

# RECLAMATION

*Managing Water in the West*

## **Natomas Central Mutual Water Company: NCMWC/RD 1000 SCADA Integration Project**

**Bay-Delta Program: CALFED Water Use Efficiency Grants**

**Environmental Assessment 18-25-MP**



## **Mission Statements**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors 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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# List of Acronyms and Abbreviations

CHRIS	California Historical Resources Information System
NCMWC	Natomas Central Mutual Water Company
GGs	Giant garter snake
GHG	Greenhouse Gases
ITA	Indian Trust Assets
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
National Register	National Register of Historic Places
PM10	Particulate matter less than 10 micrometers in diameter
PM2.5	Particulate matter less than 2.5 micrometers in diameter
Reclamation	U.S. Bureau of Reclamation
RD 1000	Reclamation District 1000
ROG	Reactive organic gases
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
SMAQMD	Sacramento Metropolitan Air Quality Management District
SVAB	Sacramento Valley Air Basin

# **Section 1 Introduction**

## **1.1 Background**

This Environmental Assessment examines the potential direct, indirect, and cumulative impacts to the affected environment associated with the U.S. Bureau of Reclamation (Reclamation) providing CALFED Water Use Efficiency Grant funding to the Natomas Central Mutual Water Company (NCMWC) for the NCMWC/RD 1000 SCADA Integration Project (Proposed Action). This project is in the Natomas Basin in Sacramento and Sutter counties (Figure 1). This project would improve water management practices for the tailwater recovery resulting in conservation of an estimated 5-10 percent of the tailwater supply, effectively increasing tailwater recovery by approximately 1,900 to 3,700 acre-feet per year.

NCMWC has a Reclamation Settlement Contract for an annual water supply of 120,200 acre-feet made up of 98,200 acre-feet of base supply and 22,000 acre-feet of “Project” supply allocated by Reclamation. NCMWC receives its irrigation supply from the Sacramento River and through an extensive tailwater recovery system. Rice is the primary crop grown within the Natomas Basin. The two additional main crops grown are alfalfa and wheat. Currently there are approximately 24,000 irrigable acres. Reclamation District 1000 (RD1000) is responsible for flood control and drain water management within the Natomas Basin. NCMWC has a joint use agreement with RD1000 to operate the drainage canals at a higher level during the irrigation season to facilitate tailwater recovery.

## **1.2 Need for Action**

There are instances when excess tailwater accumulates that elevates the drainage canals above the allowable summer levels. RD1000 pump stations are automated to turn on when the allowable summer level is exceeded, pumping the excess accumulated tailwater to the Sacramento River. RD1000 maintains a pumping record and reports this on a monthly basis. While this information is important for the water balance analysis, NCMWC staff do not receive this information in a timely manner to make water management decisions that would reduce the amount of excess tailwater. This project will provide a SCADA system for RD1000’s pumping plants to relay drain water levels and pump runtime status to NCMWC staff to improve water management practices.

**Figure 1. Natomas Central Mutual Water Company Vicinity**

# Section 2 Alternatives Including the Proposed Action

## 2.1 No Action

Under No Action, Reclamation would not provide CALFED Water Use Efficiency Grants to NCMWC to help construct the proposed action. Without funding by Reclamation, it is expected that NCMWC could still move forward with the proposed action as described below through other budgetary arrangements though possible at a smaller scale. The effects of the proposed action would be the same as No Action.

## 2.2 Proposed Action

Reclamation would provide a \$365,000 CALFED Water Use Efficiency Grant to NCMWC for the NCMWC/RD 1000 SCADA Integration Project. NCMWC is proposing to provide a SCADA system from RD 1000's pumping plants, maintenance yard, and NCMWC office (nine sites total) (See Figure 2). The project would install water level sensors, pump runtime meters, monitoring equipment, remote terminal units (RTUs) and radio masts at each site to improve drain water management and tailwater recovery.

At RD 1000 Pumping Plant 2, NCMWC operates a drain pump that is SCADA equipped to recirculate tailwater. A hardwire communication connection would be made between the NCMWC's RTU and the new RD 1000 RTU, and programming would be developed to integrate the two SCADA systems. The NCMWC's base station would be updated to collect the new data available from RD 1000's SCADA system and transmit to field staff to improve water management decisions.

Physical installation of monitoring equipment and radio masts at each site would include drilling (or excavation depending on site access) to an approximate depth of 7 to 8 feet for the radio mast foundation. The radio mast height may vary by site, but is generally expected to be approximately 40 feet high and no higher than 60 feet. A conduit trench approximately 3 feet deep would extend from the tower location to the control/electrical building for each site.

General project components for each site are as follows; however, the applicability for each project site may vary slightly:

- A cast-in-place concrete foundation for mounting the radio tower.
- New polyvinyl chloride conduit for radio cables installed from the radio tower to the electrical/control building (length varies, but not generally longer than 50 feet) in a 2- to 3-foot-deep, 8- to 12-inch- wide trench.
- New RTU at Plant 2 to facilitate communication between RD 1000 and the NCMWC.
- Water level sensors placed in the pump wet wells
- Pump Runtime meters placed in pump drives (electrical cabinets).

Figure 3 shows examples of the proposed facilities. Existing roads would be used for transporting construction equipment and materials. Each project site would be used for equipment and material staging as needed.

Most ground disturbance is associated with construction of the radio tower /foundation, which would be completed by excavation or auger drilling. If excavation is used to construct the foundation, the excavated area could be approximately 20 feet wide by 20 feet long not including the spoils pile or excavation equipment. If the foundation is constructed using an auger drill, the disturbed area would be an approximately 4 to 5 foot diameter circle not including the spoils pile or excavation equipment.

The anticipated equipment to be used for each work component is as follows:

- Concrete foundation – excavator or auger drilling rig (rubber wheeled)
- Tower installation – crane (rubber wheeled)
- Buried conduit – backhoe or trencher
- Equipment installation and conductor pulling – service pickups or vans

The NCMWC is proposing to begin construction in September 2018. Construction would last approximately 9 months, with completion anticipated in June 2019. The nine months of construction is for all facets of the project including hardware installation, pulling conductors, and programming. The actual ground disturbance activities are estimated to take no more than one week total for each site (40 to 50 person hours). In some cases, depending on the site, ground disturbance would be no more than a couple days (16 to 24 person hours). For the duration of the construction contract work would generally be performed during normal working hours, Monday through Friday.



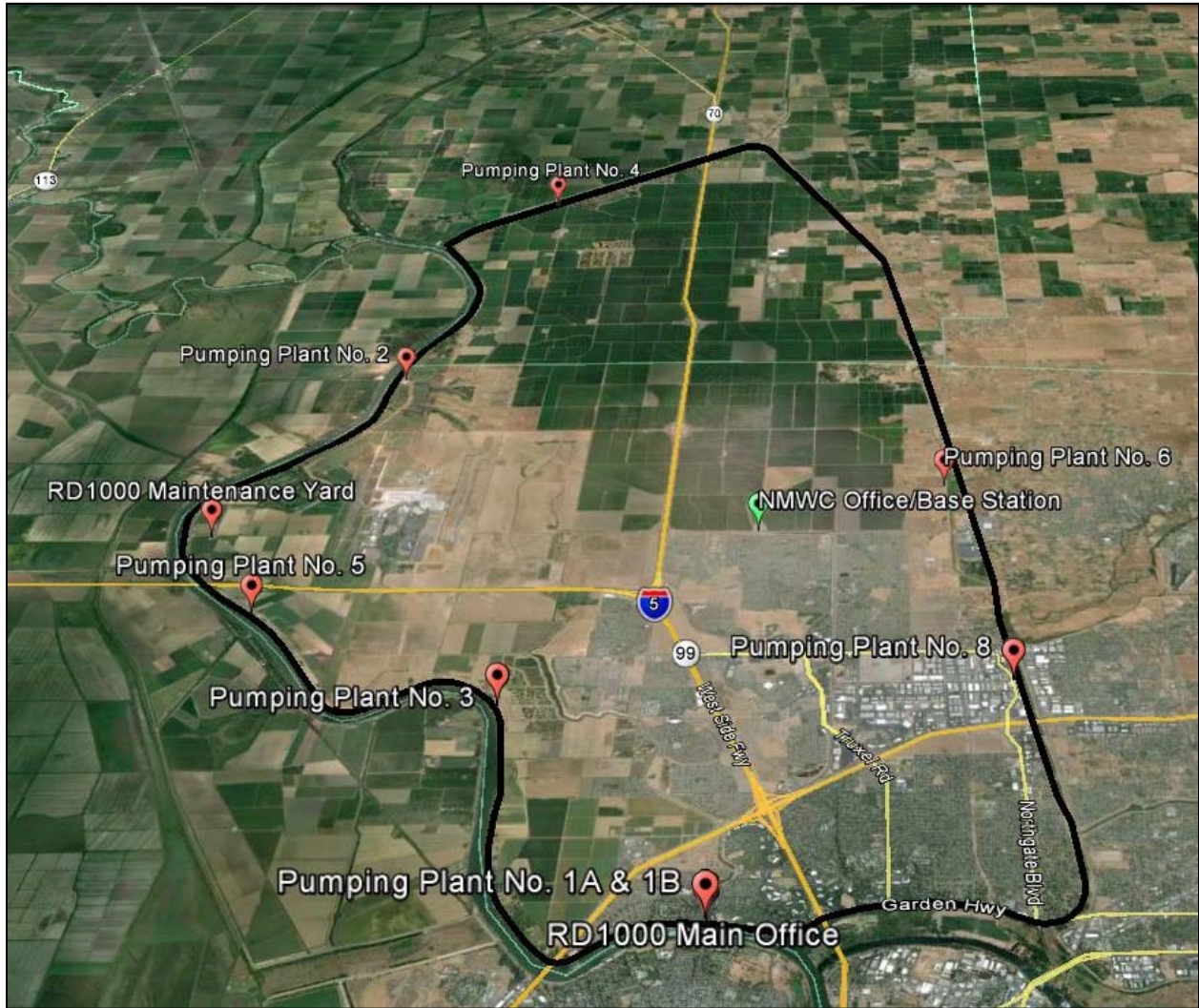


Figure 2. Location of RD 1000 Pumping Plants



Figure 3. Examples of Modifications to RD 1000 Pumps

# Section 3 Environment and Environmental Consequences

## 3.1 No Action Alternative

Under No Action, Reclamation would not provide CALFED Water Use Efficiency Grants to NCMWC to help construct the proposed action. Without funding by Reclamation, it is expected that NCMWC would still move forward with the proposed action through other budgetary arrangements though possible at a smaller scale. The effects of the proposed action would be the same or less as No Action, and thus no further analysis is necessary in this document.

## 3.2 Proposed Action

### 3.2.1 Resources Not Analyzed in Detail

Impacts to the following resources were considered and found to be minor or absent. Brief explanations for their elimination from further consideration are provided below:

#### 3.2.1.1 *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 Mooretown Rancheria of Maidu Indians which is about 11.32 miles north of the project area. The Proposed Action does not have a potential to affect ITAs (See Appendix B).

#### 3.2.1.2 *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 is not located on federal land and therefore would not affect or prohibit access to and ceremonial use of Indian sacred sites.

#### 3.2.1.3 *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 because of implementing the Proposed Action. Therefore, implementing the Proposed Action could not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area.

## **3.2.2 Cultural Resources**

### **3.2.2.1 Affected Environment**

The Proposed Action is situated in the Reclamation District 1000 Rural Historic Landscape District (RD 1000) characterized by irrigation canals and drainage canals and pumping stations that enable rice farming and the cultivation of field crops. This historic district was found eligible for listing in the National Register of Historic Places (National Register) in 1994 by Peak and Associates (Peak 1997). It is significant as one of the first and largest reclamation districts in California with a period of significance from 1911 to 1939.

A records search of the California Historical Resources Information System (CHRIS) North Central Information Center at the California State University, Sacramento took place on January 20 and 23, 2017 with a 0.5-mile radius for previously located cultural resources and inventories located in Sacramento County. A second CHRIS search with the same parameters took place on January 17, 2017 at the Northeast Information Center at the California State University, Chico for resources located in Sutter County. The CHRIS search determined that thirty-one sites are located within the study area, and include eighteen historic period resources, seven prehistoric sites, and three multi-component sites. Portions of the study area are in the RD 1000 rural historic landscape.

Cultural resources inventories of study area took place in February 2017. Due to poor ground visibility at the time of inventory limited archaeological shovel testing took place to determine the presence/absence of intact subsurface archaeological deposits. No archaeological resources were discovered because of the pedestrian survey or the shovel testing. The architectural resources inventory identified two new historic period sites and updated information on six previously recorded historic period sites. Portions of the study area are in the RD 1000 Historic District and its contributing elements within the study area include the RD 1000 Pumping Plant 1A and the North Drainage Canal. The NCMWC's Laterals 3 and 3A within the study area were determined to be eligible for listing in the National Register. They are contributing elements to the RD 1000 Historic District under National Register Criterion A, for their role in Sacramento Valley agriculture and water conveyance.

### **3.2.2.2 Environmental Consequences**

No prehistoric cultural resources have been located in the study area. Reclamation determined that the Proposed Action would have no adverse effect on historic properties (See Appendix A).

## **3.2.3 Biological Resources**

### **3.2.3.1 Affected Environment**

Most of the pumping station locations are surrounded by agricultural lands adjacent to canals and drains. The remaining sites occur in developed or urban areas. Irrigation canals and drains crisscross the area, delivering and receiving water during agricultural production. The water is managed by RD 1000 and the NCMWC. Canals and drains are routinely maintained and are generally devoid of vegetation.

Habitat types found in the study area include the following:

- **Developed areas** include the roads, levees, pumping stations, and urban landscape

structures within disturbed farming areas.

- **Agricultural uses** include rice, fallow agricultural land, and canals. Access roads and rice margins have ruderal vegetation species that are routinely mowed or sprayed and that are devoid of vegetation. Canals and drains in the area are routinely cleared of vegetation.

Habitat assessments and biological resource surveys were conducted on January 26, 2017 for the nine SCADA locations occurring at the existing pumping stations, NCMWC office, and RD 1000 maintenance yard (CH2M, 2017). The focus of these surveys was to identify potential biological resources (e.g., special-status species, sensitive natural communities, and wetlands), potential for nesting birds, and mammal burrows that could serve as underground refugia for special-status species.

Potential habitat for giant garter snake (GGS), a federal- and state- listed threatened species, was noted throughout the various areas, except for the NCMWC office and RD 1000 maintenance yard. Potential habitat for western pond turtle (WPT), a state species of special concern, was noted throughout the various areas, except for the maintenance yard. All sites are located within suitable nesting or foraging habitat for Swainson's hawk, a state-listed threatened species. Potential habitat for western burrowing owl, a state species of special concern, was observed at Pumping Plant 8. Suitable nesting habitat for Cooper's hawk, a state watch-list species, and suitable nesting and foraging habitat for white-tailed kite, a state fully protected species, exists at Pumping Plant 1 and the NCMWC office.

### **3.2.3.2 Environmental Consequences**

Permanent impacts would be confined to a 20- by 20-foot pad needed to install the radio tower masts and up to 50 feet in length of shallow trenching for electrical conduit at each of the nine locations to accommodate connections of radio tower to SCADA receivers/transceivers. All permanent impacts would occur within previously disturbed and developed areas. In addition, temporary impacts associated with the laydown areas (approximately 1,000 square feet or as allowed by location size) and access roads would occur within previously disturbed and developed areas.

Based on current site conditions, there is potential habitat, including refugia, for GGS in the study areas (within 200 feet of tower locations); however, this species would be considered highly unlikely to occur in the proposed SCADA mast and laydown areas for Pumping Plants 1 through 8. The canals and roads in the area are routinely maintained, keeping foraging habitat within the canals to a minimum and further reducing the likelihood of GGS to occur in the project footprint.

The SCADA sites include active developed facilities where routine maintenance occurs. Because of the minimal footprint associated with installation of the SCADA masts, and the developed nature of the tower locations, impacts to biological resources are not expected. During a site visit on March 1, 2017, the U.S. Fish and Wildlife Service concluded that Section 7 consultation was not necessary because the project would occur within previously disturbed and developed areas and would not affect Federal listed species.

## 3.2.4 Air Quality

### 3.2.4.1 Affected Environment

The Proposed Action is in Sacramento County and Sutter County, both of which lie within the Sacramento Valley Air Basin (SVAB). Air basins share a common “air shed”, the boundaries of which are defined by surrounding topography. Although mixing between adjacent air basins inevitably occurs, air quality conditions are relatively uniform within a given air basin. Air quality in the Proposed Action area is regulated by the Sacramento Metropolitan Air Quality Management District (SMAQMD) and the Feather River Air Quality Management District (FRAQMD).

The U.S. Environmental Protection Agency and California Air Resources Board developed federal and state health-based air quality standards, known as National and California ambient air quality standards (NAAQS and CAAQS), for criteria air pollutants. Criteria air pollutants consist of carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide, inhalable particulate matter between 2.5 and 10 microns in diameter (PM<sub>10</sub>), particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>), and lead. The CAAQS also set standards for sulfates, hydrogen sulfide and visibility. Regionally, some portions of the SVAB have fewer air quality problems than others.

The Sacramento region is designated a nonattainment area for the ozone NAAQS, and includes all of Sacramento and Yolo counties and portions of Placer, El Dorado, Solano, and Sutter counties. This area is referred to as the Sacramento Federal Nonattainment Area. In Sutter County, only the southern portion of the county is designated as nonattainment for the ozone NAAQS. The entire SVAB, including all of Sutter County, is designated as nonattainment for the CAAQS for ozone and PM<sub>10</sub> (CARB, 2014; State of California, Office of Administrative Law [OAL], 2017). After the U.S. Environmental Protection Agency promulgated a new 24-hour standard for PM<sub>2.5</sub> in October 2006 (71 FR 61144), a multi-county PM<sub>2.5</sub> nonattainment area was created in the Sacramento region that includes all of Sacramento County, the eastern portion of Yolo County, the western portions of El Dorado and Placer counties, and the northeast portion of Solano County. The Sacramento region nonattainment area attained the Federal PM<sub>2.5</sub> health standards on December 31, 2011 and the affected air quality management districts have requested re-designation of the area to attainment for the federal standard (SMAQMD et al. 2013).

Even though the SVAB does not attain certain standards, air quality has improved over time. Pollutant levels have decreased dramatically since the 1980s even with substantial region-wide population growth. In Sacramento County, most air pollution during the summer comes from mobile sources, which are the cars, trucks, buses, agriculture and construction equipment that are used every day. In the wintertime, most air pollution comes from wood burning in residential fireplaces and wood stoves (SMAQMD 2017). The sources that are most associated with emitting ozone precursors and particulate matter in Sutter County include fuel combustion, petroleum production, farming operations, and motor vehicles. Section 110(a) of the Clean Air Act (42 U.S.C. 7401(a)) requires states to develop plans, known as State Implementation Plans (SIPs), that describe how they would attain NAAQS.

Section 176(c) of the Clean Air Act (42 U.S.C. 7506(c)) requires that any entity of the federal government that engages in, supports, or in any way provided financial support for, licenses or

permits, or approves any activity to demonstrate that the action conforms to the applicable SIP before the action is otherwise approved. The U.S. Environmental Protection Agency promulgated the General Conformity Rule to ensure that such federal actions are consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS for criteria air pollutants and achieving expeditious attainment of those standards. If an action does not conform to the SIP, the Federal agency must submit a conformity determination to the U.S. Environmental Protection Agency, State and local air pollution control agencies, and to the public. Federal actions that are exempt from the General Conformity Regulations include, but are not limited to, actions with associated emissions clearly at or below specified *de minimis* levels (USEPA 2017).

#### **3.2.4.2 Environmental Consequences**

Construction emissions would be short term and vary from day to day and by activity, timing, and intensity. Temporary impacts from installing radio towers and trenching for installing cables would occur over approximately 0.01 acres and would be gradually spread over a nine-month period. However, actual ground disturbance activities are estimated to take no more than one-week total at each of the nine sites. In some cases, depending on the site, ground disturbance would be no more than a couple days. Therefore, construction time would be less than nine weeks.

Short-term air quality impacts would generally arise from dust generation (fugitive dust) and operation of construction equipment and vehicle traffic on paved and unpaved roads. Fugitive dust is a source of airborne particulates, including PM<sub>10</sub> and PM<sub>2.5</sub>. Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff. SMAQMD has adopted Basic Construction Emission Control Practices (Best Management Practices) for controlling fugitive dust from a construction site (SMAQMD 2018).

Trucks and other mobile sources powered by diesel or gasoline are also sources of combustion emissions, including nitrogen dioxide, carbon monoxide, volatile organic compounds, sulfur dioxide, and small amounts of air toxics. The SMAQMD has developed a screening level to assist in determining if nitrogen dioxide and particulate emissions from constructing a project in Sacramento County will exceed SMAQMD construction significance thresholds. This screening level was developed using default construction inputs in the California Emissions Estimator Model (CalEEMod). Projects that are 35 acres or less in size generally will not exceed the SMAQMD construction thresholds of significance for nitrogen dioxide or particulates, provided that the project meets all the screening parameters. All construction projects regardless of the screening level are required to implement the Basic Construction Emission Control Practices (SMAQMD 2018).

The Proposed Action would disturb approximately 0.01 acres which is much less than the screening level of 35 acres and the project meets all of the screening parameters. In addition, construction for the Proposed Action would last less than 8 weeks and be spread over a 9-month period. Therefore, the Proposed Action would not exceed SMAQMD thresholds of significance. Since the Proposed Action will be below SMAQMD adopted thresholds which are more stringent than the *de minimis* thresholds, the Proposed Action would also fall below federal general conformity thresholds and a Federal general conformity analysis report is not required. Thus, the Proposed Action would have a *de minimus* effect on air quality.

### 3.2.5 Cumulative Impacts

According to CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time* (40 CFR 1508.7).

Greenhouse gas (GHG) impacts are considered to be cumulative impacts since any increase in greenhouse gas emissions would add to the existing inventory of gases that could contribute to climate change. Reclamation provided a grant in 2015 to the Garden Highway Mutual Water Company for the System Modernization and Real-Time Monitoring and Control Project, adjacent to the Proposed Action. The estimated GHG emissions for the Garden Highway project were 13.22 metric tons of carbon dioxide equivalents, due to temporary project construction activities. The Proposed Action is smaller in magnitude than the Garden Highway project and there are no on-going operational emissions.

In considering when to disclose projected quantitative GHG emissions, Council on Environmental Quality has provided a reference point of 25,000 metric tons of carbon dioxide equivalent emissions on an annual basis below which a GHG emissions quantitative analysis is not warranted unless quantification below that reference point is easily accomplished (CEQ 2014). The SMAQMD provides a recommended threshold of 1,100 metric tons of carbon dioxide equivalent emission annually during construction for agencies without adopted GHG reduction plans or their own adopted thresholds (SMAQMD 2018). If a project's emissions exceed the threshold of significance, then the project emissions may have a cumulatively considerable contribution to a significant cumulative environmental impact. Construction-related GHG emissions from the Proposed Action would be the same or less than the 13.22 metric tons of carbon dioxide equivalent per year anticipated to be emitted from the similar Garden Highway project. Therefore, the Proposed Action's GHG emissions are well below 1,100 metric tons/year and the contribution of GHG is negligible.

## **Section 4 Consultation and Coordination**

### **4.1 Agencies and Persons Consulted**

Reclamation consulted with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, State Historic Preservation Officer, and Natomas Central Mutual Water Company.

### **4.2 National Historic Preservation Act (54 USC § 306108)**

Reclamation is consulting under Title 54 USC § 306108, commonly known as Section 106 of the NHPA, which requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the NHPA. Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register.

Based on review of the available information, Reclamation initiated consultation with the State Historic Preservation Officer on February 14, 2018 and requested concurrence on a finding that the Proposed Action would have no adverse effect on historic properties, pursuant to 36 CFR § 800.5(b) (See Appendix A). Reclamation received concurrence on the National Register eligibility of these resources and the finding of no adverse effect on historic properties on March 15, 2018.



## Section 5 References

- California Air Resources Board (CARB). 2014. Final Regulation Order, Area Designations for State Ambient Air Quality Standards. Chapter 1. Air Resources Board. Subchapter 1.5. Air Basins and Air Quality Standards. Article 1.5. Area Pollutant Designations.
- CH2M. 2017. Technical Memorandum. Biological Survey Results for Natomas Central Mutual Water Company Proposed SCADA Tower Installation.
- Council on Environmental Quality. 2014. Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews. Federal Register /Vol. 79, No. 247 /Wednesday, December 24, 2014.
- Peak, Melinda A. 1997. Historic American Engineering Record for the Reclamation District 1000 HAER No. CA-187. Prepared by Peak & Associates, Eldorado Hills, CA.
- Sacramento Metropolitan Air Quality Management District (SMAQMD). 2017. Air Quality and Health. SMAQMD Website <http://www.airquality.org/air-quality-health>
- Sacramento Metropolitan Air Quality Management District (SMAQMD). 2018. Guide to Air Quality Assessment in Sacramento County. December 2009. Revised September 2010, April 2011, May 2011, April 2013, June 2013, July 2013, August 2013, October 2013, June 2014, November 2014, May 2015, June 2015, December 2015, February 2016, March 2016, May 2016, June 2016, August 2016, September 2016, December 2016, May 2017, April 2018, and May 2018. Individual chapters available for download at: <http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools>
- Sacramento Metropolitan Air Quality Management District (SMAQMD), El Dorado County Air Quality Management District, Placer County Air Pollution Control District, Yolo-Solano Air Quality Management District. 2013. PM2.5 Implementation/Maintenance Plan and Re-designation Request for Sacramento PM2.5 Nonattainment Area. October.
- State of California, Office of Administrative Law (OAL). 2017. Notice of Approval of Changes without Regulatory Effect. 2016 Changes by Operation of Law. Area Designations for State Ambient Air Quality Standards. Chapter 1. Air Resources Board. Subchapter 1.5. Air Basins and Air Quality Standards. Article 1.5. Area Pollutant Designations.
- USEPA. 2017. General Conformity: Frequent Questions about General Conformity. U.S. Environmental Protection Agency. Website: <https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#2>. Accessed: August 14, 2018.

# **Appendix A: Cultural Resources Compliance**

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

MP-153 Tracking Number: 15-NCAO-195/15-NCAO-196/16-NCAO-174

Project Name: Reclamation District 1000 (RD-1000) and Natomas Central Mutual Water Company (NCMWC) Supervisory Control and Data Acquisition (SCADA) Integration, Cottonwood Check Structure, and North Drainage Canal (NDC) Lift Pump Station Projects, Sacramento & Sutter Counties

NEPA Document: 18-18-MP

MP 153 Cultural Resources Reviewer: Lex Palmer

Date: March 15, 2018

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Reclamation proposes to approve CALFED Water Use Efficiency program grant funding for the installation of SCADA systems and a Lift Pump Station located within the RD-1000 and NCMWD boundaries. This action constitutes an undertaking with the potential to cause effects to historic properties, assuming such properties are present, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) as amended.

Based on historic properties identification efforts conducted by CH2M on behalf of RD-1000 and NCMWC, Reclamation made a finding of no adverse effect to historic properties by the proposed undertaking. Reclamation notified the State Historic Preservation Officer (SHPO) of this finding, pursuant to 36 CFR §800.4(d)(1). SHPO replied with concurrence on the finding. Consultation correspondence between Reclamation and the SHPO has been provided with this cultural resources compliance document for inclusion in the administrative record for this action.

Please note that as a condition of this finding, Reclamation will provide a staff archaeologist to monitor the installation of a SCADA tower at the RD-1000 work shop. RD-1000 must coordinate with Reclamation on when this activity will occur.

This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, additional NHPA Section 106 review, including further consultation with the SHPO, may be required. Thank you for providing the opportunity to comment on this project.

Attachment:

Letter: SHPO to Reclamation dated March 15, 2018



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

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer  
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100  
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March 15, 2018

In reply refer to: BUR\_2018\_0215\_001

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

Subject: Section 106 Consultation for the Reclamation District 1000 (RD-1000) and Natomas Central Mutual Water Company (NCMWC) Supervisory Control and Data Acquisition (SCADA) Integration, Cottonwood Check Structure, and North Drainage Canal (NDC) Lift Pump Station Projects, Sacramento & Sutter Counties, CA (Projects #15-NCAO-195; #15-NCAO-196; #16-NCAO-174)

Dear Ms. Leigh:

The State Historic Preservation Officer (SHPO) received on February 15, 2018 your letter initiating consultation on the above referenced undertaking to comply with Section 106 of the National Historic Preservation Act of 1966 (as currently amended) and its implementing regulations found at 36 CFR Part 800. The Bureau of Reclamation (Reclamation) is seeking comments on delineation of the Area of Potential Effects (APE), appropriateness of historic properties identification efforts, and on its effect finding of no adverse effect to historic properties. The following documentation was provided:

- *Enclosure 1: Cultural Resources Inventory Report for the Cottonwood Check Structure Automation, SCADA Integration, and North Drainage Canal Lift Pump Station Projects, Sacramento and Sutter Counties, California; Reclamation Projects 15-NCAO-195/196; October 2017 [By: G. Cardenas, L. Price, M. Montgomery, N. Lawson, & A. McCarthy-Reid; CH2M HILL, Inc., Santa Ana, CA] [For: Natomas Central Mutual Water Company, Rio Linda, CA, and U.S. Bureau of Reclamation, Mid-Pacific Region Environmental Affairs MP-150, Sacramento, CA].*
- *Enclosure 2: (on Compact Disk): Appendix C: As Built for Project; Appendix D: DPR 523 forms.*

Proposed work involves three interrelated grant-funded projects that are located within RD-1000 and NCMWD boundaries. Basically, the RD-1000 infrastructure drains the natural floodplain of the basin, while NCMWD infrastructure provides local agricultural irrigation:

- The SCADA Integration Project (#15-NCAO-195) requires RD-1000 and NCMWD to coordinate to install SCADA water level sensors and telemetry towers at nine sites that include seven RD-1000 pump stations, the RD-1000 shop, and the RD-1000 office. Excavation is needed to install the towers and run hard wire conduit from the towers to existing electrical control buildings.
- The Cottonwood Check Project (#15-NCAO-196) will replace an existing check structure in NCMWD's Lateral 3 with a new, automated Hydra-LOPAC gate; install instrumentation and control equipment conduit and cables along the Lateral 3 and Lateral 3A canal access roads; and place a solar powered SCADA system terminal at the new automated gate to manage flows.
- The NDC Lift Pump Station Project (#16-NCAO-174) is designed to recover agricultural tailwater by constructing a new lift pump on the south side of the NCMWD's Sankey Canal and access road. Construction components include a cast-in-place or precast concrete wet well and pump base slab, and installation of motors, a control cabinet, and electrical transformer. The wet well requires a concrete intake and trash racks to cover four 48-inch

intake pipes. The lift pump station needs excavation for electrical service conduit in the lower Sankey Canal access road.

The goal for the three projects is to provide greater flexibility in meeting spring water demands, improve water management, reduce Sacramento River fresh water diversions by 4,000 acre-feet annually, and reduce the amount of excess drain water being pumped back into the river.

The Area of Potential Effects (APE) comprises eleven (11) discontinuous light industrial and rural locations (Figures: 1-12A, Appendix A, CH2M 2017). All staging will occur on existing canal access roads, in the canals, or on paved surfaces at the RD-1000 and NCMWD headquarters shops. The total APE acreage for all three projects is about 5.3 acres:

- The RD-1000 SCADA Project (15-NCAO-195) horizontal APE will be 5 feet by 5 feet at each of the nine tower locations, with a vertical APE ranging from 3 feet deep for electrical conduit runs with varying lengths, and 10 feet deep for tower foundations.
- The Cottonwood Check Project (15-NCAO-196) horizontal APE is 80 square feet for the check structure replacement work area, and 275 feet long by 12 inches wide for the cable trench in the Lateral 3 and Lateral 3A canal access roads. The vertical APE is 3 feet deep. In addition, about 900 square feet of riprap will be installed upstream and downstream of the new check structure in the existing canal prism. Work will be in the canal and from the dirt access roads.
- The NDC Lift Station Project (16-NCAO-174) horizontal APE is 100 feet long and 65 feet wide for the lift station, and 270 feet long and 12 inches wide for an electrical service line conduit trench to be placed in the lower Sankey Canal access road. The vertical APE will be 14 feet deep.

On behalf RD-1000 and NCMWD, CH2M Hill Inc. (CH2M: 2017) conducted background records searches and conducted a cultural resources inventory that included shovel testing in portions of the APE. No archaeological sites were located during the inventory. Six (6) previously recorded and two newly recorded historic period architectural sites are located in the APE. Sections of the APE are located within the recorded boundary of the RD-1000 Rural Landscape Historic District and its contributing elements within the APE include the RD-1000 Pumping Plant 1A and the North Drainage Canal. The RD-1000 pumping plants record drawings (as-builts) were provided (Compact Disk enclosure).

The RD-1000 Rural Landscape Historic District was determined eligible for listing in the National Register of Historic Places (NRHP) in 1994 (Peak and Associates: 1997). It is significant as one of the first and largest reclamation districts in California with a period of significance from 1911 to 1939 and has been recorded and documented for the Historic American Engineering Record (HAER No. CA-187, June 1997). CH2M documented the NCMWC Lateral 3 and Lateral 3A in the APE, and recommended that the NCMWD irrigation system is eligible for NRHP listing as a contributing element to the RD-1000 Historic District under National Register Criterion A, for its role in Sacramento Valley agriculture and water conveyance. Reclamation agrees with the CH2M recommendation that Lateral 3 and Lateral 3A are eligible for NRHP listing as contributors to the district.

Reclamation identified the United Auburn Indian Community of the Auburn Rancheria (UAIC), Buena Vista Rancheria, Lone Band of Miwok Indians, Shingle Springs Band of Miwok Indians (Shingle Springs Band), and Wilton Rancheria as tribes potentially having interests in the project area. Reclamation contacted these tribes by letter dated April 07, 2017, and invited their participation in the Section 106 process. Reclamation also sent letters dated April 07, 2017, to the Nashville-EI Dorado Miwok, Tsi Akim Maidu, and Mr. Don Ryberg of the Tsi Akim Maidu requesting their assistance in site identification.

The UAIC and the Shingle Springs Band responded, requesting copies of any associated cultural resources inventory reports and to be Section 106 consulting parties. Reclamation replied on October 24, 2017, providing the draft inventory report and again requesting information on any cultural resources of concern specific to these projects. A site visit was done with UAIC representatives on January 9, 2018. The UAIC indicated concerns about a SCADA tower installation at the RD-1000 shop due to proximity of known recorded prehistoric sites located along the Sacramento River east bank (CH2M 2017: Figure 10A). To address the UAIC concerns, Reclamation will provide a staff archaeologist to monitor the SCADA Tower foundation excavation that is located within the RD-1000 shop APE. Reclamation currently has no further responses, but will work to address any concerns that may subsequently arise and will make notifications as required.

Reclamation applied the criteria of adverse effect for each component and reached the following conclusions. The SCADA Integration Project (15-NCAO-195) involves construction of vertical antennas, though placement is in locations that will not have an indirect visual, or direct effect, to any contributing RD-1000 Historic District historic properties. Removal of the Cottonwood Check Structure (15-NCAO-196) constitutes only a minor change within the NCMWC irrigation system that has over 100 miles of canals, and the new replacement gate will let Lateral 3 continue to operate as designed. The NDC Lift Station Project (16-NCAO-174) will be built on only 200 feet of the 4-mile-long North Drainage Canal, which is a contributing element to the RD-1000 historic district. The new lift station is a minor change in the setting of the canal, will not impact the structure's National Register eligibility, and will allow the canal to still function as intended.

Following OHP staff review, the following comments are offered:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the overall APE as defined;
- Pursuant to 36 CFR 800.4(b), Reclamation has documented a reasonable and good faith effort to identify historic properties within all sections of the area of potential effects.
- Pursuant to 36 CFR 800.4(c)(2), **I do not object** that Reclamation has determined that NCMWC Lateral 3 and Lateral 3A are eligible for listing in the NRHP under Criterion A, as contributors to the eligible RD-1000 Rural Landscape Historic District.
- Reclamation finds that, with the condition of having a Reclamation staff archaeologist monitor the SCADA Tower foundation excavation that is located within the RD-1000 shop APE, the proposed undertaking will result in no adverse effects to the historic properties affected. Pursuant to 36 CFR 800.5(b), **I do not object**.

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

Sincerely,



Julianne Polanco  
State Historic Preservation Officer

## **Appendix B**

### **Indian Trust Assets Compliance**

10/22/2015

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

Submit your request to your office's ITA designee or to MP-400, attention Kevin Clancy.

**Date:**

<b>Requested by (office/program)</b>	Doug Kleinsmith
<b>Fund</b>	16XR0687NA
<b>WBS</b>	RX.31721000.000000
<b>Fund Cost Center</b>	2015200
<b>Region # (if other than MP)</b>	
<b>Project Name</b>	Natomas Central Mutual Water Company: Cottonwood Check Automation Project; and NMWC/RD1000 SCADA Integration Project
<b>CEC or EA Number</b>	
<b>Project Description (attach additional sheets if needed and include photos if appropriate)</b>	<p>1. Cottonwood Check Automation Project: This project will reconstruct the existing Cottonwood check structure to provide a self-regulating vertical leaf gate that opens/closes to maintain a consistent upstream water level. In addition to the new check structure improvements, two flow meters, three water level sensors and a solar powered SCADA RTU will be installed to expand the coverage/features of the Company SCADA system for improved water management.</p> <p>2. NMWC/RD1000 SCADA Integration Project: NCMWC is proposing to install water level sensors and pump runtime meters at the eight RD1000 pump stations to improve drain water management and tailwater recovery. The project will include implementing RD1000's SCADA system and integration with the NCMEWC's SCADA system.</p>



10/22/2015

<b>*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)</b>	121.5 longitude and 39.3 latitude (See figure below).
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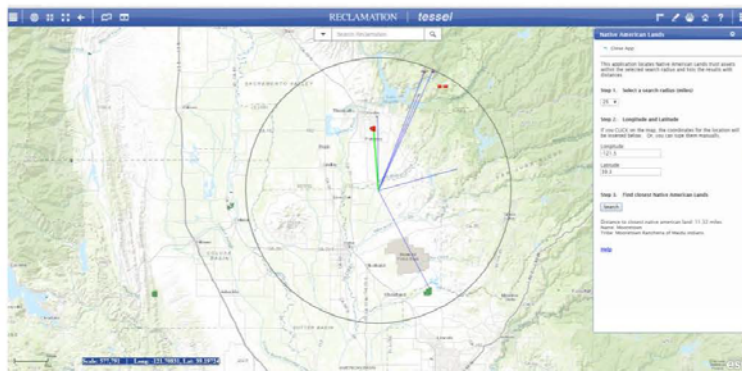
/s/ Doug Kleinsmith                      Doug Kleinsmith                      7/27/16  
Signature                                      Printed name of preparer                      Date

**ITA Determination:**

The closest ITA to the proposed Natomas Central Mutual Water Company activity is the Moortown Rancheria of Maidue Indians about 11.32 miles to the north (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.

K. Clancy                                      Kevin Clancy                                      8/1/2016  
Signature                                      Printed name of approver                      Date



10/22/2015

