

DEPARTMENT OF WATER RESOURCES

DIVISION OF FLOOD MANAGEMENT

P.O. BOX 219000

SACRAMENTO, CA 95821-9000



April 15, 2014

NOTICE OF INTENT: to Consider Adoption of a Proposed Initial Study/Mitigated Negative Declaration for the Sutter Bypass Collecting Canal Culvert Rehabilitation -- Hughes Road

Dear Interested Parties:

Enclosed for your review is the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Sutter Bypass Collecting Canal Culvert Rehabilitation -- Hughes Road, which is located at Hughes Road in Sutter County on the collecting canal system east of the Sutter Bypass approximately eight miles south west of Yuba City. The document has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines.

The proposed project involves replacing a deteriorated and undersized 36-inch diameter corrugated metal culvert to prevent further erosion of Hughes Road and provide sufficient water conveyance for present canal flow conditions. The new culvert will reduce the need to conduct maintenance such as clearing debris and will improve passage for aquatic and terrestrial species. The replacement is a precast box culvert with dimensions equaling 60 feet long, 7 feet wide, and five feet high.

The IS/MND identifies the proposed project's potential effects on the environment and the significance of those effects. Based on the IS/MND, DWR has determined that the proposed project would have less-than-significant effects on the environment.

The IS/MND is being circulated for public review and comment for a period of 30 days, starting on Wednesday, April 16, 2014 and ending on Thursday, May 15, 2014. The IS/MND may also be reviewed at the Department of Water Resources' website, <http://www.water.ca.gov/floodmgmt/fmo/msb/> and at the Main Branch of the Sutter County Library, 750 Forbes Avenue, Yuba City, CA 95991.

Please send written comments on the IS/MND no later than close of business on Thursday, May 15, 2014 to:

Mr. Andrew Rogers, Environmental Scientist Maintenance Environmental Support Branch
Division of Flood Management
Department of Water Resources
3310 El Camino Ave, Suite 140
Sacramento, CA 95821
Fax: (916) 574-2010

Interested Parties

April 15, 2014

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Comments may also be provided via e-mail to Andrew Rogers at andrew.rogers@ca.water.gov. If comments are provided via e-mail, please include the project title in the subject line, attach comments in Microsoft Word format, and include the commenter's U.S. Postal Service mailing address.

To simplify the distribution process, copies of the IS/MND are being distributed in electronic format and accompanied by paper copies of the summary form. If you are a reviewer/recipient who received the IS/MND in electronic format and you require a paper copy, please contact Andrew Rogers at (916) 574-2010 or andrew.rogers@water.ca.gov.

Enclosures:

Draft Initial Study/Proposed Mitigated Negative Declaration for the Sutter Bypass Collecting Canal Culvert Rehabilitation -- Hughes Road

Proposed Mitigated Negative Declaration
Sutter Bypass Collecting Canal Culvert Rehabilitation
Hughes Road

April 2014

Prepared by:
Division of Flood Management
Flood Maintenance Office
California Department of Water Resources
3310 El Camino Avenue Room 140
Sacramento, CA 95821

Contact Person:
Andrew Rogers
ajrogers@water.ca.gov
(916) 574-2010

Proposed Mitigated Negative Declaration

Project: Sutter Bypass Collecting Canal Culvert Rehabilitation – Hughes Road

Lead Agency: California Department of Water Resources (DWR)

Availability of Documents: The Initial Study and Proposed Mitigated Negative Declaration are available for review at the State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814. Copies of the documents can be obtained by contacting DWR's Flood Maintenance Office at (916) 574-2760. The documents will also be post to the Sutter County Library and DWR's Flood Maintenance Office website.

Project Location: The Sutter Bypass Collecting Canal Culvert Rehabilitation – Hughes Road project is located at Hughes Road in Sutter County on the collecting canal system east of the Sutter Bypass. The project is approximately 8-miles south west of Yuba City. Shown in Figure 1 is a vicinity map of the culvert replacement location, and Figure 2 illustrates a detailed aerial view of the Project's location. The project is within the Gilsizer Slough 7.5-minute U.S. Geological Survey (USGS) quadrangle, T14N, R2E, south west ¼ of Section 10, located at latitude 39° 4' 23.37" N and longitude 121° 44' 36.04" W.

Directions to the site: Travel west on Oswald Road for 5.5 miles from the intersection of Highway 99 and Oswald Road in Sutter County. Turn right and travel north on Schlag Road and continue 0.25 miles until reaching Hughes Road. Turn Left onto Hughes Road and travel west for 0.4 miles to arrive at site where the collecting canal passes under Hughes Road 500 feet east of the Sutter Bypass East Levee.

Project Description: DWR proposes to replace a deteriorated and undersized 36-inch corrugated metal culvert and repair erosion of the collecting canal banks at the culvert inlet and outlet. The design of the replacement culvert will improve water conveyance, reduce routine annual maintenance, and improve passage for wildlife species.

Following installation of the proposed box culvert, concrete headwalls will be poured, keying the box culvert into the channel, and flared wingwalls will be installed at the inlet and outlet. Approximately 5 tons of 18-inch minus rock revetment will be placed around each headwall to reduce erosion.

The project has been designed, and will be implemented in accordance with, the avoidance and minimization measures described in this IS/MND. All vehicle and materials will be hauled to and from the site on existing county roadways and levee roads. If equipment and materials are staged at the project site, they will be staged or stockpiled on the Hughes Road right-of-way or the land side of the levee approximately 150-yards east of the site on State property (Figure 2). Excavated soil will be utilized on-site with excess soil off hauled and stockpiled at the DWR's Sutter Maintenance Yard (SMY) for future use, and the existing culvert will be taken to an appropriate disposal site. During construction, Water will be diverted around the construction site with

submersible pumps and returned back into the collecting canal upstream of the turbidity curtain. Additional resource specific avoidance and minimization measures are described in detail under each resource heading.

Following installation of the new culvert and headwall assembly, DWR will continue routine annual maintenance of the collecting canals. This includes: removing debris, spraying herbicide, mowing or burning vegetation on slopes, dragging slopes, re-grading access roads, and repairing minor erosion.

Findings: This Initial Study (IS) has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, DWR has determined that the proposed project would not have any significant effects on the environment. This conclusion is supported by the following findings:

- The proposed project would result in no impact to cultural resources, mineral resources, population and housing, public services, and recreation, and utilities.
- The proposed project would result in less-than-significant impacts to aesthetics, agricultural resources, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise, transportation/traffic, and utilities and service systems.
- Avoidance and minimization measures will be implemented, as applicable and in some cases depending upon circumstances encountered in the field, by DWR to avoid or minimize potential impacts to biological resources (potential impact on special-status species) and hydrology/water quality to avoid or reduce potential impacts to a less-than-significant level.

Avoidance and Minimization Measures: Avoidance and minimization measures will be implemented by DWR to reduce the environmental impacts to biological resources. Implementation of these measures would, where applicable either avoid the potential for impacts to occur or reduce the potential environmental impacts of the proposed project to a less than significant level. DWR will be managing the proposed project to avoid take of both fully protected species, for which no take authorization is available, and for listed species, for which take authorization under the California Endangered Species Act (CESA) has not been obtained.

Avoidance and Minimization Measures for Biological Resources

The following general avoidance and minimization measures will be implemented:

1. The project site will be surveyed by an Environmental Scientist and the Construction Supervisor to establish project boundary, delineate vegetation requiring removal, and mark sensitive biological resources to be avoided. The project boundary and vegetation clearing will not exceed the minimum necessary to facilitate construction activities.

2. Construction personnel will receive environmental awareness training. This training will cover special status species that could potentially be present, habitat needs of these species, status under California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA), and potential penalties for take of these species.
3. An Environmental Scientist will monitor excavation and assist construction personnel, as needed, to comply with all environmental requirements. SMY staff will maintain the exclusion fencing and any marked features of the construction and staging areas adjacent to sensitive biological resources.
4. Upon completion of construction activities, any temporary fill and construction debris will be removed, and, wherever feasible, disturbed areas will be restored to pre-project conditions and planted with native grass seed.

Avoidance and Minimization Measures for Giant Garter Snakes:

5. Construction personnel will receive environmental awareness training. This training will instruct workers on how to recognize GGS and their habitat, how they can avoid adverse effects to the snake, and what to do if they encounter a snake. If a snake is encountered in the project area, the Environmental Scientist will be contacted and construction activities will cease until the snake has left the project area or the determination is made that the snake will not be harmed. DWR will report any sighting and any incidental take to USFWS immediately by telephone at (916) 414-6600 and to CDFW at (916) 358-4353.
6. The project site will be surveyed by an Environmental Scientist and the Construction Supervisor to establish project boundary, delineate vegetation requiring removal, and mark sensitive biological resources to be avoided. The project boundary and vegetation clearing will not exceed the minimum necessary to facilitate construction activities
7. Prior to construction activities, snake exclusion fencing will be installed surrounding the Project's construction and staging area. SMY staff will maintain exclusion fencing for the duration of the Project's construction activities.
8. An Environmental Scientist will monitor excavation and assist construction personnel, as needed, to comply with all environmental requirements. SMY staff will maintain the exclusion fencing and any marked features of the construction and staging areas adjacent to sensitive biological resources.

9. All excavation and vegetation clearing will be conducted within the snake's active period (May 1 to October 1), when direct mortality is lessened because snakes are expected to actively move and avoid danger. Depending on annual conditions, the rice fields surrounding the project area could be dry in early May reducing the likelihood for GGS being present. Beginning in April 2014, SMY staff will mobilize equipment and material to the site. No vegetation removal or ground disturbance will occur until May 2014 and following completion of biological surveys. If construction activity within GGS habitat starts prior to May 1 or may go beyond October 1, USFWS and CDFW will be contacted and additional measures may be necessary to avoid take.
10. Within 24 hours prior to construction activities, the project area shall be surveyed for GGS by an Environmental Scientist.
11. Once dewatered, the channel will remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling, unless consultation with CDFW and USFWS about the dewatered site conditions allows for excavation to begin prior to the 15 consecutive days.

Avoidance and Minimization Measures for Western Pond Turtles:

12. In-water work will be avoided to the extent practicable. In cases where this is unavoidable, a biological monitor will survey the sites before work commences. If a western pond turtle is identified within the work zone, work will not proceed until the turtle has moved out of the work zone.

Avoidance and Minimization Measures for Birds:

13. A qualified biologist will conduct a preconstruction survey for bird nests or nesting activity within 500 feet of the project boundaries. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction. If any active nests or nesting behaviors are found, CDFW and USFWS must be notified prior to further action. DWR may be required to create exclusion zones of between 75 feet and 0.25 mile depending on the species observed. The exclusion zone must be maintained until birds have fledged or the nest is abandoned (as determined by a qualified biologist), unless otherwise approved by CDFW and USFWS.
14. Pre-construction bird surveys will be conducted for the species prior to the initiation of construction and in the event tricolored blackbirds are nesting in the project-affected area, consultation with CDFW and USFWS will determine if additional avoidance measures are required.

15. Since work is to be conducted during the nesting season (April 1-August 31), pre-construction surveys will be completed, between 30 and 14 days prior to construction, within a radius of 1/4 mile of the project site to identify any active nests (eggs or juveniles). If an active nest is identified, work will be postponed until September 1 or after the young have fledged. If that area cannot be avoided or work postponed, CDFW will be notified and consulted. Upon CDFW approval, a qualified biologist will monitor the nesting pair for behavioral indications of disturbance during all construction hours.

Avoidance and Minimization Measures for Hazardous Materials

1. Diesel fuel and oil will be used, stored and disposed in accordance with standard protocols for handling of hazardous materials. All personnel involved in use of hazardous materials will be trained in emergency response and spill control.
2. During construction activities, SMY staff will prevent oil, grease, fuels, and other petroleum products, toxic chemicals, and any other substances that could be deleterious to aquatic life from contaminating the soil and/or entering waters of the state. SMY staff will immediately remove such substances from any place where they could enter waters of the state and/or adversely affect fish and wildlife resources. SMY staff will attempt to contain any releases or spills of such substances, and shall report any significant spills as soon as possible to the California Emergency Management Agency (Cal-EMA). In the event of a significant spill, work will cease immediately and workers will employ containment methods if it is safe to do so. DWR will make notifications to the appropriate agencies within the regulatory time frames.

Avoidance and Minimization Measures for Hydrology and Water Quality

1. A turbidity curtain placed in the channel immediately downstream of the project will reduce impacts to water quality, and in-water work will be avoided to the extent practicable.
2. Construction is scheduled to begin in May when the level of water is lowest in the collecting canal. The schedule should allow construction in the channel to be completed before the surrounding rice fields are irrigated for the growing season, and water is flowing in the channel.
3. All excavated material will be placed in upland areas where it will not likely be subject to regular flooding, mobilization of soluble metals, or affect ground water.

4. After completion of construction activities, any temporary fill and construction debris will be removed, and, wherever feasible, disturbed areas will be restored to pre-project conditions and planted with native grass seed.

Avoidance and Minimization Measures for Noise

1. Equipment will be properly tuned and will utilize appropriate mufflers.
2. Construction will be limited to the Hours of 6:00 a.m. to 8:00 p.m.

Statement of No Significant Effect:

DWR prepared an Initial Study and in support of this Mitigated Negative Declaration. Copies of the Initial Study/Mitigated Negative Declaration (IS/MND) were provided to the State Clearinghouse on date 2014, initiating the 30-day public review period, which will end on date 2014.

Pursuant to §21082 of the California Environmental Quality Act, DWR has independently reviewed and analyzed the IS/MND for the proposed project and finds that the IS/MND reflect the independent judgment of DWR. As the lead agency for the project, DWR further finds that the project, including its avoidance and minimization measures will be implemented as stated in the MND. With implementation of these measures, the proposed project as so modified would have no significant effect on the environment.

I hereby approve this project:

Jon Ericson
Chief, Flood Maintenance Office
California Department of Water Resources

Date

Initial Study
Sutter Bypass Collecting Canal Culvert Rehabilitation
Hughes Road

April 2014

Prepared by:
Division of Flood Management
Flood Maintenance Office
California Department of Water Resources
3310 El Camino Avenue Room 140
Sacramento, CA 95821

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The California Department of Water Resources (DWR) proposes the Sutter Bypass Collecting Canal Culvert Rehabilitation – Hughes Road project to rehabilitate (replace) a drainage culvert located on a collecting canal DWR maintains that crosses underneath Hughes Road (a county road). DWR is the Lead Agency for the project under the California Environmental Quality Act (CEQA) and has prepared this Initial Study (IS) to assess the Project's effects on the environment. The IS for the project is composed of two parts. Part I is a description of the project and the environmental setting. Part 2 is the Initial Study Checklist form and an evaluation of potential impacts.

Part 1. Project Description

Project Location

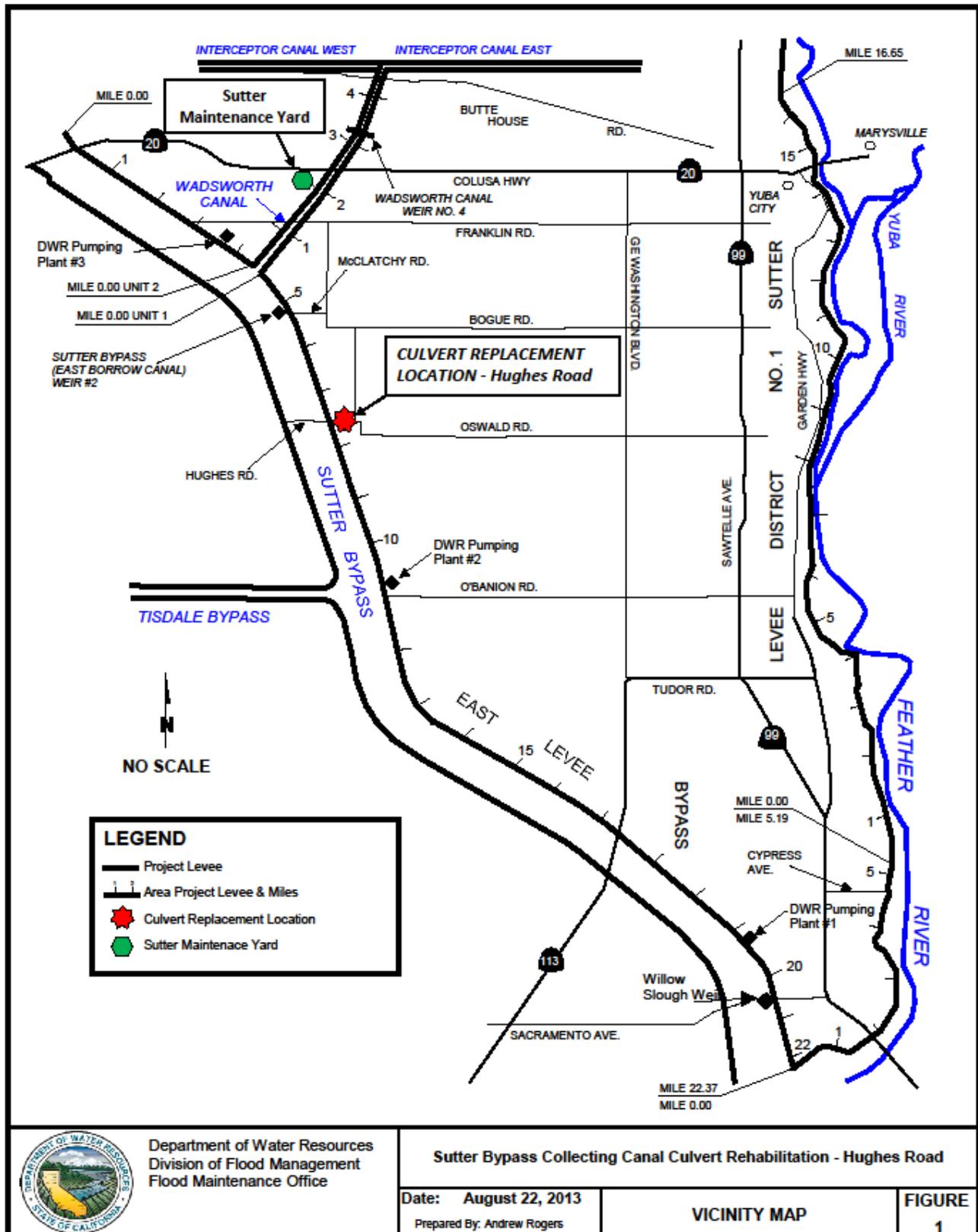
The culvert replacement site is part of the collecting canal system east of the Sutter Bypass on Hughes Road in Sutter County, shown on the vicinity map (Figure 1). Figure 2 illustrates a detailed aerial view of the Project's location. The project is within the Gilsizer Slough 7.5-minute U.S. Geological Survey (USGS) quadrangle, T14N, R2E, south west ¼ of Section 10, located at latitude 39° 4' 23.37" N and longitude 121° 44' 36.04" W.

Directions to the site: Travel west on Oswald Road for 5.5 miles from the intersection of Highway 99 and Oswald Road in Sutter County. Turn right and travel north on Schlag Road and continue 0.25 miles until reaching Hughes Road. Turn Left onto Hughes Road and travel west for 0.4 miles to arrive at the site where the collecting canal passes under Hughes Road, 500-feet east of the Sutter Bypass East Levee.

Background

The project is located outside of the bypass approximately 500-feet east of the Sutter Bypass East Levee on a collecting canal that drains water to Pumping Plant #2 – one of three pumping plants located along the Sutter Bypass East Levee and operated by DWR. The water is pumped through the East Levee into the Sutter Bypass East Borrow Canal and eventually flows south to the Feather River.

The collecting canal is part of a system of canals that represent the Lower Snake River watershed, south of Wadsworth Canal and north of Gilsizer Slough. The Snake River, which has been mostly channelized into a canal, is also a part of this watershed and is defined as a notable hydrologic feature by the California Natural Resource Agency in the Sutter County General Plan Technical Background Report (Sutter County 2008). Figure 3 shows the project location, collecting canal, pumping plant #2, direction of water flow, and the Snake River. The Snake River and collecting canals convey storm runoff and excess irrigation water from north and northeast Sutter County to the three pumping plants. The construction of the Sutter Bypass requires the pumps to facilitate the otherwise natural flow of the Lower Snake River watershed and connection to the Feather River.





Division of Flood Management
Flood Maintenance Office

Figure 2

Sutter Bypass Collecting Canal Culvert Rehabilitation - Hughes Road

Sutter County, California, Lat: 39° 4' 23.37" Long: 121° 44' 36.04"

February 10, 2014

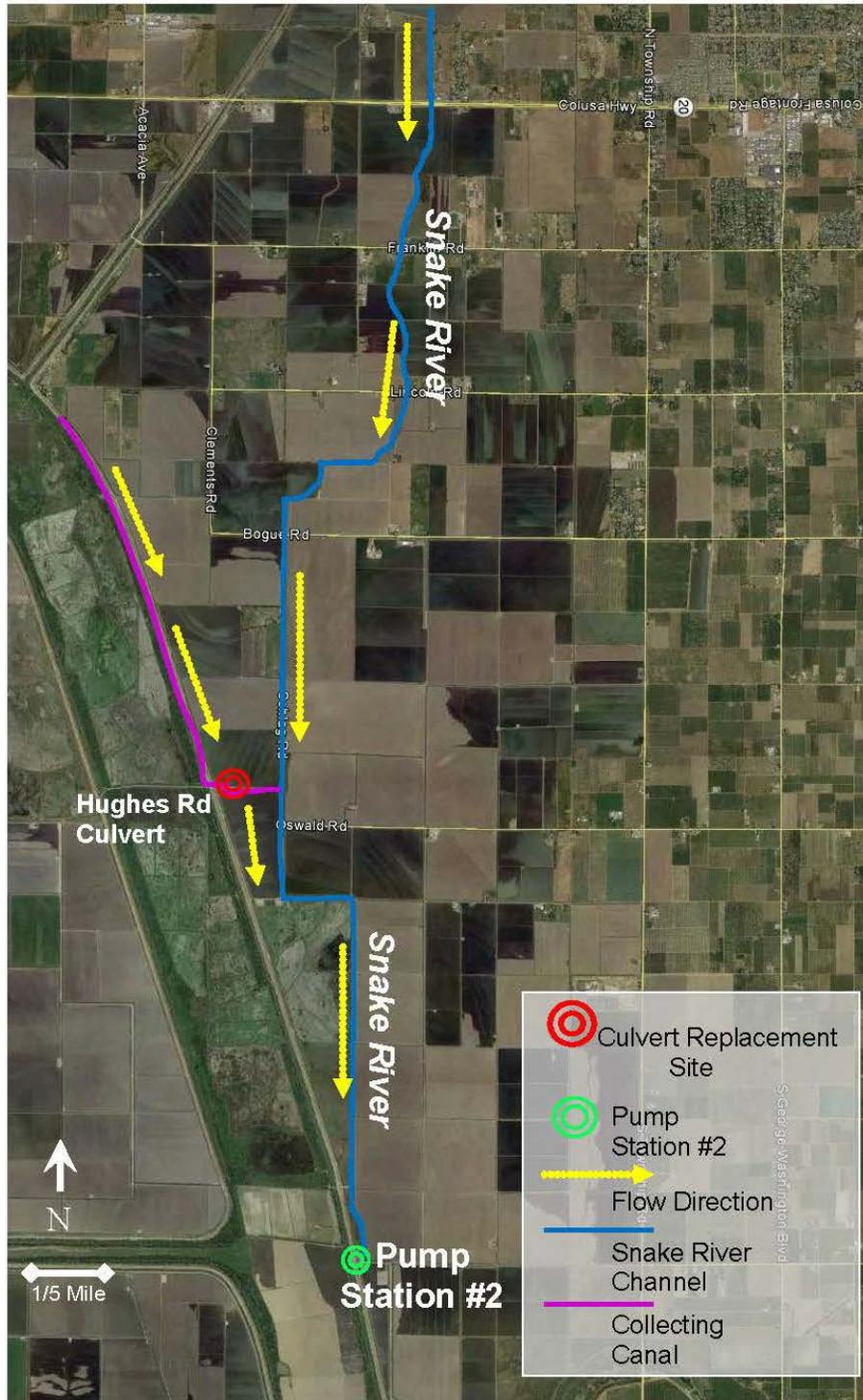
Prepared By: Andrew Rogers

Proposed Culvert Design Details

Concrete Box Culvert -- Length:60 ft Width:7 ft Height:5 ft
Concrete Headwalls with Flared Wingwalls
Revetment at Inlet & Outlet -- Total:10 CY of 18 in Minus Rock
Required Excavation Approximately 420 CY

Imagery Date: March 2008

- ◆ OHWM Data Point
- ▭ Project Boundary
- ▭ Staging Area
- ▨ OHWM Collecting Canal



	Department of Water Resources Division of Flood Management Flood Maintenance Office	Snake River, Sutter County Imagery Date May 2, 2013	Figure 3
	CEQA - Mitigated Negative Declaration and Initial Study Prepared By: Andrew Rogers	Sutter Bypass Collecting Canal Culvert Rehabilitation - Hughes Road	

DWR maintains the collecting canal system, including the Snake River, as part of the Sacramento River Flood Control Project (SRFCP) in accordance with California Water Code Section 8361 – (c) “The collecting canals, sumps, pumps, and structures of the drainage system of Project No. 6 east of the Sutter Bypass.” DWR’s Sutter Maintenance Yard (SMY) performs yearly maintenance activities including: burning/spraying vegetation, dragging the slopes, re-grading access roads, and ensures the collecting canal’s ability to safely convey runoff.

Erosion and damage to the project culvert were discovered by SMY staff while performing routine inspections. Deterioration of the corrugated metal culvert and an increase in the volume of runoff in the canal has caused erosion into the county right-of-way on the edge of Hughes Road seen in Figures 4 and 5. Changes in land-use, particularly expanded rice farming, are responsible for increase in run-off volumes since the culvert’s initial installation.

The project is in an agricultural area where farming practices have changed since the existing culvert was installed. Much of the land in the region has been converted from pasture to rice farming, requiring large volumes of water, and this water is received by the collecting canals. Also, the practice of burning off rice stubble after harvest has been restricted due to air quality regulations resulting in farmers flooding their rice fields again after harvest to allow for natural decomposition of the rice stubble. Due to the existing farming practices, the culvert is not adequately sized for the amount of runoff received causing water to back up in the channel. Along with being undersized, the corrugated metal culvert is deteriorated. In order to meet water conveyance needs and prevent further erosion, the culvert will be replaced with an adequately sized concrete box culvert.

The proposed box culvert design provides sufficient water conveyance for present conditions, prevents further erosion, reduces maintenance, and improves passage for aquatic and terrestrial species.

History

The Federal Rivers and Harbors Act (RHA) of 1896 and 1902 started the federal-state partnership in the construction, operation and maintenance of flood protection facilities. In 1911, the State of California approved a master plan for flood control in the Central Valley and created The Reclamation Board to carry out the plan. In 1917, Congress authorized the SRFCP and construction started in 1918. In 1927, the California State Legislature specified the portions of the SRFCP that would be operated and maintained by the State of California. Over the years, three other federally-authorized, state-supported flood protection projects developed from the basic SRFCP authorization: the Sacramento River and Major and Minor Tributaries Project, Sacramento River -- Chico Landing to Red Bluff, and Sacramento River Bank Protection Project.



Department of Water Resources
Division of Flood Management
Flood Maintenance Office

Culvert Inlet
North Side of Hughes Road
Pictures March 18, 2013

Figure 4

Sutter Bypass Collecting Canal Culvert Rehabilitation - Hughes Road



Department of Water Resources
 Division of Flood Management
 Flood Maintenance Office

Culvert Outlet
South Side of Hughes Road
 Pictures March 18, 2013

Figure 5

Sutter Bypass Collecting Canal Culvert Rehabilitation - Hughes Road

The federal, State, and local roles in flood protection activities in the Central Valley of California essentially are: (1) the Corps constructs flood protection works; (2) the Central Valley Flood Protection Board (formerly The Reclamation Board) provides assurance of proper operation and maintenance and the state share of required nonfederal funding; (3) DWR (a) operates and maintains legislatively specified project works and project channels (Water Code §8361), and (b) inspects the project works that are operated and maintained by local interests; and (4) local districts and public agencies assure The Central Valley Flood Protection Board that they will properly operate and maintain those projects within their jurisdiction.

Construction Description

The Sutter Bypass Collecting Canal Culvert Rehabilitation – Hughes Road includes the following actions:

- A) **Culvert Rehabilitation:** DWR proposes replacing a deteriorated and undersized 36-inch diameter corrugated metal culvert. The replacement is a precast box culvert with dimensions: length 60 feet, width 7 feet, and height 5 feet (Figure 6). Precast concrete headwalls (width 11 feet by height 8 feet) with flared wingwalls (angled 30° from headwall surface) will be installed on the inlet and outlet (Figure 7). Once the culvert and headwall assembly is in place, a reinforced concrete apron will be poured to key the structure into the channel bottom, and approximately 5 tons of 18-inch minus revetment will be placed around each headwall to reduce erosion (Figures 8 and 9). SMY staff will perform all site work except traffic control and asphalt paving, which will be performed by the Sutter County Public Works Department.
- B) **Staging/Stockpiling Area:** All equipment and materials will be hauled to the site from the SMY located 5-miles west of Yuba City on State Highway 20. If equipment and materials are staged at the project site, they will be staged or stockpiled on the Hughes Road right-of-way or the land side of the levee approximately 150-yards east of the site on State property (Figure 2).
- C) **Haul Routes:** The haul routes for equipment and materials and excess excavated material will be limited to existing county roadways and existing levee roads.
- D) **Description of How Work Will Proceed:** This section is intended to provide a general description of how construction activity on the culvert replacement and erosion repair will proceed in order to evaluate the environmental effects of the project.

ENDS CAN BE SKEWED TO ALLOW FOR CURVES IN CULVERT RUN- NO NEED FOR SECONDARY FILLER POUR.

BOX CULVERT
4' TO 12' SPANS
TYPE I - CANTILEVER WALL DESIGN

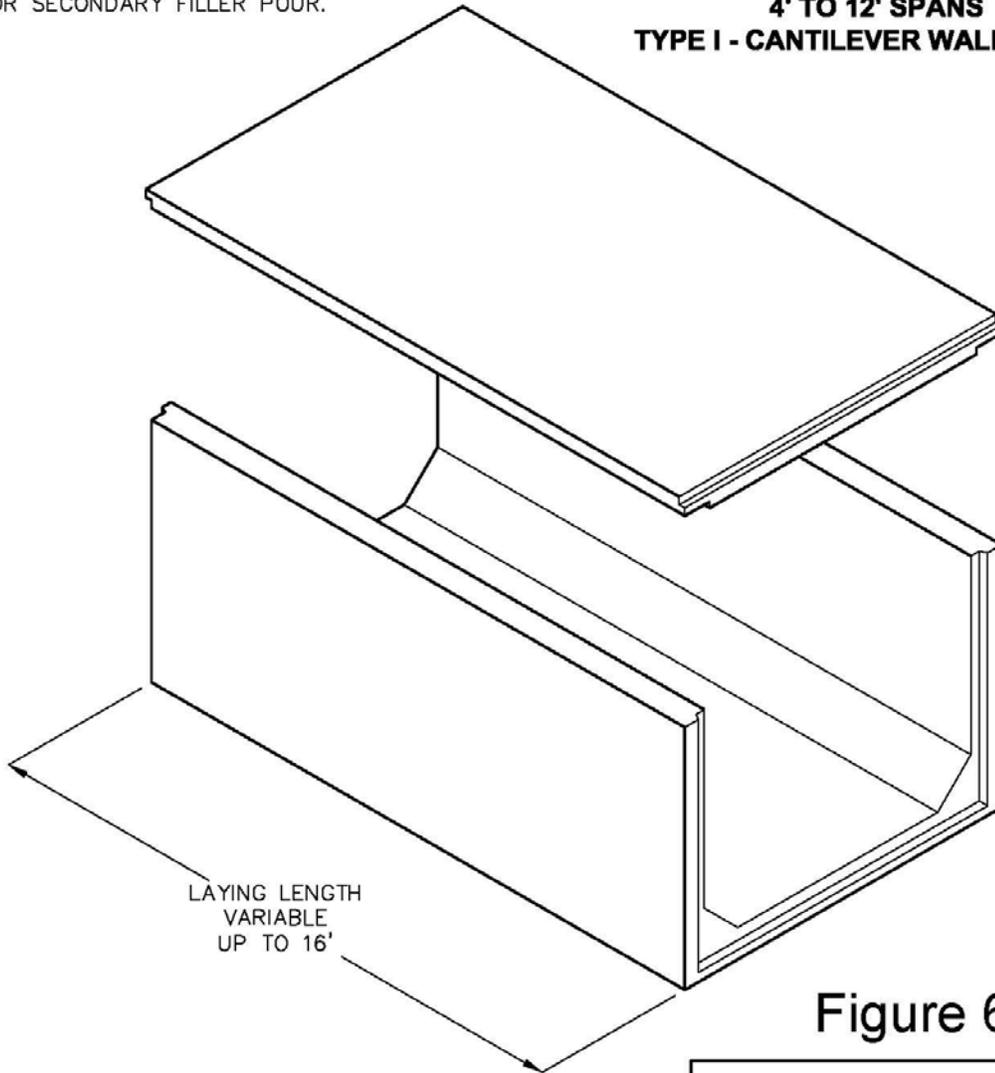
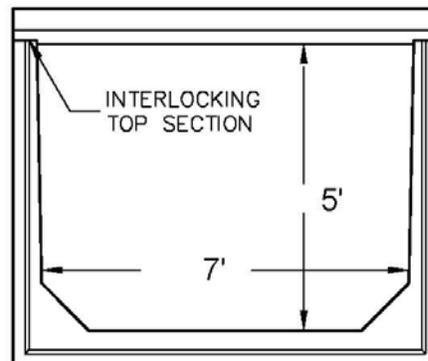


Figure 6



STANDARD DESIGNS MEET AASHTO HS-20 TRAFFIC LOADS IN ACCORDANCE WITH ASTM C1433, ACI 318 AND AASHTO SPECIFICATIONS.

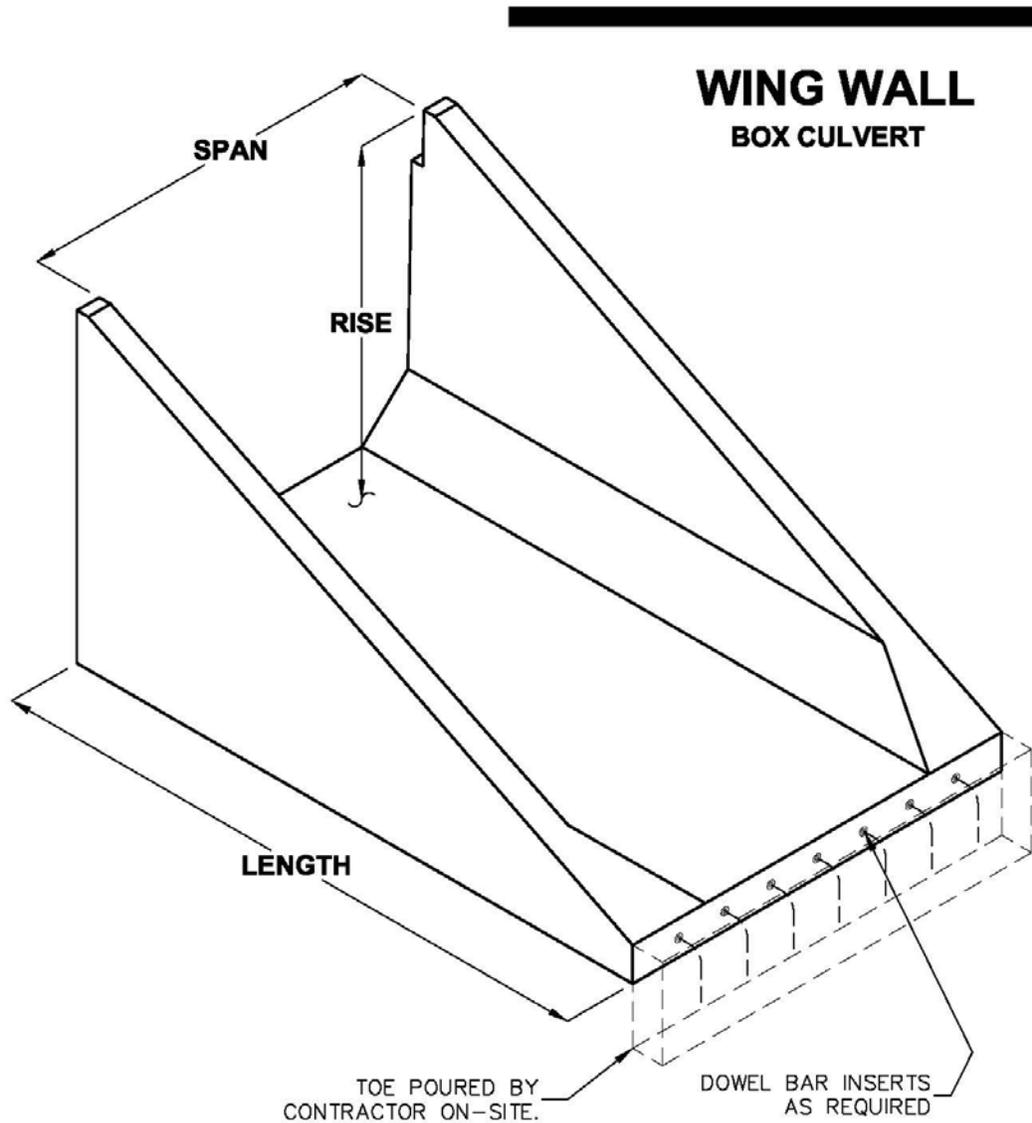
DESIGNS BASED ON SPECIAL LOADINGS OR DEPTHS OF BURY ARE AVAILABLE ON REQUEST. CUSTOM COMPONENTS CAN BE ENGINEERED WITH OPENINGS, DOWELS, AND SKEWS. CUSTOM HEIGHTS AVAILABLE IN 1/2" INCREMENTS.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.



5/22/2008
BOX CULVERTS 4-12-TYPE I_E.DWG
© 2008



**WING WALL
BOX CULVERT**

SPAN	RISE	LENGTH
4-12 CULVERTS 4' TO 12' IN 1' INCREMENTS	2' TO 6'	4' TO 16'
14-24 CULVERTS 14' TO 24' IN 2' INCREMENTS	2' TO 8'	4' TO 10'

Figure 7

DESIGN TO MEET LOAD CONDITION ASSOCIATED WITH BOX CULVERT RUN.

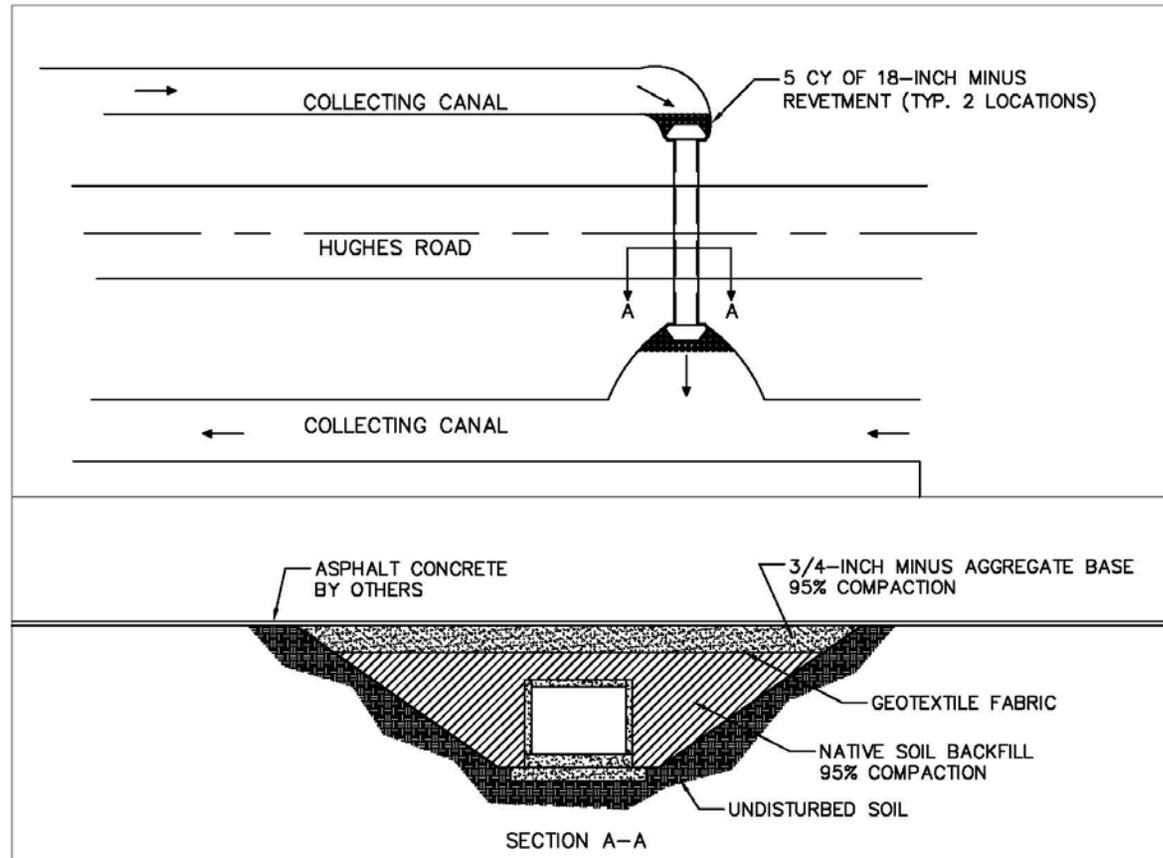
RISE AND SPAN TO MATCH BOX CULVERT RUN- SPECIFY LENGTH.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.



11/18/2009
WING WALL 5X7 BC_A.DWG
©2009



HUGHES ROAD CULVERT REPLACEMENT AND EROSION REPAIR

PLAN VIEW

FIGURE 9

Beginning in April, 2014, SMY staff will mobilize equipment and material to the site. Vegetation removal or ground disturbance will occur after May 1, 2014, following completion of biological surveys. Vegetation will be cleared in the area to be excavated, and exclusion fencing will be installed around the work area. If budget constraints cause delay, construction would occur sometime between May 1 and October 1, 2015.

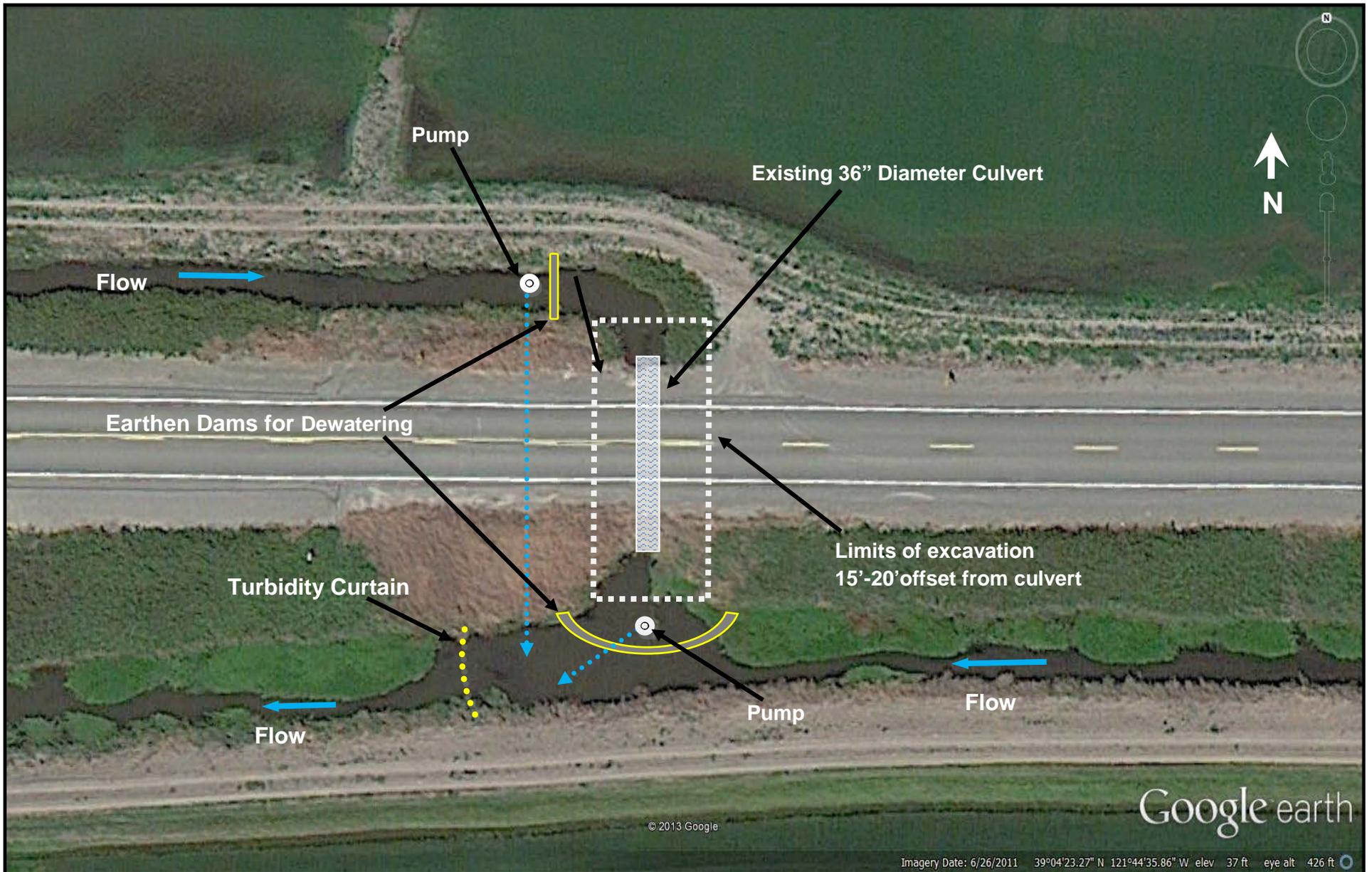
A turbidity curtain will be placed across the collection canal immediately downstream from the site, as shown in Figure 9. Earthen dams will be constructed from soil excavated on-site immediately upstream and downstream of the culvert. Water will be diverted around the construction site with submersible pumps and returned back into the collecting canal upstream of the turbidity curtain.

Prior to excavation, a concrete saw will be used to cut the asphalt roadway approximately 15-feet east and west of the centerline of the existing culvert, and an excavator will remove the roadway, channel embankments, and pull the existing culvert (Figure 10). Approximately 420-cubic yards (CY) of soil and road base will be excavated in order to place the new box culvert. The excavated soil will be utilized on-site with excess soil and asphalt material hauled and stockpiled at the SMY for future use. The existing culvert will be taken to an appropriate disposal site. Erosion control measures will be in place during construction activities.

The new culvert will be set in place with a crane. Once the culvert is in place, it will be backfilled to within 2 feet of finished grade with the existing soil and compacted to 95 percent of its relative compaction (Figure 10). The soil will be placed in 1-foot lifts and compacted in place using an excavator and hand equipment. Geotextile fabric will be used to cap the soil prior to the final 2-feet of $\frac{3}{4}$ -inch aggregate base (AB) being placed. The AB will be compacted to 95 percent of its relative compaction. Revetment of approximately 5 tons of 18-inch minus rock will be installed around the perimeter of each headwall and apron locations to prevent erosion (Figure 8). The Sutter County Public Works Department will remove the top 4 inches of AB from the roadway and replace the AB with asphalt concrete and restripe the roadway. The Public Works Department will perform this work approximately 1 to 2 years after the box culvert installation to allow the new culvert to settle. The repaving activity is limited to the Hughes Road right-of-way.

Construction equipment anticipated for this work includes pickup trucks, dump trucks, concrete trucks, an excavator, backhoe, crane, and hand equipment. Construction is estimated to take approximately one month to remove and replace the culvert. All construction will be completed by August 1, 2014, unless funding restrictions delay the start of construction until the following year in 2015.

- D) Avoidance and minimization: Implementation of the culvert replacement will occur in accordance with the avoidance and minimization measures described in the applicable sections of the Initial Study discussions.
- E) Site restoration: The collecting canal banks in the vicinity of the project have a near vertical slope with limited vegetation, mainly consisting of Himalayan blackberry and ruderal vegetation. After completion of construction activities, any temporary fill and construction debris will be removed, and, wherever feasible, disturbed areas will be restored to pre-project conditions and planted with native grass seed.
- F) Post-project maintenance: DWR will continue routine annual maintenance of the collecting canal. This includes: removal of debris, spraying herbicide, mowing or burning of vegetation on slopes, dragging slopes, re-grading access roads, and minor erosion repairs. The increased water conveyance of the proposed culvert design will reduce the need to remove debris from the culvert inlet



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Dewatering and Limits of Excavation
 Imagery Date June 26, 2013

Figure 10

Sutter Bypass Collecting Canal Culvert Rehabilitation -Hughes Road

Concurrent Projects

Sutter County Public Works Department will repave and restripe the roadway of Hughes Road. The top 4 inches of AB material will be removed from the roadway and replaced with asphalt concrete. This work is limited to the Hughes Road right-of-way and will be done approximately 1 to 2 years after the box culvert installation to allow the new culvert assembly to settle.

Environmental Setting

The culvert replacement site is within the Sacramento River watershed on the collecting canal system east of the Sutter Bypass, south of Wadsworth Canal and north of Gilsizer Slough. Figure 1 shows the vicinity map of the culvert replacement location on Hughes Road in Sutter County. The collecting canal is part of the Lower Snake River watershed which drains water from the north to the southwest through a series of channels that drain to Pumping Plant #2, located 3.5-miles south on O'Banion Road (Figure 10). From Pumping Plant #2, water is pumped through the East Levee into the Sutter Bypass East Borrow Canal and eventually flows south to the Feather River. The part of collecting canal at the Project's location typically contains a small amount of water that pools near the culvert year-round. From August through April, this canal is usually draining the greatest amount of water.

The Ordinary High Water Mark (OHWM) was recorded during a field assessment and is shown in Figure 2. The map also shows the culvert replacement location and staging area. The OHWM was based on observed signs of shelving and absence of terrestrial vegetation on the bank below the OHWM.

Land use in the vicinity of the project is dominated by rice farming which accounts for approximately 92,984 acres of Sutter County's total 388,358-acre area (Sutter 2008). The rice fields and associated water channels help support the State and federally listed giant garter snake (*Thamnophis gigas*), and provide foraging habitat for egrets, heron, cranes, and other waterfowl. The Sutter Bypass, including the Sutter National Wildlife Refuge (SNWR), is located immediately to the west and south. The Refuge contains 2,591 acres comprised of seasonal marsh, permanent ponds, and uplands. Other habitat types in the general vicinity of the project include cultivated, annual grasslands, riparian, open water, and developed/urban. The majority of the land surrounding the project consists of rice fields that together with the refuge typically support wintering populations of more than 175,000 ducks and 50,000 geese (USFWS 2011). More than 300 species of birds and mammals, both resident and migratory, use the refuges. These same species can be found in the land and waterways surrounding the project. The marshes and rice lands support fish, frogs, and invertebrates, which are used by wintering grebes, white pelicans, white-faced ibis, egrets, herons, and bitterns as a food resource. A search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) and U.S. Fish and Wildlife Service (USFWS) records was conducted using the Gilsizer Slough and Tisdale Weir 7.5-minute USGS quadrangles. The quadrangles encompass an approximate 3-mile perimeter around the

Project's location. The sensitive and protected species occurrences from a November 2013 search of CNDDDB and USFWS records are shown in Table 4 with an assessment of species occurrence, the potential of the species to occur at the project area, or the presence of suitable habitat for species. The project includes avoidance and minimization measures appropriate for each circumstance.

DWR has determined that the collecting canal is "Waters of the United States" for Clean Water Act (CWA) purposes; therefore, DWR will be applying for a CWA , §404 permit from the U.S. Corps of Engineers (USACE). DWR anticipates consulting with the USFWS through the Endangered Species Act (ESA), §7 consultation process. The channel of the collecting canal is also under the jurisdiction of the CDFW, and DWR has applied for a stream alteration agreement required under the Department of Fish and Game (DFG) code, §1602.

List of Permits Required for Project

- U.S. Army Corps of Engineers Clean Water Act Section 404 permit
- Clean Water Act Section 401 Water Quality Certification from the California Regional Water Quality Control Board, Central Valley Region
- California Department of Fish and Wildlife Streambed Alteration Agreement
- National Historic Preservation Act Section 106 compliance
- California Endangered Species Act compliance
- U.S. Fish and Wildlife Service Federal Endangered Species Act compliance

Environmental Factors Potentially Affected:

The checklist identifies environmental and other factors that might be affected by the proposed activities. The environmental factors checked below would be potentially affected by this project, involving one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages. Please refer to the checklist table in each section for the corresponding discussion.

- | | | |
|--|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

Determination:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project WOULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required

Jon Ericson
Chief, Flood Maintenance Office
CA Department of Water Resources

Date

Part 2. Initial Study Checklist

Aesthetics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<hr/> Would the project...				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The scenic character of the project area is defined by agriculture, mainly rice fields and associated water channels, and the Sutter Bypass East Levee. The eastern boundary of the SNWR is approximately 800-feet west of the project's culvert. The Sutter Bypass East Levee separates the project area from the scenic resource of the SNWR. Once installed, the new culvert will have limited visibility, only being visible from Hughes Road and from the access road along the collecting canal immediately adjacent to the culvert. The staging of equipment and materials during construction will create a temporary impact to the project area's visual character.

Discussion

- No impact. Construction activities, materials, and equipment will be visible for the approximate one month duration of the project. Once installed the new culvert will be isolated to the channel of the collecting canal and will not substantially affect the scenic character of the area or impact a scenic vista.
- No impact. There are no designated scenic resources, such as wild and scenic rivers or scenic highways, in the vicinity of the project (Sutter 2011). Therefore, the project will not substantially damage scenic resources.
- Less than significant impact. The character of the area is defined by agriculture. The project supports agriculture by facilitating both stormwater and agricultural runoff. There will be a less than significant impact caused by installing a larger

culvert and temporary impacts to the existing visual character of the area during construction due to equipment and materials.

- d) No impact. The project is limited to replacement of an existing culvert. No new sources of light will be created, and construction is planned to occur during daylight hours.

Agricultural Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as a model in assessing impacts on agriculture and farmland

Would the project...

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Environmental Setting

The project site and surrounding area are mapped as agricultural prime farmland by the California Department of Conservation, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. No changes to zoning are involved with the project, and, therefore, the project will not impact designated zoning or agricultural uses.

Discussion

- a) Less than significant impact. While the general area of the project is considered prime farmland, the existing land use would not be altered by the project. The culvert replacement will be limited to the existing culvert therefore there would be less than significant impact.

- b) No impact. The project is limited to replacing an existing culvert and will be restricted to areas below the road. A Williamson Act Parcel is located north of Hughes Road and the project area, but the project will not conflict with existing zoning for agricultural use, or under a Williamson Act contract, or in a Farmland Security Zone. The project will not convert designated zoning or agricultural uses.
- c) No impact. The project is limited to replacing an existing culvert and does not involve changes to the existing environment which could result in conversion of Farmland, to non-agricultural use.

Air Quality

Where available, significance criteria established by applicable air quality management or air pollution control district may be relied on to make the following determinations.

Would the project...

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Federal and State Standards

The federal and California state governments establish ambient air quality standards. National ambient air quality standards (NAAQS) protect public health and welfare and are established for six air pollutants (called criteria pollutants): ozone (O³), oxides of nitrogen (NO_x), sulfur dioxide (SO²), carbon monoxide (CO), particulate matters (PM), and lead. Particulate matter pollutants are categorized as inhalable coarse particles

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(PM₁₀) or fine particles (PM_{2.5}). Similarly, the State of California adopted state ambient air quality standards (SAAQS) for the same six criteria pollutants as well as for hydrogen sulfide, sulfates, lead, vinyl chloride, and visibility reducing particles. Typically, California's standard is more stringent than the national standard for the same criteria pollutant

On the national level, an air basin, or portions thereof, is designated as "attainment" or "non-attainment" for each criterion pollutant based on whether the NAAQS had been achieved. Similarly, the California designates an area as "attainment" or "non-attainment" of State standards for each criteria pollutant.

Regional Air Quality

Located in the Sacramento Valley Air Basin, the Feather River Air Quality Management District (FRAQMD) encompasses Yuba and Sutter counties and the project area. The mission of the FRAQMD is to promote and improve the air quality of Sutter and Yuba counties, in part by enforcing emission limits for pollutants that are regulated under the NAAQS and SAAQS. Table 1 shows the State and Federal area designations for the FRAQMD for 2010.

Table 1. FRAMQD Area Designations for State and Federal Air Quality Standards

Designation/Classification		
Pollutants	State	Federal
1-Hour Ozone	S. Sutter: Serious Nonattainment The Balance of FRAQMD: Nonattainment-Transitional*	No Federal Standard
8-Hour Ozone	Nonattainment-Transitional *	S. Sutter: Severe Nonattainment Sutter Buttes (>2000ft): Nonattainment The Balance of FRAQMD: Unclassified/Attainment
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Attainment**	Nonattainment (As of Dec 14, 2010)
Carbon Monoxide	Sutter County: Attainment Yuba County: Unclassified	No Federal Standard
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	No Federal Standard
Lead	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

*The District has been redesignated from Nonattainment to Nonattainment Transitional for the State designation for ozone occurs by operation of law. The change was confirmed by the CARB Board of Directors on March 25, 2010. [HSC §40925.5]

**The District has been redesignated to attainment for the annual PM_{2.5} SAAQS. The change was adopted on the March 25, 2010, by the CARB Board of Directors.

Thresholds of Significance

Thresholds of Significance published by FRAQMD support the determination whether a project may have a significant impact on air quality (FRAQMD 2010). An Environmental Impact Report may be required if the proposed project would exceed any of these Thresholds. Air quality impacts will be less than significant if the Thresholds given in Table 2 are not exceeded.

Table 2. FRAQMD Thresholds of Significance

Project Phase	Nitrogen Oxides (NO_x)	Reactive Organic Gases (ROG)	Particulate Matter less than 10 microns (PM₁₀)	Particulate Matter less than 2.5 microns (PM_{2.5})	Greenhouse Gases (CO², CH⁴)
Operational	25 lbs/day	25 lbs/day	80 lbs/day	Not Established	Not Established
Construction	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year*	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year*	80 lbs/day	Not Established	Not Established

*NO_x and ROG Construction emissions may be averaged over the life of the project, but may not exceed 4.5 tons/year

The proposed project will only generate emissions during construction and will have no operational phase; therefore, FRAQMD defines the project as a Type 2 project and recommends calculating emissions to verify the project life emissions do not exceed 25lbs/day of NO_x or ROG, and the daily emissions of 80lbs/day of PM₁₀.

Emissions Calculation

Pollutant emissions from the proposed project were estimated using the URBEMIS 2007 model (version 9.4.2) (see Appendix). Inputs to the URBEMIS model, such as construction equipment and operational hours, were provided by the project engineer. Based on the URBEMIS model, the project would generate emissions below the Thresholds of Significance set by FRAMQD. Table 3 shows the estimated emissions for the project which do not exceed the Thresholds; the Project's affect on air quality is considered less than significant.

Table 3. Pollutants Emissions of Proposed Project

Project Phase	Nitrogen Oxides (NO_x)	Reactive Organic Gases (ROG)	Particulate Matter less than 10 microns (PM₁₀)	Particulate Matter less than 2.5 microns (PM_{2.5})	Greenhouse Gases (CO², CH⁴)
FRAQMD Thresholds	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year*	25 lbs/day multiplied by project length, not to exceed 4.5 tons/year*	80 lbs/day	Not Established	Not Established
Project Construction Emissions Totals	0.22 tons	0.02 tons	20 lbs	Not Established	Not Established
Significant?	No	No	No	NA	NA

*NO_x and ROG Construction emissions may be averaged over the life of the project, but may not exceed 4.5 tons/year

The State CEQA Guidelines Appendix G suggests criteria for determining whether a project will have a potentially significant impact on air quality. According to the checklist, a project will have a potentially significant impact if it will:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute to an existing or projected air quality violation.
- Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

The work area of the proposed project is less than one acre, and the primary construction equipment used to replace the culvert will be an excavator and backhoe. The surrounding area is open space with no sensitive receptors located within one mile, and emissions would be short-term construction emissions, only occur during the one month construction period with no long-term operational emissions. Therefore, the project is unlikely to generate a violation of any ambient air quality standard or expose

sensitive receptors to substantial pollutant concentrations.

Discussion

- a) No Impact. FRAQMD has set Air Quality standards for the project area. The project will not conflict with or obstruct the air quality plan developed by FRAQMD.
- b) Less than significant impact. The project will involve the use of diesel and gasoline burning equipment, and exhaust fumes of this equipment are a direct source of the criteria pollutants carbon monoxide (CO), particulate matter between 2.5 and 10 micrometers in diameter (PM₁₀ and PM_{2.5}), NO_x, SO₂, and ROG. However, criteria pollutants will be minimized by using properly tuned equipment that meets current emission standards, and dust will be controlled by hydrating exposed soil and other best management practices. The project will not violate air quality standards or contribute substantially to an existing air quality violation.
- c) Less than significant impact. The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standards. The emission levels of criteria air pollutants from construction equipment were estimated using the URBEMIS 2007 model. Project construction would not generate criteria air pollutants in quantities that exceed the threshold limits set by FRAQMD.
- d) Less than significant impact. Based on construction emissions estimated using URBEMIS 2007 model, the project would not exceed threshold limits set by FRAQMD. The project will not expose sensitive receptors to substantial pollutant concentration. There are no hospitals, schools, or human inhabitants within close proximity to the project.
- e) No impact. The project is limited to the replacement an existing culvert and will not create objectionable odors.

Biological Resources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project...				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the CDFW or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project is located in the Sutter Basin within a region dominated by agriculture, primarily rice farming, and the Sutter Bypass, including the SNWR. While rice fields and associated watercourses comprise the majority of the surrounding land, other habitats present include annual grassland, open water, wetland, and valley riparian. The riparian habitat is limited to areas inside the Sutter Bypass which is outside the project boundary. The project is adjacent to rice fields and the habitat within the project boundary includes the channel of the collecting canal and roads (Hughes Road and an unpaved access road). The hydrology of the collecting canal is controlled by stormwater runoff and agricultural return flows. High flows may occur in the channel resulting from natural runoff in winter and during mid to late summer when water is being released from rice fields.

Research and Field Surveys

Field surveys were conducted in 2012 and 2013 by DWR's Environmental Scientists. Surveys included reconnaissance-level investigation of the project site, botanical survey, and delineation of waters. A list of special status species with the potential to occur in the area was compiled from CDFW and USFWS records (Table 4). Habitat requirements for each species were compared with habitat features in the project area to determine if the species has potential to be found in the area. If potential habitat is present or the species was actually found in surveys, potential impacts due to the project were assessed and avoidance and minimization measures were incorporated.

Table 4. Special Status Species*

Common Name and Scientific Name	Status	Habitat	Potential to Occur at Project**
Plants			
woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	CNPS List 1B.2	Marshes and swamps, freshwater river banks. Elevation: 0 – 395 feet Blooming period: June – September.	Moderate. Present in Sutter Bypass.
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	CNPS List 2	Mudflats of vernal lakes, drying river beds, alkali meadows. Elevation: 15 – 1430 feet Blooming period: May – September.	Low. Alkaline soil not present.
veiny monardella <i>Monardella venosa</i>	CNPS List 1B.1	In heavy clay; Valley/foothill grasslands, Cismontane woodland. Elevation: 200 – 1350 feet Blooming period: May- July	Low. Prefers clay soil and higher elevations.
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	FE, SE, CNPS List 1B.1	Chenopod scrub, meadows and seeps, playas, Valley/foothill grasslands Elevation: 50 – 492 feet Blooming period: March – April.	Low. Alkaline soil not present.
Reptiles			
western pond turtle <i>Emys marmorata</i>	CSC	Streams, lakes, ponds and canals.	Moderate. Waterways in vicinity of project area provide suitable habitat.
giant garter snake <i>Thamnophis gigas</i>	FT, ST	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protection from flooding during winter.	High. Waterways in vicinity of project area provide suitable aquatic habitat and upland habitat within project provide potential for basking and hibernation.

Amphibians			
California tiger salamander, central population <i>Ambystoma californiense</i>	FT	Grasslands and low foothill regions with large vernal pools, vernal playas or large sag ponds.	Low. No suitable habitat within or adjacent to project area.
California red-legged frog <i>Rana draytonii</i>	FT, CSC	Dense, emergent vegetation or grasslands associated with deep, still or slow-moving water.	Low. No suitable habitat within or adjacent to project area.
Birds			
Swainson's hawk <i>Buteo swainsoni</i>	BCC, ST	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures. Breeds late March-late August.	Moderate. No nesting habitat occurs within project area, but nests have been observed inside the Sutter Bypass adjacent to project area.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	Brackish marsh, freshwater marsh, salt marsh, wetlands, and coastal streams.	Low. No suitable nesting habitat in the project area.
bank swallow <i>Riparia riparia</i>	ST	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam. Nests May-July.	Low. No suitable nesting habitat within or adjacent to project area.
tricolored blackbird <i>Agelaius tricolor</i>	BCC, CSC	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles and grainfields. Breeds mid April-late July.	Moderate. No suitable nesting habitat in the project area.
Aleutian Canada goose <i>Branta hutchinsii leucopareia</i>	FD	Roosts in large marshes, flooded fields, and reservoirs; forages in pastures, meadows, and harvested grainfields, Breeds March-June.	High. Likely to occur in winter. Suitable foraging and overwintering habitat, but no nesting habitat in project area.
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FC, SE	Wide, dense riparian forests, preference for willow-cottonwood. Nests June-July.	Moderate. Suitable nesting habitat found in Sutter Bypass adjacent to project area.
Invertebrates			
California linderiella fairy shrimp <i>Linderiella occidentalis</i>	FSC	Vernal pools	None. No vernal pools in project area.
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Vernal pools	None. No vernal pools in project area.
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	Vernal pools	None. No vernal pools in project area.

valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant	Low. No elderberry plants in project area.
Fish			
green sturgeon <i>Acipenser medirostris</i>	FT, CSC	Sacramento-San Joaquin estuary, coastal waters.	None. No suitable habitat in project area.
delta smelt <i>Hypomesus transpacificus</i>	FT, SE	Lower Sacramento-San Joaquin Rivers; Delta and San Francisco Bay estuary.	None. No suitable habitat in project area.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT	Central Valley Rivers; Delta and San Francisco Bay estuary.	None. No suitable habitat in project area.
Central Valley spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FT, ST	Central Valley Rivers; Delta and San Francisco Bay estuary.	None. No suitable habitat in project area.
Central Valley winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FE, SE	Central Valley Rivers; Delta and San Francisco Bay estuary.	None. No suitable habitat in project area.
Status			
Federal		State	
FE : Federally Endangered		SE : State Endangered	
FT : Federally Threatened		ST : State Threatened	
FC : Federal Candidate		CSC: California Species Concern	
FD : Federally Delisted		California Native Plant Society	
BCC: Bird of Conservation Concern		List 1B: Plants are rare, threatened, or endangered in CA and elsewhere	
FSC: Federal Species of Concern		List 2: Plants rare, threatened, or endangered, but common elsewhere	

***Special Status Species for USGS 7.5-minute quadrangles Tisdale Weir and Gilsizer Slough. Sources U.S. Fish and Wildlife Service and CA Department of Fish and Wildlife (databases accessed November 2013)**

****The “Potential to Occur at Project” category is defined as follows:**

None: The project site or immediate area does not support suitable habitat for a particular species.

Low: The project site or immediate area provides limited habitat for a particular species

Moderate: The project site or immediate area provides suitable habitat for a particular species

High: The project site or immediate area provides ideal habitat conditions for a particular species, and the species is known to occur within the project area.

Discussion

- a) Less than significant impact. The project will not have a substantial adverse effect on any sensitive species. Avoidance and minimization measures described below have been incorporated to avoid impacts and/or reduce potential impacts to less than significant.

Special Status Species

Special status species and plant communities that may occur in the project area were assessed during field surveys by DWR Environmental Scientists, and a species occurrences list was developed from a review of the CNDDDB records and USFWS records for the Gilsizer Slough and Tisdale Weir 7.5-minute USGS quadrangles encompassing an approximate 3-mile perimeter around the Project's location. The sensitive and protected species occurrences from the November 2013 records search are shown in Table 1 with an assessment of the potential of the species to occur at the project area.

General Biological Avoidance and Minimization Measures

The following general avoidance and minimization measures will be implemented:

1. The Project site will be surveyed by an Environmental Scientist and the Construction Supervisor to establish project boundary, delineate vegetation requiring removal, and mark sensitive biological resources to be avoided. The project boundary and vegetation clearing will not exceed the minimum necessary to facilitate construction activities.
2. Construction personnel will receive environmental awareness training. This training will cover special status species that could potentially be present, habitat needs of these species, status under California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA), and potential penalties for take of these species.
3. An Environmental Scientist will monitor excavation and assist construction personnel, as needed, to comply with all environmental requirements. SMY staff will maintain the exclusion fencing and any marked features of the construction and staging areas adjacent to sensitive biological resources.
4. After completion of construction activities, any temporary fill and construction debris will be removed, and, wherever feasible, disturbed areas will be restored to pre-project conditions and planted with native grass seed.

The following species have potential habitat in the project area:

Giant garter snake (GGS): Suitable habitat for GGS occurs in the project area. The species' habitat includes marshes; sloughs; ponds; small lakes; and low-gradient waterways, such as small streams, irrigation and drainage canals, and rice fields. GGS requires adequate water with herbaceous, emergent vegetation for protective cover, and foraging habitat. Open areas and grassy banks are needed for basking. Small mammal burrows and other small crevices at higher elevations provide winter hibernation sites and refuge from floodwaters.

A CNDDDB records search identified occurrences within 2 miles of the project area. The collecting canal channel, rice fields, and Sutter Bypass around the project represent suitable habitat for GGS. In the absence of avoidance and minimization measures, if GGS are present at the project site construction activities could have the potential to kill, injure, or disturb them.

Avoidance and Minimization Measures for Giant Garter Snakes:

1. Construction personnel will receive environmental awareness training. This training will instruct workers on how to recognize GGS and their habitat, how they can avoid adverse effects to the snake, and what to do if they encounter a snake. If a snake is encountered in the project area, the Environmental Scientist will be contacted and construction activities will cease until the snake has left the project area or the determination is made that the snake will not be harmed. DWR will report any sighting and any incidental take to USFWS immediately by telephone at (916) 414-6600 and to CDFW at (916) 358-4353.
2. The project site will be surveyed by an Environmental Scientist and the Construction Supervisor to establish project boundary, delineate vegetation requiring removal, and mark sensitive biological resources to be avoided. The project boundary and vegetation clearing will not exceed the minimum necessary to facilitate construction activities
3. Prior to construction activities, snake exclusion fencing will be installed surrounding the Project's construction and staging area. SMY staff will maintain exclusion fencing for the duration of the Project's construction activities.
4. An Environmental Scientist will monitor excavation and assist construction personnel, as needed, to comply with all environmental requirements. SMY staff will maintain the exclusion fencing and any marked features of the construction and staging areas adjacent to sensitive biological resources.
5. All excavation and vegetation clearing will be conducted within the snake's active period (May 1 to October 1), when direct mortality is lessened

because snakes are expected to actively move and avoid danger. Depending on annual conditions, the rice fields surrounding the project area could be dry in early May reducing the likelihood for GGS being present. Beginning in April 2014, SMY staff will mobilize equipment and material to the site. No vegetation removal or ground disturbance will occur until May 2014 and following completion of biological surveys. If construction activity within GGS habitat starts prior to May 1 or may go beyond October 1, USFWS and CDFW will be contacted and additional measures may be necessary to avoid take.

6. Within 24 hours prior to construction activities, the project area shall be surveyed for GGS by an Environmental Scientist.
7. Once dewatered, the channel will remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling, unless consultation with CDFW and USFWS about the dewatered site conditions allows for excavation to begin prior to the 15 consecutive days.

Western pond turtle: Western pond turtles occur in the Sutter Bypass. This species may also inhabit the channels of larger irrigation ditches near the project area. Western pond turtles may be directly and indirectly adversely affected by the proposed project.

Avoidance and Minimization Measures for Western pond turtles:

1. In-water work will be avoided to the extent practicable. In cases where this is unavoidable, a biological monitor will survey the sites before work commences. If a western pond turtle is identified within the work zone, work will not proceed until the turtle has moved out of the work zone.

Tricolored Blackbird: Tricolored blackbirds occur throughout the Central Valley. No nesting habitat occurs in the immediate vicinity of the project area, but areas with dense tules or cattails within the collecting canals could provide suitable nesting habitat.

Swainson's hawk: No suitable nesting habitat for Swainson's hawks occurs in the project area, but riparian habitat in the Sutter Bypass provides suitable nesting habitat for Swainson's hawk. The CNDDDB identifies Swainson's hawk occurrences within a 1-mile proximity to the project area.

Noise and other construction-related disturbances may affect nesting Swainson's hawks in the vicinity of the Project during the breeding season (March through August). This impact would be considered significant because construction disturbances of nest sites may contribute to continuing local decline of Swainson's hawks and would violate the Migratory Bird Treaty Act (MBTA) and §3503 of the California Fish and Game Code, which protects bird's nests.

Nesting Birds/Migratory Birds: Non-special-status migratory birds and raptors have the potential to nest in trees and shrubs adjacent to the proposed project area, and although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by the California Fish and Game Code §3503 and §3503.5 and the MBTA of 1918 (50 CFR 10 and 21). Construction will be conducted outside the nesting season (March through August) and therefore impacts to this species are not anticipated. A qualified biologist will conduct preconstruction surveys to locate all active nest sites within 500 feet of the project area.

Avoidance and Minimization Measures for Birds:

1. A qualified biologist will conduct a preconstruction survey for bird nests or nesting activity within 500 feet of the project boundaries. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction. If any active nests or nesting behaviors are found, CDFW and USFWS must be notified prior to further action. DWR may be required to create exclusion zones of between 75 feet and 0.25 mile depending on the species observed. The exclusion zone must be maintained until birds have fledged or the nest is abandoned (as determined by a qualified biologist), unless otherwise approved by CDFW and USFWS.
 2. Pre-construction bird surveys will be conducted for the species prior to the initiation of construction and in the event tricolored blackbirds are nesting in the project-affected area, consultation with CDFW and USFWS will determine if additional avoidance measures are required.
 3. Since work is to be conducted during the Swainson's hawk nesting season (April 1-August 31), pre-construction surveys will be completed, between 30 and 14 days prior to construction, within a radius of 1/4 mile of the project site to identify any active nests (eggs or juveniles). If an active nest is identified, work will be postponed until September 1 or after the young have fledged. If that area cannot be avoided or work postponed, CDFW will be notified and consulted. Upon CDFW approval, a qualified biologist will monitor the nesting pair for behavioral indications of disturbance during all construction hours.
- b) No impact. Riparian or other sensitive habitats are not present in the immediate project area. Therefore, the project will not have an adverse effect on any riparian habitat or other sensitive natural community.
- c) Less than significant impact. The project will have temporary impacts to the channel of the collecting canal during construction, and the permanent effect of the installation of a larger culvert. An application for a permit from the Army Corps of

Engineers allows work within Waters of the US and temporary dewatering of the channel. Figure 2 shows the OHWM of the collecting canal at the Project’s location. Additional restrictions and guidelines from applicable resource agency permits acquired for the project will also be implemented. The larger box culvert will have the positive effects of reducing regular maintenance involving removal of debris from the inlet and repair ongoing erosion into the county right of way on Hughes Road.

- d) Less than significant impact. The project will have a temporary effect on the movement of wildlife species during construction. Interference with movement in the channel will only be present during construction, and once installed, the box culvert assembly will improve terrestrial and aquatic wildlife passage in the channel. The project follows the recommended action of the USFWS Giant Garter Snake 5-Year Review (June 2012) of installing larger box culverts that provide benefits for the recovery of GGS by facilitating movement and improving habitat connectivity.
- e) No impact. The project will not conflict with any local policies or ordinances protecting biological resources or tree preservation policies. No trees occur in the project area, and removal of trees is not required.
- f) Less than significant impact. The project is within the planning area of the Yuba-Sutter RCP. The State and Federal joint plan is currently being developed and will potentially replace the existing environmental permitting process for the region. The project will comply with existing laws and regulations and will not conflict with any approved local, regional, or state habitat conservation plan.

Cultural Resources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<hr/> Would the project...				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) Disturb any human remains, including those interred outside of formal cemeteries?

Environmental Setting

DWR has conducted a cultural resources study in compliance with §106 of the National Historic Preservation Act for the Clean Water Act §404 permit. A record search was conducted on December 12, 2013 by the staff of the Northeast Information Center of the California Historical Resources Information System (CHRIS) at Chico State University. The CHRIS results stated there were no cultural resources within the project area and none recorded within a 1/4-mile radius. The CHRIS search indicated that four previous cultural studies have been conducted in the project area and areas within ¼-mile radius. The most recent was done in 2010 by URS. A field survey was not conducted for this project as four studies have already been conducted in the project area and no cultural resources were found; the last being less than five years old. In summary, based on the archaeological resources inventory report, DWR finds no impact under CEQA, pursuant CEQA Guidelines §15064.5, and the study recommends that the proposed project will result in a Finding of No Historic Properties Affected (36 CFR §800.4[d][1]).

Discussion

- a) No impact. A cultural resources study was conducted, and no historical resources as defined in §15064.5 were identified in the project area or would be affected by the Project's implementation. Based on an Archaeological Inventory Report performed for the project, DWR found no impact under CEQA, pursuant to CEQA guidelines §15064.5.
- b) No impact. No archaeological resources or remains were identified within the proposed project area during the cultural resources study. Should cultural resources be uncovered while conducting activities associated with the removal of sediment, all work will temporarily cease in the vicinity of the findings until they can be assessed by a qualified archaeologist and an appropriate course of action can be determined in consultation with the State Historic Preservation Officer (CDPR 1976, 1995, and 2002; NRHP, 2002).
- c) No impact. No paleontological resources or unique geologic features are known to exist within the project area. Should paleontological resources or unique geologic features be unearthed, all work will immediately stop in the vicinity of the finds until findings can be assessed by and an appropriate course of action can be determined following local, State, and Federal regulations.
- d) No impact. No evidence of individual interments or a cemetery was identified in the archaeological resources inventory report. As standard practice, if human remains are unearthed during the course of construction, all work will immediately stop in the vicinity of the finds until findings can be verified and the requirements of Public Resource Code §5097.98 are met, and the County Coroner will be contacted in

accordance with California Health and Human Safety Code §7050.5(b). If the remains are determined to be Native American, the Native American Heritage Commission will be consulted, and the most likely descendant will be determined.

Geology and Soils	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<u>Would the project...</u>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Environmental Setting

The project area is located in the Sacramento Valley portion of the Great Valley geomorphic province of California, a wide alluvial plain typified by sequences of alluvial sediment. Soils found in the area within and adjacent to the project site are silt and clay loams, specifically Gridley clay loam within the project area with a 0 to 1 percent slope (USDA 2014). According to the California Geologic Survey 2010 Fault Activity Map of California, there are no faults within the project area or surround area; the nearest faults are Quaternary faults located on the southern side of the Sutter Buttes 8 miles north of the project area.

Discussion

- a) No impact. Sutter County is not in an Earthquake Fault Zone, and there are no known faults in the project area or surrounding vicinity, therefore the proposed project will have no impact on earthquake faults, ground shaking, seismic-related ground failure, or landslides. Furthermore, the area being dominated by agriculture, the vicinity of the project has very limited structures and is sparsely populated.
- b) Less than significant impact. The project will have the positive impact of preventing further erosion occurring at the inlet and outlet of the culvert. Construction activities will have the potential to increased soil erosion during construction. Upon completion of construction, the excavated area and disturbed areas will be planted with native grass seed and treated to reduce erosion and siltation.
- c) No impact. The project area has a 0-1% slope and is dominated by Gridley clay loam soils (USDA 2013). The soil is stable with a low caving potential. No geologic instability will result from the project.
- d) No impact. The project is not located within expansive soils. Furthermore, during the culvert replacement, the soils surrounding the new culvert will be engineered and compacted to have a low potential for expansion.
- e) No impact. The project does not involve septic tanks or wastewater disposal.

Greenhouse Gas Emissions	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project...				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

GHG Emissions Analysis

In May 2012, DWR adopted the DWR Climate Action Plan-Phase I: Greenhouse Gas Emissions Reduction Plan (GGERP), which details DWR's efforts to reduce its greenhouse gas (GHG) emissions consistent with Executive Order S-3-05 and the Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32). DWR also adopted the Initial Study/Negative Declaration prepared for the GGERP in accordance with the CEQA Guidelines review and public process. Both the GGERP and Initial Study/Negative Declaration are incorporated herein by reference and are available at: <http://www.water.ca.gov/climatechange/CAP.cfm>. The GGERP provides estimates of historical (back to 1990), current, and future GHG emissions related to operations, construction, maintenance, and business practices (e.g. building-related energy use). The GGERP specifies aggressive 2020 and 2050 emission reduction goals and identifies a list of GHG emissions reduction measures to achieve these goals.

DWR specifically prepared its GGERP as a "Plan for the Reduction of Greenhouse Gas Emissions" for purposes of CEQA Guidelines §15183.5. That section provides that such a document, which must meet certain specified requirements, "may be used in the cumulative impacts analysis of later projects." Because global climate change, by its very nature, is a global cumulative impact, an individual project's compliance with a qualifying GHG Reduction Plan may suffice to mitigate the project's incremental contribution to that cumulative impact to a level that is not "cumulatively considerable." (See CEQA Guidelines, §15064, subd. (h)(3).)

More specifically, "[l]ater project-specific environmental documents may tier from and/or incorporate by reference" the "programmatic review" conducted for the GHG emissions reduction plan. "An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project." (CEQA Guidelines §15183.5, subd. (b)(2).)

Section 12 of the GGERP outlines the steps that each DWR project will take to demonstrate consistency with the GGERP. These steps include:

- 1) analysis of GHG emissions from construction of the proposed project,
- 2) determination that the construction emissions from the project do not exceed the levels of construction emissions analyzed in the GGERP,
- 3) incorporation into the design of the project DWR's project level GHG emissions reduction strategies,
- 4) determination that the project does not conflict with DWR's ability to implement any of the "Specific Action" GHG emissions reduction measures identified in the GGERP, and
- 5) determination that the project would not add electricity demands to the State Water Project (SWP) system that could alter DWR's emissions reduction trajectory in such a way as to impede its ability to meet its emissions reduction goals.

Consistent with these requirements, a GGERP Consistency Determination Checklist and Best Management Practices (BMPs) are attached documenting that the project has met each of the required elements.

Discussion

- a) Less than significant. Based on the analysis provided in the GGERP and the demonstration that the proposed project is consistent with the GGERP (as shown in the attached Consistency Determination Checklist) (Appendix), DWR as the lead agency has determined that the proposed Project's incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs is less than cumulatively considerable and, therefore, less than significant.
- b) No impact. DWR's GGERP is in compliance with all applicable plans and policies. This project is in compliance with the GGERP and all BMPs suggested and adopted from the GGERP are listed in the Appendix along with the Consistency Determination form.

Hazards and Hazardous Materials	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project...				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Environmental Setting

The construction equipment used for this project will use diesel fuel and oil. These materials will be used, stored, and disposed of according to standard protocols for handling of hazardous materials. All personnel involved in use of hazardous materials will be trained in emergency response and spill containment.

Discussion

- a) Less than significant impact. There are no known hazardous materials within the project area. However, during the construction period diesel fuel and oil will be used on the project site; once complete, the project site will not require long-term storage, treatment, disposal, or transport of hazardous materials.
- b) Less than significant impact. Construction vehicles on site may require routine or emergency maintenance that could result in the release of oil, diesel fuel, transmission fluid or other materials, but the materials are not expected be used in quantities or stored in a manner that would pose a significant hazard to the public or to the workers themselves.
- c) No impact. There are no existing or proposed schools within 1-mile of the project site.
- d) No impact. According to the State Water Resources Control Board website GeoTracker, the project area is not a hazardous site.
- e) No impact. The closet public use airport is located in Yuba City, approximately 10-miles from the project area.
- f) No impact. The private use Vanderford Ranch Company Airport is located approximately 2-miles northeast of the project site; and therefore, the project will not result in a safety hazard for people residing or working in the project area.
- g) No impact. The project will not impair or physically interfere with an adopted emergency response or evacuation plan. SMY construction personnel are required to be trained in emergency response and spill containment.
- h) No impact. The project will not expose people or structures to a significant risk of loss, injury or death due to wildland fires. As a standard safety practice during construction activities, SMY will have fire prevention equipment on site including fire extinguishers and shovels.

Avoidance and Minimization Measures for Hazards and Hazardous Materials

1. Diesel fuel and oil will be used, stored and disposed in accordance with standard protocols for handling of hazardous materials. All personnel involved in use of hazardous materials will be trained in emergency response and spill control.
2. During construction activities, SMY staff will prevent oil, grease, fuels, and other petroleum products, toxic chemicals, and any other substances that could be deleterious to aquatic life from contaminating the soil and/or entering waters of the state. SMY staff will immediately remove such

substances from any place where they could enter waters of the state and/or adversely affect fish and wildlife resources. SMY staff will attempt to contain any releases or spills of such substances, and shall report any significant spills as soon as possible to the California Emergency Management Agency (Cal-EMA). In the event of a significant spill, work will cease immediately and workers will employ containment methods if it is safe to do so. DWR will make notifications to the appropriate agencies within the regulatory time frames.

Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<hr/> Would the project...				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

e) Substantially increase exposure of people or structures to a risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Substantially increase the risk of inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Substantially reduce existing water supplies in a manner that would require new or expanded supplies to meet existing demands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project will increase the capacity of the culvert and improve conveyance in the collecting canal at Hughes Road. Ongoing erosion at Hughes Road along the right-of-way at the channel crossing will also be repaired. Both the increase in capacity and repair of ongoing erosion will enhance the stability of the culvert crossing and decrease the chance of road failure. Avoidance and minimization measures will be in place to protect water quality during construction.

Discussion

- a) Less than significant impact. The project will comply with Waste Discharge requirements or Waiver of Waste Discharge requirements from the Central Valley Regional Water Quality Control Board. Appropriate avoidance and minimization measures, described below, will be implemented.
- b) No Impact. The project involves surface water conveyance of the collecting canal at Hughes Road and will not draw from a groundwater aquifer. Therefore, the project will not deplete groundwater supplies or interfere with groundwater recharge.
- c) Less than significant. The project will increase water conveyance at Hughes Road and alleviate erosion occurring at the site. The Project's design is intended to avoid substantial erosion or siltation.

- d) Less than significant. Water in the channel will be diverted around the project during construction. Following construction, the capacity of culvert will change, but the increased conveyance of water would not substantially alter the existing drainage pattern of the area or exceed the capacity of the channel.
- e) No impact. The project will comply with Regional Water Quality Control Board permit conditions and will not degrade water quality.
- f) No impact. The project will not place housing in a 100-year flood hazard area. The Project is intended to improve water conveyance and alleviate erosion at the site.
- g) No impact. The project will not place structures in a 100-year flood hazard area. The project will improve water conveyance and decrease the chance of road failure at the culvert crossing.
- h) Less than significant. The project is within the 100-year flood hazard area. The project will improve water conveyance at the site but is relatively small and would not impede, redirect, or cause flood flows.
- i) No impact. The project is located in a geographically flat region of Sutter County and is not a coastal area. The project will not expose people or structures to inundation by tsunami, seiche, or mudflow.

Avoidance and Minimization Measures for Hydrology and Water Quality

1. A turbidity curtain placed in the channel immediately downstream of the project will reduce impacts to water quality, and in-water work will be avoided to the extent practicable.
2. Construction is scheduled to begin in May when the level of water is lowest in the collecting canal. The schedule should allow construction in the channel to be completed before the surrounding rice fields are irrigated for the growing season, and water is flowing in the channel.
3. All excavated material will be placed in upland areas where it will not likely be subject to regular flooding, mobilization of soluble metals, or affect ground water.
4. After completion of construction activities, any temporary fill and construction debris will be removed, and, wherever feasible, disturbed areas will be restored to pre-project conditions and planted with native grass seed.

Land Use and Planning	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Physically divide an established community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, or result in changes to an applicable land use plan, policy, or regulation, adopted for the purpose of avoiding or mitigating one or more environmental effects (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) that would result in alterations of land uses or patterns of land use that would cause a substantial adverse physical environmental effect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable HCP or NCCP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The project is located adjacent to the Sutter Bypass in Sutter County. Surrounding land use is mainly comprised of agriculture, the SNWR, and open space.

Discussion

- a) No impact. The project is limited to the replacement of an existing culvert and will not physically divide a community.
- b) No impact. The project is limited to the replacement of an existing culvert and will not conflict with any land use plan.
- c) Less than significant. The project is located within the planning area of the Yuba-Sutter NCCP/HCP. The joint plan is being designed to protect open space in the valley and lower foothill portion of both counties. The project will not change land use and will comply with existing land use and planning guidelines.

Mineral Resources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Construction aggregate, primarily consisting of sand, gravel, and crushed stone, is currently Sutter County's main mining resource, according to the Sutter General Plan Technical Background Report (Sutter 2008). The major economic asset of the region is agricultural activities, and much of the County is protected as agricultural land under the Williamson Act.

Discussion

- a) No impact. The project is limited to the replacement of an existing project and will not result in the loss of a known mineral resource.
- b) No impact. The project is limited to the replacement of an existing culvert and will not result in the loss of a locally important mineral resource recovery site.

Noise	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

-
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, expose people residing or working in the project area to excessive noise levels
- f) For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels
-

Environmental Setting

The project is in an isolated agricultural area with no sensitive receptors within close proximity. Hughes Road conveys agricultural equipment and transports with the heaviest use occurring in the summer and fall months during the growing and harvest seasons for rice.

Discussion

- a) Less than significant. The proposed project is bordered by agricultural lands and the Sutter Bypass. During construction noise levels will increase due to operation of heavy equipment, but the proposed project will not expose persons to noise levels in excess of standards either permanently or significantly. DWR will comply with applicable local, state, and federal regulations regarding noise attenuation and ensure that all engine-driven equipment will be fitted with adequate mufflers.
- b) Less than significant. Heavy equipment will generate some ground borne vibration but not in the immediate vicinity of any occupied residences.
- c) No impact. No permanent increase in noise levels will occur due to the project because the project is limited to replacing an existing culvert.
- d) Less than Significant. While the construction equipment is working, ambient noise levels will increase. However, all equipment will be properly tuned and will utilize appropriate mufflers. Furthermore, work will generally be limited to daylight hours.
- e) No impact. The project is not within 2 miles of a public airport.

- f) No impact. The private use Vanderford Ranch Company Airport is located approximately 2-miles north east of the project site, but construction will not expose people residing or working in the project area to excessive noise levels.

Avoidance and Minimization Measures for Noise

- 3. Equipment will be properly tuned and will utilize appropriate mufflers.
- 4. Construction will be limited to the Hours of 6:00 a.m. to 8:00 p.m.

Population and Housing	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Would the project...</i>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project is located in the western portion of Sutter County, which is unincorporated. The area is sparsely populated and is zoned for agriculture. There are no residences in the project vicinity.

Discussion

- a) No impact. The project is limited to the replacement of an existing culvert. The Project's design is for the stormwater and agricultural runoff currently present and is not intended to facilitate future population growth. The project will not directly or indirectly induce population growth.
- b) No impact. The project is limited to the replacement of an existing culvert and will not displace existing housing or necessitate construction of housing elsewhere.
- c) No impact. The project is limited to the replacement of an existing culvert and will

not displace people or necessitate construction of housing elsewhere.

Public Services	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Public services in the area are under jurisdiction of the Sutter County Sheriff’s Department and within the fire districts of the Sutter, Live Oak, and Oswald-Tudor Fire Stations.

Discussion

a) No impact. Because the project is limited to the replacement of an existing culvert, the project will not result in impacts which would require new or additional fire protection, police protection, schools, parks or other public services.

Recreation	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project...				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Recreation in the vicinity of the project is provided by the SNWR. Hunting, fishing, and boating opportunities are seasonally provided by the refuge. There are no other recreational facilities such as city or county parks or in the area affected by the project.

Discussion

- a) No impact. The project is limited to the replacement of an existing culvert and will not increase the use of existing neighborhood and regional parks or other recreational facilities.
- b) No impact. The project does not include recreational facilities or require expansion of facilities.

Transportation/Traffic	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project...				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, either by an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curve, dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project will require the closure of Hughes Road during construction. Sutter County Public Works Department will administer the road closure. The project will decrease the chance of road failure by repairing ongoing erosion and increasing water conveyance which increase the reliability of Hughes Road.

Discussion

- a) Less than significant. Equipment, material, and personnel will be mobilized to the site, and equipment or material may be stored at a designated staging area or along the Hughes Road right-of-way at the site. The project will not permanently generate any new trips.
- b) Less than Significant. The increase in road use during the project construction will be negligible. The level of service standard for Oswald Road and Hughes Road will not be exceeded.
- c) Less than significant. The project requires a temporary closure of Hughes Road at the project site during construction. The closure will have temporary impacts to local traffic but will not result in a permanent change in air traffic patterns. The Public Works Department will ensure temporary impacts are minimized.

- d) Less than significant. The project will have a positive impact of modernizing the culvert which will decrease erosion and the chance of road failure. The project will not alter design features of the roadway or significantly increase hazards.
- e) Less than significant. The project will require the temporary closure of Hughes Road and may impact emergency access. There are alternate routes available making the impact less than significant.
- f) No impact. The project will have no effect on parking capacity.
- g) No impact. The project will not conflict with alternative transportation plans.

Utilities and Service Systems	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Exceed wastewater treatment requirements of applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to providers existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Environmental Setting

The project is located in a remote part of the county and there are no utility or service systems for the project site.

Discussion

- a) No impact. The project is limited to the replacement of an existing culvert and will not include wastewater.
- b) No impact. The project is limited to the replacement of an existing culvert and will not require or result in new or expanded wastewater treatment facilities.
- c) Less than significant. The project will increase the conveyance capacity on the collecting canal at Hughes Road but will not require or result in new storm water drainage facilities.
- d) No impact. The project is limited to the replacement of an existing culvert and will not require a new or expanded water supply.
- e) No impact. The project is limited to the replacement of an existing culvert and will not require wastewater treatment.
- f) Less than significant. A limited amount of solid waste will require disposal: The old culvert and asphalt removed from the roadway will be disposed of at a landfill with sufficient capacity or be stockpiled at SMY. The waste disposal is not expected to impact landfill capacities and will be a less than significant impact.
- g) No impact. The minimal amount of solid waste generated by this project will be transported and disposed of in accordance with all applicable federal, state, and local regulations. Therefore, there would be no impact.

Mandatory Findings of Significance	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project...				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This IS has been prepared to assess the proposed project’s potential effects on the environment and the significance of those effects. Based on the IS, the proposed project would not have any significant effects on the environment because the few minor impacts are short term and BMPs and avoidance and minimization measures will be implemented. Cumulative effects are not significant because most impacts are short term and temporary. Site restoration is included as component of the project and the proposed box culvert design will improve wildlife passage, reduce erosion, and reduce maintenance activities associated with the culvert.

- a) **Less than significant impacts.** Potential impacts to biological resources and hydrology/water quality have been identified and will be avoided completely by the proposed avoidance and minimization measures that reduce potential impacts to less than significant.
- b) **Less than significant impact.** Cumulative effects are not significant because these impacts are short term and temporary. The project is designed to avoid or minimize cumulative effects through incorporated avoidance and minimization measures.

- c) **Less than significant.** No project-related environmental effects were identified that would cause substantial adverse effects on human beings. The project has the potential to create temporary impacts related to aesthetics, agricultural resources, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation/traffic, and utilities and service systems during construction. However, with implementation of BMPs will avoid potential impacts, and these impacts will be short-term be and reduced to less than significant.

References

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February 2014

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Appendix. Air Pollutant Emissions Calculations

**DWR GHG Emissions Reduction Plan
Consistency Determination Form
For Projects Using Contractors or Other Outside Labor**

Print Form



California Department of Water Resources
1416 9th Street
Sacramento, CA
95814
dwrclimatechange.water.ca.gov
www.water.ca.gov/climatechange

This form is to be used by DWR project managers to document a DWR CEQA project's consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when contractors or outside labor and equipment are used to implement the project.

Additional Guidance on filling out this form can be found at:
dwrclimatechange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:
<http://www.water.ca.gov/climatechange/CAP.cfm>

Project Name:	Sutter Bypass Collecting Canal Culvert Rehabilitation-Hughes
Environmental Document type:	Initial Study / Mitigated Negative Declaration
Manager's Name:	Casey Wilder
Manager's email:	cwilder@water.ca.gov
Division:	Division of Flood Management
Office, Branch, or Field Division	Flood Maintenance Office

Short Project Description: The Sutter Bypass Collecting Canal Culvert Rehabilitation – Hughes Road project is located at Hughes Road in Sutter County on the collecting canal system east of the Sutter Bypass. The project will replace a culvert on the collecting canal and will be performed by the DWR Sutter Maintenance Yard. The patch paving of Hughes Road required for the project will be performed by the Sutter County Public Works Department. The County will patch pave the disturbed roadway (an area of approximately 1,500-square feet) with asphalt concrete. This work is anticipated to take place within 2 years after the culvert replacement which is anticipated to be replaced in Spring, 2014. While DWR accounts for GHG emissions of the culvert replacement performed by the Sutter Maintenance Yard, the County is considered a contractor for the project. Therefore, the County's GHG emissions for the Project's paving work is summarized below.

Project GHG Emissions Summary

Total Construction Emissions mtCO₂e

Maximum Annual Construction Emissions mtCO₂e

All other emissions from the project not accounted for above will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP.

Extraordinary Construction Project Determination
Do total project construction emissions exceed 25,000 mtCO₂e for the entire construction phase or exceed 12,500 mtCO₂e in any single year of construction.

Yes - Addition analysis is required, consult with C4
 No - Additional analysis not required

Project GHG Reduction Plan Checklist

All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. (Project Level GHG Emissions Reduction Measures)

Or

All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and Measures not incorporated have been listed and determined not to apply to the proposed project (include as an attachment)

Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures (Specific Action GHG Emissions Reduction Measures)

Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?

Yes No

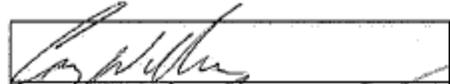
If you answered Yes, attach a Renewable Power Procurement Plan update approval letter from the DWR SWP Power and Risk Office.

Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?

Yes No

If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).)

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that the proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis.

Project Manager Signature:  Date: 1/22/14

C4 Approval Signature:  Date: 4/1/14

Attachments:

- GHG Emissions Inventory
- List and Explanation of excluded Project Level GHG Emissions Reduction Measures
- Plan to update Renewable Energy Procurement Plan from DWR SWP Power and Risk Office

Hughes Road Culvert Replacement							
Greenhouse Gas Emission Analysis							
1/22/2014							
Analysis based on Sutter County Public Works performing the work							
Construction Equipment Emissions							
Type of Equipment	Maximum Number per Day	Total Operation Days ⁴	Total Operation hours ¹	Fuel Consumption Per Hour ²	Total Fuel Consumption (gal. diesel)	CO ₂ e/gal Diesel ³	Total CO ₂ Equivalent Emissions (metric tons)
Skiploader	1	1	8	10	80	0.0103914	0.83
Roller/Compactor	1	1	8	10	80	0.0103914	0.83
TOTAL					160		1.66
¹ Assuming 8 hour work days and all equipment operating entire 8 hours per day.							
² Fuel consumption rates based on values obtained from CAT equipment specs for typical like equipment.							
³ World Resources Institute-Mobile combustion CO ₂ emissions tool. June 2003 Version 1.2							
Construction Workforce Transportation Emissions							
Average Number of Worker vehicles per Day	Total Number of Workdays	Average Distance Travelled (round trip)	Total Miles Travelled	Average Passenger Vehicle Fuel Efficiency ⁵	Total Fuel Consumption (gal. gasoline)	CO ₂ e/gal Gasoline ³	Total CO ₂ Equivalent Emissions (metric tons)
3	2	10	60	20.8	2.9	0.00901	0.03
TOTAL							0.03
⁵ United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel							
Construction Materials Transportation Emissions							
Trip Type	Total Number of Trips	Average Trip Distance	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO ₂ e/gal Diesel ³	Total CO ₂ Equivalent Emissions (metric tons)
Delivery ⁶	2	36	72	6	12.00	0.0103914	0.12
TOTAL							0.12
⁶ Delivery analysis is based on the use of Trucks w/transfers transporting from Marysville, CA.							
Total Greenhouse Gas Emissions				1.81 MT CO₂ equivalents			
Construction Equipment Emissions				1.66			
Workforce Transportation Emissions				0.03			
Construction Materials Emissions				0.12			

Project Level Greenhouse Gas Emissions Reduction Measures

The following list includes both the emissions reduction measures (BMPs) incorporated for the project and excluded emissions reduction measures with a brief explanation for exclusion.

BMP 1: Evaluate project characteristics, including location, project work flow, site conditions, and equipment performance requirements, to determine whether specifications of the use of equipment with repowered engines, electric drive trains, or other high efficiency technologies are appropriate and feasible for the project or specific elements of the project.

BMP2: Evaluate the feasibility and efficacy of performing on-site material hauling with trucks equipped with on-road engines.

BMP3: Not applicable

Electrical service will not be used for the patch paving work. Therefore, providing an electrical service drop or the use of power generators will not be required.

BMP 4, 5, and 13: Not applicable

BMPs 4, 5, and 13 are specific to cement and concrete. No cement or concrete will be used to repave Hughes Road. Asphalt concrete, typically referred to as asphalt, will be used for the paving.

BMP 6: Limit deliveries of materials and equipment to the site to off peak traffic congestion hours.

BMP 7: Minimize idling time by requiring that equipment be shut down after five minutes when not in use (as required by the State airborne toxics control measure [Title 13, §2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and provide a plan for the enforcement of this requirement.

BMP 8: Maintain all construction equipment in proper working condition and perform all preventative maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules shall be detailed in an Air Quality Control Plan prior to commencement of construction.

BMP 9: Implement tire inflation program on jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives on-site and every two weeks for equipment that remains on-site. Check vehicles used for hauling materials off-site weekly for correct tire inflation. Procedures for the tire inflation program shall be documented in an Air Quality Management Plan prior to commencement of construction.

BMP 10: Develop a project specific ride share program to encourage carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes.

BMP 11: Not applicable

No temporary construction office will be required for the approximate one day of construction activity to path pave Hughes Road.

BMP 12: For deliveries to project sites where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box type trailer is used for hauling, a SmartWay27 certified truck will be used to the maximum extent feasible.

BMP 14: Develop a project specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste.

BMP 15: Evaluate the feasibility of restricting all material hauling on public roadways to off-peak traffic congestion hours. During construction scheduling and execution minimize, to the extent possible, uses of public roadways that would increase traffic congestion.