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## Memorandum

**To:** Kelly McNally  
Environmental Branch  
Caltrans Local District 3  
703 B Street, Marysville, CA 95901

**Date:** March 24, 2016

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**Subject:** Water Quality Technical Memorandum for the Clay Street Realignment and Bridge Replacement Project

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### Introduction

The purpose of this Water Quality Technical Memorandum is to provide an analysis of potential water quality degradation associated with the Clay Street Realignment and Bridge Replacement Project (project) proposed by the City of Placerville Engineering Division (City).

### Project Purpose and Need

The existing bridge was last inspected by Caltrans in 2014 and has an overall Sufficiency Rating (SR) of 65.6. The bridge has been identified as Functionally Obsolete due to substandard deck width; therefore, the bridge is eligible for replacement under HBP guidelines. In addition to replacing the existing one-lane bridge, the City of Placerville proposes to realign Clay Street to tie into the Cedar Ravine Road/Main Street intersection, reconfigure the Ivy House parking lot, and improve the Locust Street parking lot. The new Clay Street/Cedar Ravine Road/Main Street intersection will be a 4-way stop with improvements for future signalization.

The purpose of the proposed project is to remove the functionally obsolete existing concrete bridge and replace it with a new concrete bridge designed to current structural and geometric standards that will provide adequate, reliable, and safe service for traffic. The new bridge and realignment will maintain access and improve safety for vehicular, pedestrian, and bicycle traffic.

### Project Location

The proposed project is located in the central eastern portion of El Dorado County (**Figure 1**) in the City of Placerville where Clay Street crosses Hangtown Creek, south of U.S Route 50 and includes the Clay Street Bridge, portions of Main Street, Cedar Ravine Road, Thompson Way, Pacific Street, Locust



 Project Location



Source: ESRI Online Basemap, Street Map, El Dorado County  
 Coordinate System NAD 83 State Plane California II FIPS  
 9402 Feet  
 Notes: This map was created for informational and display purposes only

Project Name:  
 Clay Street Realignment and  
 Bridge (25C-0117) Replacement Project  
 City of Placerville, California

Regional Location

Figure  
 1

Avenue, and a section of the El Dorado Trail (**Figure 2**). The proposed project is on the Placerville CA USGS 7.5' Quadrangle within Township 10 North, Range 11 East, Section 7.

## Project Description

### **Existing Conditions**

Constructed in 1940 according to the Caltrans Bridge Inspection Report, the existing bridge is an earth filled concrete arch. The bridge is approximately 32 feet (ft) long by 19 ft wide, and is within the City's right-of-way. The bridge has been determined to be functionally obsolete due to substandard deck geometry. The Caltrans inspection noted some undermining of the slope protection at the north abutment, as well as spalling of the concrete on the bridge railing.

Since the proposed project is located within the historic downtown of the City of Placerville, preserving certain existing elements are of high priority. The monument to the California Druids in the intersection of Cedar Ravine and Main Street is an iconic local landmark prized by local residents and businesses alike. The mature cork oak tree located in the parking lot at the intersection of Cedar Ravine and Main Street is among the most venerable and cherished tenants in historic Placerville, representing a sense of local pride. Additionally, the weekend Farmers Market which takes place in the existing parking lot is a favorite with locals, as well as visitors from throughout El Dorado County.

Given the close proximity of the Clay Street and Cedar Ravine Road intersections, queues from the all-way stop control at Main Street/ Cedar Ravine Road routinely extend through the Clay Street intersection. In addition, eastbound Main Street left-turn vehicles at Clay Street block eastbound through traffic while waiting for an adequate gap to complete the turn. As a result, southbound Clay Street vehicles have few opportunities to turn left onto Main Street during the PM peak period. Clay Street primarily serves residential properties to the north of US 50, crossing under US 50 and terminating at Main Street.

Cedar Ravine Creek is a tributary to Hangtown Creek and outlets at the creek by way of a drainage culvert. This drainage culvert consists of a 234-ft long open culvert along Cedar Ravine Road, which transitions to a 66 in corrugated metal pipe for 286-ft from the Cedar Ravine/ Main Street intersection to the outfall at Hangtown Creek. The culvert outfall is physically adjacent to the existing southern abutment of the Clay Street Bridge.

### **Proposed Conditions**

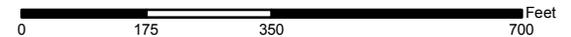
The Clay Street project is functionally an HBP bridge replacement project. A cast in place slab structure is recommended, which will be more economical (relative to pre-cast concrete) given the curved horizontal alignment of Clay Street. The realigned Clay Street and new bridge will accommodate a two-lane street with sidewalks on both sides of the road with pedestrian and bike connections to the El



Project Location



Clay Street Bridge



Dorado Trail and ultimately to the Locust Street parking lot. The Ivy House parking lot is expected to be subdivided into two separate parking lots owned and maintained by the City. Currently, the Ivy House parking lot houses the Saturday morning Farmers Market. The ultimate design will consider long term affects to the Farmers Market and should take into consideration their special needs.

The project will affect local streets inclusive of Main Street and Cedar Ravine Road, both designated as minor arterials. The historic Druid Monument located at the intersection of Cedar Ravine Road and Main Street is expected to remain in its current location to minimize its impact. The portion of the Cedar Ravine drainage culvert between Main Street and the existing bridge is expected to be affected by the Clay Street realignment and parking lot reconstruction. Additionally, the Hangtown Creek viewing area just north of the Ivy House parking lot will also be affected.

## Regulatory Setting

### Federal Laws and Requirements

#### Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the Waters of the United States (US) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant to apply for a federal license or permit to conduct any activity that may result in a discharge to waters of the US and to obtain certification from the State that the discharge will comply with other provisions of the act (this is most frequently required in tandem with a Section 404 permit request described below.)
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into Waters of the US Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into Waters of the US. This permit program is administered by the United States Army Corps of Engineers (Corps).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The Corps issues two types of 404 permits: Standard permits and General permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the Corps’ Standard permits. For Standard permits, the Corps decision to approve is based on compliance with US Environmental Protection Agency’s (EPA) Section 404 (b) (1) Guidelines (US EPA CFR 40 Part 230), and whether permit approval is in the public interest. The Section 404(b) (1) Guidelines were developed by the US EPA in conjunction with the Corps, and allow the discharge of dredged or fill material into the aquatic system (waters of the US) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the Corps may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the US, and not have any other adverse environmental consequences. Per Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the US. In addition, every permit from the Corps, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements (see 33 CFR 320.4).

### **Safe Drinking Water Act**

The Safe Drinking Water Act was established to protect the quality of waters actually or potentially designated for drinking use, whether from aboveground or underground sources. Contaminants of concern in a domestic water supply are those that either pose a health threat or in some way alter the aesthetic acceptability of the water. Primary and secondary Maximum Contaminant Levels (MCL) are established for numerous components of concern including turbidity, total dissolved solids (TDS), chloride, fluoride, nitrate, priority pollutant metals and organic compounds, selenium, bromate, trihalomethane and haloacetic acid precursors, radioactive compounds, and gross radioactivity. All domestic water suppliers must follow the requirements established by this act and its associated amendments.

## State Laws and Requirements

### Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. It predates the CWA and regulates discharges to Waters of the State. Waters of the State include more than Waters of the US, such as groundwater and surface waters not considered Waters of the US. Additionally, the Porter-Cologne Act prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant". Discharges under the Porter-Cologne Act must be regulated by the Waste Discharge Requirements (WDRs) Program, which may regulate the project even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCB are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a study area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more components and the standards cannot be met through point source controls, the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

### State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWCQB are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility. The Central Valley RWQCB has adopted the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) which has been designed to support the intentions of the Clean Water Act and the Porter-Cologne Act by: (1) characterizing watersheds within the Central Valley Region; (2) identifying beneficial uses that exist or have the potential to exist in each water body; (3) establishing water quality objectives for each water body to protect beneficial uses or allow their restoration, and; (4) providing an implementation program that achieves water quality objectives.

### National Pollution Discharge Elimination System Program, Construction General Permit

Construction General Permit (Final Order No. 2012-011-DWQ, NPDES No. CAS000003), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of

a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Projects that include dewatering are subject to the General Waste Discharge Requirements/NPDES Permit for Dewatering and Other Low Threat Discharges to Surface Waters (Order No. R5-2008-0081/NPDES Permit No. CAG995001). A Notice of Intent (NOI) must be submitted to the Central Valley RWQCB for approval before dewatering may commence. A completed Notice of Termination Form must be submitted to the Central Valley RWQCB after the permitted discharge is complete. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). The project site (including staging areas, etc.) would result in a DSA of one acre or greater.

## Regional and Local Requirements

### City of Placerville General Plan

#### ***Natural, Cultural and Scenic Resources Element***

Goal A To conserve water resources and protect water quality within the Placerville area.

#### **Policies:**

1. The City shall promote water conservation in both public and private developments.
2. The City shall encourage agricultural operators to use the Irrigation Management (IMS) water conservation program of the El Dorado Irrigation District.
3. The City shall encourage the use of treated wastewater for irrigation of pasture land, golf courses, and other open-space areas, consistent with health standards.
4. The City shall encourage the use of native drought-resistant plants in both public and private landscaping.
5. The City shall require in new development sound anti-pollution practices to protect water quality.
6. The City shall prohibit establishment of mining operations in and near streams, lakes and reservoirs.
7. The City shall condition approvals of development in hillside areas to minimize erosion and silt flows into watercourses.

## Hangtown Creek Master Plan

Hangtown Creek Master Plan Goals, Objectives, Policies, Standards, and Watershed Based Implementation Measures

### **Goal 2: Watershed Protection, Erosion, and Flood Control**

**Objective 1:** Encourage stewardship techniques for watershed protection that utilize development standard recommendations that provide for protecting water quality and reducing stormwater-related flooding.

**Policy 1:** No new structures improvements, or grading activities shall be allowed that do not enhance riparian habitat.

**Implementation Measure 1:** The City shall amend its General Plan and ordinance code as necessary to maintain a 50-foot setback area adjacent to all "rural reaches" of Hangtown Creek.

**Implementation Measure 2:** The City shall amend its General Plan ordinance code as necessary to maintain a 15-foot setback area adjacent to all "urban reaches" of Hangtown Creek.

**Implementation Measure 3:** The City shall amend its General Plan ordinance code as necessary to maintain a 25-foot setback area adjacent to all "waterways" of the Hangtown Creek Watershed (identified Plan in accordance with the General Plan goal: "The City shall amend the Zoning Ordinance to require setbacks from watercourses in accordance with Policy V.D.I." and the General Plan Implementation: "The City shall make every effort to protect riparian vegetation. To this end, buildings and improvements shall be setback from watercourses.")

**Policy 2:** Encourage increased shading throughout the creek area to maintain water temperatures in Hangtown Creek that support the native cold-water fishery.

**Policy 3:** The City is encouraged to seek funding for the installation of filtration systems to treat stormwater run-off originating from existing parking lots.

**Policy 4:** Seek ways to control and discourage herbicide and pesticide use on public and private spaces within 50 feet of the creek to ensure chemicals do not have an impact to water quality.

**Policy 5:** Reduce stormwater-related flooding and damage to stream and wetland habitat, and increase infiltration.

**Implementation Measure 1:** City shall adopt design guidelines that include the following practices:

- Minimize impervious cover to improve water absorption;
- Spread run-off over pervious areas to improve water absorption;

- Utilize narrow roads to reduce paved (impervious) surface;
- Utilize open-channel drainage to improve water absorption;
- Protect natural areas to improve water holding capacity in the watershed; and,
- Maintain stream riparian areas to improve water-holding capacity.

**Implementation Measure 2:** The City shall work with Community Pride, the Hangtown Creek Stewardship Committee and other interested organizations and agencies to encourage:

- Shading parking lots with vegetation to reduce heat load
- Protecting riparian areas with stream setbacks
- Restricting the removal of native riparian vegetation

**Policy 6:** The City shall ensure that channel improvements to creeks and tree and brush clearance activities along creeks within the city do not unnecessarily disturb riparian vegetation

**Implementation Measure 1:** Prohibit culverting, lining or piping of streams, except at driveways and road crossings.

**Implementation Measure 2:** Wherever feasible, replace concrete channels with natural unlined channels.

**Implementation Measure 3:** For parking lots of 25 or more stalls, commercial sites with 10,000 square feet or more, and houses of 10 units or more implement run-off management plans that retain the first 0.75 inches of rainwater (stormwater) on site.

### Placerville Storm Water Management Plan

The City maintains a storm drain system separate from the sewer system, and is regulated by the EPA. Urban runoff from areas located within the City limits is primarily discharged to Hangtown Creek.

The City maintains a Storm Water Management Plan (SWMP), required by the EPA. The SWMP includes BMPs and the use of technology to protect water quality to the maximum extent practicable. The City's SWMP has been approved by the SWRCB, which requires actions to be carried out by the City on an ongoing basis.

The City has been specifically designated by the RWQCB as the owner and operator of a Small MS4. In California, the federal stormwater regulations for Small MS4s are being implemented through Water Quality Order No. 2003-01005-DWQ, NPDES General Permit No. CAS000004, and Waste Discharge Requirements for Storm Water Discharges from Small MS4s Systems (General Small MS4 Permit) - which was adopted on April 30, 2003 - by the SWRCB. The program is designed to protect water quality from urban runoff pollution. According to the Placerville SWMP, protecting water quality from pollution "is accomplished by addressing

various ways storm water quality can be impacted by public, municipal activities, development, and redevelopment.” By identifying the source of pollution, steps can be taken to slow, stop, and remediate pollution that harms water quality.

## **Affected Environment**

### **Topography**

The project site is located in the City of Placerville along the western edge of the Slate Mountain Range within the Sierra Nevada Foothills. The topography of the area varies from rolling hills, typical of land forms that developed on the soft mudstone of the Great Valley Sequence, to flat land, at or slightly above sea level. Elevations within the project site range from 1,850 to 1,925 feet above mean seal level. The closest water body that could be impacted by construction is Hangtown Creek. The project area is located adjacent to a 500-year flood zone located along the southern Hangtown Creek boundary.

### **Hydrology**

#### **Regional Hydrology**

The project is located within the Upper American River watershed which originates at the crest of the Sierra Nevada just west of Lake Tahoe, and encompasses 1,850 square miles. The watershed has three forks: the North, Middle, and South American River forks. The project drains to the South Fork American River. The major tributaries contributing flow directly into the South Fork American River are Silver Creek, Slab Creek, Rock Creek, and Weber Creek. Major streams in the entire watershed are the Rubicon River, Duncan Creek, Long Canyon Creek, and Silver Creek. The main reservoirs and lakes in the watershed are: French Meadows, Hell Hole, Union Valley, Ice House, Lake Valley, Loon Lake, Silver Lake, Slab Creek, and Stumpy Meadows. The peak runoff from this watershed, where precipitation occurs primarily as snowfall in the upper elevations of the watershed and rainfall in the lower elevations, is typically from March through June (Sacramento River Watershed Program, 2010).

Beneficial uses for the South Fork American River include municipal, agricultural, industrial, and recreational uses, freshwater habitat, migration and spawning, and wildlife habitat (RWQCB, 2011).

#### **Local Hydrology**

Locally, the project is located within the Weber Creek subbasin and Hangtown Creek planning watershed (Ervin Consulting Group, 2010). The area's drainage system generally consists of a network of roadside ditches, channels, and culverts which route drainage to Hangtown Creek or Weber Creek.

Hangtown Creek runs through the entire length of the project site. Historically, the Hangtown Creek was a source of water and the location of placer mining in the area. As the City grew, Hangtown Creek was utilized primarily as a sanitary sewer and a storm drain. Many of the historic buildings on Main Street are built up to and in some cases straddle the creek (Ervin Consulting Group, 2010). In the late 1800s, construction of the Southern Pacific Railroad (SPRR) corridor adjacent to the creek channel further

constrained the creek along its northerly bank; in the 1990s that railroad right-of-way (ROW) was replaced by a rails-to-trails recreational trail. Pipe sewers in the 1900s were constructed using Hangtown Creek as the primary route for the above ground pipelines to convey sewage to the first treatment plant, and still serve as the primary route to the current treatment plant (Ervin Consulting Group, 2010).

Hangtown Creek has been substantially constrained through the City due to adjacent development, and the existence of the above ground trunk sewers. As a result, there has been a long history of flood problems within the City, and the length of the creek and adjacent properties are identified as within the 100-year floodplain. Due to Hangtown Creek being constrained to a small area, large storm events are extremely amplified. Runoff from the project site discharges into Hangtown Creek.

### Groundwater

The project site is not situated within a recognized California groundwater basin or subbasin. The nearest recognized groundwater basin, the South American Groundwater Subbasin, is located approximately 20 miles west-southwest and downstream of the project site. However, some groundwater likely occurs in isolated pockets, including the shallow alluvial materials associated with surface waters or fractures in the underlying bedrock.

### Existing Water Quality

In general, water quality in the American River is considered to be very good from headwaters to the confluence with the Sacramento River. Streams in the upper watershed are typically clear, cold streams that are naturally highly oxygenated, low in dissolved ions and nutrients, and exhibit low instream plant or algal growth. However, erosion from land use activities (past and present), roads, and recreational use throughout the watershed contribute to instream sediment problems. The South Fork American River is listed on the Clean Water Act Section 303(d) list of impaired water bodies for mercury because of historical mining activities.

### Hangtown Creek

Municipal and industrial contributions to poor water quality are a function of the type and degree of waste treatment and disposal. Hangtown Creek Water Reclamation Facility (WRF) is located off Cool Water Creek Road approximately 3 miles north northwest of the project site. Discharge from municipal treatment plants may result in high coliform counts, elevated temperature, pH levels in discharge that differ from the levels in receiving waters, increased turbidity, and low dissolved oxygen in water bodies. These changes could adversely affect aquatic habitat. According to the Federal Water Pollution Control Act Amendments of 1972, all publicly owned waste water treatment plants (WWTPs) must achieve required treatment levels through the “Best Practicable Waste Treatment Technology.” Each WWTP is subject to review and establishment of water quality discharge standards by the RWQCB, and plants that discharge to water bodies are required to comply with an NPDES discharge permit. Permitted discharge

water quality can vary from plant to plant, so long as standards in the receiving waters' Basin Plan are met.

The WRF currently discharges treated wastewater to Hangtown Creek per the City's NPDES Permit (Order No. R5-2001-0045-AO1). The plant is in compliance with most discharge requirements; however, final effluent limitations for copper and zinc became effective on May 18, 2010. Cease and Desist Order No. R5-2008-0054 was amended to provide a compliance schedule for copper and zinc final effluent limitations that extend the May 18 2010 compliance date in the NPDES permit to a March 1 2015 compliance date.

The Hangtown Creek Master Plan notes that the Trunk Sewer System is the "biggest concern for sources of fecal bacteria" in Hangtown Creek (Hangtown Creek Master Plan Committee [HCMPC], 2007). The Master Plan states that fecal bacteria colonies contain several pathogens that could significantly threaten public health, including hepatitis, dysentery, and typhus. The presence of fecal bacteria, while perfectly natural at certain concentrations, is an indicator of sewer line leaks or failure in higher concentrations. When fecal bacteria colony counts rise above 200 colonies/100 mL, fecal bacteria becomes a public-health risk. In 1997, as the average fecal bacteria colony count reached 153.3 colonies/100 mL, the City was required to take drastic steps to reline the sewer pipes, extending the life of the Trunk Sewer System (HCMPC, 2007). Still, a major storm event could significantly damage the Trunk Sewer System due to trees or other debris that may fall or flow into the creek, and damage to the system could release bacteria because the system is located in such close proximity to Hangtown Creek (HCMPC, 2007).

## Water Quality Impacts

### Construction-Related Impacts

Construction of the entire project is anticipated to take approximately five months. The proposed project is subject to Construction General Permit (Final Order No. 2012-011-DWQ, NPDES No.CAS000003) requirements, which requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The proposed project would comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit including preparing and implementing a SWPPP that identifies project specific Best Management Practices (BMPs) to protect water quality during project construction. These BMPs must meet the technical standards established by the permit related to conventional (e.g., sediment) and non-conventional (e.g., toxics) pollutants and must be designed and implemented to ensure the proposed project does not cause or contribute to a violation of water quality standards. The Caltrans Storm Water Quality Handbook has published a set of BMPs, which the proposed project must utilize in drafting the SWPPP (Caltrans, 2003). Through compliance with the NPDES program requirements and implementation of a SWPPP, water quality standards would not be violated during project construction.

## Operation-Related Impacts

Implementation of the proposed bridge replacement would not substantially modify the character of the project site in terms of sources of water pollutants. Vehicles traveling on Clay Street and urban land uses would remain the primary sources of water pollutants at the project site. The project would not change the number of vehicles traveling on Clay Street or other nearby land uses in the watershed.

## Best Management Practices

BMP's designed to address water quality (and related special status species) impacts are described below and will be finalized in consultation with the project engineer, City of Placerville, the Central Valley RWQCB, and other appropriate agencies.

- The contractors will develop and implement a toxic materials control and spill response plan to regulate the use of hazardous materials, such as the petroleum-based products used as fuel and lubricants for equipment and other potentially toxic materials associated with project construction.
- Standard construction BMPs will be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the project site. Appropriate erosion control measures will be used (e.g., straw wattles, filter fences, vegetative buffer strips, or other accepted equivalents) to reduce siltation and contaminated runoff from project sites. The specific BMPs to be implemented will be described in full in the project's SWPPP. All erosion control materials, including straw wattles and erosion control blanket material used on-site will be biodegradable. Use of erosion control containing plastic monofilament will not be allowed as wildlife may become entrapped in this material. Wattles should be wrapped with 100 percent biodegradable materials like burlap, jute, or coir.
- Measures would be implemented during ground-disturbing activities to reduce erosion and sedimentation. These measures may include mulches, soil binders/erosion control blankets, silt fencing, fiber rolls, and temporary berms.
- Existing vegetation would be protected, using temporary fencing or other protection devices, where feasible to reduce erosion and sedimentation.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by winds and construction activities such as traffic and grading activities.
- All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution.
- Temporary berms would be constructed along the tops of slopes to prevent water from running uncontrolled from slopes during construction activities. Water would be collected in these berms and taken down the slopes in an erosion-proof drainage system. Sediment that is collected within these berms would be allowed to "settle out" and would be removed from the site.

- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state.
- All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species.
- All construction materials would be hauled off-site after completion of construction activities.

## Requirements for Stormwater Pollution Prevention Plans

- The SWPPP shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality.
- The SWPPP shall identify the sources of pollutants that may affect the quality of storm water and include the construction site BMPs to control pollutants such as sediment control, catch basin inlet protection, construction materials management and non-storm water BMPs.
- The SWPPP shall be prepared according to the requirements stated in the *NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activities* (Construction General Permit, Order Number 2012-011-DWQ, NPDES Number CAS000003), or subsequent permit in effect at the time of construction.
- All construction site BMPs shall follow the latest edition of the *Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual* (Caltrans 2003) to control and minimize the impacts of construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-storm water BMPs.

## Agency Coordination and Anticipated Regulatory Permits

The following agency coordination and regulatory permits are anticipated for the proposed project. All BMP's and other avoidance/minimization measures will be prepared in consultation with the project engineer, City of Placerville, Central Valley RWQCB, and other appropriate agencies.

- The proposed project would require an NPDES General Construction Permit for Discharges of storm water associated with construction activities (Construction General Permit – Final Order No. 2012-011-DWQ, NPDES No. CAS000003). A SWPPP would also be developed and implemented as part of the Construction General Permit.

## References

- California Department of Transportation (Caltrans). 2003. Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual.
- Central Valley Regional Water Quality Control Board (CVRWQCB). 2011. Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. Sacramento, California.
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- Hangtown Creek Master Plan Committee. 2007. Draft Hangtown Creek Master Plan. Placerville CA.

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*Clay Street Realignment and Bridge Replacement Project*  
Memo – Water Quality Resources

Sacramento River Watershed Program. 2010. The Sacramento River Basin: A Roadmap to Watershed Management. Chico CA.

Should you need additional information or have any questions, please do not hesitate to contact me at (916) 363-4210.

Very truly yours,

**Drake Haglan & Associates**



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