy equipment will occur on the existing canal access roads and the shoulder of Sankey Road.

In addition to implementing standard Best Management Practices (BMPs), the applicant has proposed the following avoidance and minimization measures in order to prevent any adverse effects to the snake:

- Movement of heavy equipment will be confined to existing roadways to minimize habitat disturbance;
- Clearing and grading will be confined to the minimum area necessary to facilitate construction activities as determined by a qualified biologist. Habitat that will be avoided will be cordoned off, clearly flagged, and designated as an "Environmentally Sensitive Area" by a qualified biologist. This area will be avoided by all construction personnel;
- Construction personnel will receive Service-approved worker environmental awareness training. This training instructs workers to recognize the snake and its habitat(s) and what to do if a snake is encountered during construction activities;
- Prior to construction and before the onset of the snake's inactive season (October 1), an exclusion fence will be installed in order to prevent snakes from entering the proposed project area. The interior side of the exclusion fence will be routinely monitored for snakes stranded by the fence;
- 24-hours prior to construction activities, the proposed project area will be surveyed for the snake. A survey of the proposed project area will be repeated if a lapse in construction activity of two weeks or greater occurs. If a snake is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Any sightings will be reported to the Service immediately by telephone at (916) 414-6600;
- After completion of construction activities, any temporary fill and construction debris will be removed and disturbed areas will be restored to pre-project conditions wherever feasible; and
- No plastic, monofilament, jute, or similar erosion control matting that could entangle snakes will be placed on the proposed project site when working within 200 feet of snake aquatic or rice habitat. Possible substitutions include coconut coir matting, tactified hydroseeding

compounds, or other material approved by the Service. All trash will be properly disposed of and removed.

After reviewing all the available information, we concur with your determination that the proposed project is not likely to adversely affect the snake. The proposed project reached the 'may affect' level due to the fact that the proposed project occurs within the known range of the snake, and snakes may be present in the action area. Snakes are known to persist in the Natomas Basin, where the proposed project is located (Service 2012). The proposed project will only result in temporary impacts to suitable snake habitat. Rip-rap of the size proposed may be utilized by snakes as upland refugia. Due to the temporary nature of impacts to snake habitat, the potential improvement of upland snake habitat due to the use of appropriately-sized rip-rap, and the avoidance and minimization measures proposed by the applicant, the Service believes that potential adverse effects from the proposed project are extremely unlikely to occur, and are therefore discountable for purposes of this consultation.

Therefore, unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed project, no further action pursuant to the Act is necessary.

If you have any questions regarding the Sankey Road Check Structure Automation Project, please contact Lily Douglas, Fish and Wildlife Biologist, or myself at (916) 414-6645.

cc:

William Ness, U.S. Army Corps of Engineers, Sacramento, CA

Tanya Sheya, California Department of Fish and Wildlife, Rancho Cordova, CA

LITERATURE CITED

U.S. Fish and Wildlife Service (Service). 2012. Giant Garter Snake (*Thamnophis gigas*) 5-year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, California. June 2012. 62 pp.