

Water Quality Assessment
03-3F360 (0312000216)
Sacramento County, Route 50, Post Mile (PM) L0.2-R6.1
Buss/Carpool Lane Additions

I. Project Description

This project proposes to construct bus/carpool lanes from PM L0.2 to PM R6.1 and involves placing hot mix asphalt (HMA) overlay and restriping the existing lanes within the project limits.

The following additional items are anticipated to be included in the project scope and placed at selected locations:

- Median decking (widening) at four structures (Elmhurst Viaduct, Brighton Overhead, Folsom Blvd. Undercrossing, and State College Undercrossing);
- Sound walls;
- Drainage;
- Landscaping; and
- Intelligent Transportation Systems (ITS).

Additional Information:

The project has both State and federal funding, and the project limits were included in the original Sac-50 Bus/Carpool project (EA 03-44161). The following is applicable per the Draft Project Report, dated June 2015 (provided by Mike Sullivan on 5/7/15):

“A combined drainage report and floodplain evaluation was performed in January 2007 that included the limits of this project. There are no direct storm water outfalls to water bodies. All of the highway drainage discharges into local systems and is conveyed to the American River, north of the project limits. The existing local systems are at or near capacity. There is no significant increase to impervious drainage areas. All significant drainage work was installed during the 2008 SHOPP project that constructed the paved median and concrete barrier.

Minor drainage will be included with the structure widening and to existing drainage facilities where sound walls are proposed along the edge of pavement. An 84 in reinforced concrete storm drain will require relocation/modification under the Camellia City Viaduct due to new column placement. The proposed drainage design has been coordinated with the various local jurisdictions.

Edge drains were placed next to the PCC pavement in the early 1970s. These are no longer functioning and are not being maintained. They will not be perpetuated in areas of outside widening where proposed sound wall along the edge of pavement is proposed.”

Staging areas have not been identified, so a finalized associated disturbed soil area (DSA) has not been determined. However, as indicated by Mike Sullivan (email, 5/7/15), “roughly 10 acres

of DSA is anticipated.” Projects having a DSA equal to or great than 1 acre will require a Storm Water Pollution Prevention Plan (SWPPP) and will be subject to the requirements of the Construction General Permit (CGP). Additional information related to permit requirements is provided in the recommendations section below (V.).

II. Federal and State Water Quality Permits

Caltrans has a Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Caltrans Permit) issued by the State Water Resources Control Board, (Order No. 2012-0011-DWQ). This permit regulates the storm water and non-storm water discharges associated with Construction activity, discharges associated with normal maintenance and operations of Caltrans facilities (also known as a Municipal Storm Water Permit), and it also serves as a State of California Waste Discharge Requirement.

The permit requires Caltrans to comply with the requirements of the statewide Construction General Permit (CGP), Order No. 2009-0009-DWQ, for construction work that involves 1 acre or more of DSA. During construction, compliance with the CGP requires the appropriate selection and deployment of both structural and non-structural BMPs that achieve the performance standards of Best Available Technology (BAT) and Best Conventional Pollutant Control Technology (BCT), economically achievable, to reduce or eliminate storm water pollution.

III. Project Setting

The project limits are also within one Calwater Planning Watershed and lie within the Hydrological Area of Morrison Creek. The associated Hydrologic Sub-Area (HSA) is No. 519.11. The nearest “major¹” receiving water bodies to the project area are the Delta Waterway (Sacramento River, northern portion) and the American River (lower, confluence with Sacramento River) and correspond to the following Total Maximum Daily Loads (TMDLs):

Delta Waterways (northern portion)
2010 303(d) List
Water Body Type: Estuary
Estimated Size: 6795 Acres

Pollutant	Status
Chlordane	TMDL required
Chlorpyrifos	Being addressed with USEPA approved TMDL
DDT (Dichlorodiphenyltrichloroethane)	TMDL required
Diazinon	Being addressed with USEPA approved TMDL
Dieldrin	TMDL required
Group A Pesticides	TMDL required
Invasive Species	TMDL required
Mercury	TMDL required
PCBs (Polychlorinated biphenyls)	TMDL required
Unknown Toxicity	TMDL required

American River, Lower (Nimbus Dam to confluence with Sacramento River)
2010 303(d) List
Water Body Type: River & Stream
Estimated Size: 26.9286 Miles

Pollutant	Status
Mercury	TMDL required
PCBs (Polychlorinated biphenyls)	TMDL required
Unknown Toxicity	TMDL required

Of the TMDLs identified, pesticides are the only pollutants listed as being approved by the US Environmental Protection Agency (USEPA) (2012 USEPA 303d list). To clarify, the table above indicates that this is a water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for that segment. Regarding pesticides, the potential source identified for this constituent is agriculture; therefore, Caltrans is

not a contributor of this pollutant. Additionally, the other TMDLs, while not approved, do not have sources that Caltrans is a stakeholder² for nor do they need to be addressed through the implementation of permanent treatment BMPs.

1. These are the major receiving waters nearest to the range of project PMs given. To clarify, major receiving waters refers to the water bodies that will most likely be impacted by storm water and non-storm water discharges resulting from project activities. These would typically be larger water bodies and not necessarily smaller drainage systems within the project limits. Smaller drainage systems (man-made or natural) that were not identified more than likely convey stormwater to these larger (or major) receiving waters.
2. Using Caltrans' Water Quality Planning Tool, none of the TMDLs listed have sources that are linked to Caltrans activities. However, Caltrans has been assigned mass based and concentration based waste load allocations for constituents contributing to TMDLs in specific regions. Therefore, the Department is subject to the TMDLs listed in the amendment to ORDER 2012-0011-DWQ, effective July 1, 2014, which lists methylmercury for the Sacramento-San Joaquin Delta waterway within the Central Valley Region. In consideration of this requirement and the quantity of new impervious area anticipated for the project (which may reach or exceed 1 acre, Mike Sullivan, 1/17/16), treatment BMPs options, applicability, and their feasibility must be discussed in Caltrans' Storm Water Data Report (SWDR). Additionally, although not elaborated on in this study, Storm Water design staff may also evaluate treatment BMP options, as a means of obtaining compliance units (at a later time), but currently no alternatives have been presented.

The Central Valley Regional Water Quality Control Board basin plan lists the following beneficial uses that are nearest to HSA No. 519.11:

SURFACE WATER BODIES AND BENEFICIAL USES

SURFACE WATER BODIES (1)	HYDRO UNIT NUMBER	AGRI-CULTURE		INDUSTRY				RECREATION			FRESHWATER HABITAT (2)		MIGRATION		SPAWNING		WILD	NAV	
		MUN		AGR	PROC	IND	POW	REC-1	REC-2	WARM	COLD	MIGR	SPWN						
		MUNICIPAL AND DOMESTIC SUPPLY	IRRIGATION	STOCK WATERING	PROCESS	SERVICE SUPPLY	POWER	CONTACT	CANOEING (1) AND RAFTING	OTHER NONCONTACT	WARM	COLD	WARM (3)	COLD (4)	WARM (3)	COLD (4)			WILDLIFE HABITAT
511 FOLSOM DAM TO SACRAMENTO RIVER	519.21	F	F					F	F	F	F	F	F	F	F	F	F	F	F

The project lies within Sacramento County's Urban Municipal Separate Storm Sewer Systems (MS4) Phase I permitted area and must comply with the requirements of this permit and Caltrans' Permit. Project limits also lie within a high risk receiving watershed. High risk receiving watersheds are watersheds that drain to water bodies that are either listed on the CWA 303(d) List for sedimentation/siltation or turbidity, have a USEPA-approved Total Maximum Daily Load Implementation Plan for sediment; or have beneficial uses of Cold, Spawn, and Migratory. A project that meets at least one of the three criteria has a high receiving water risk.

After examining the 2014 – 2015 Storm Water Management Program's District 3 Work Plan, it does not appear that the project passes through areas where spills from Caltrans activities could discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities.

IV. Proposed BMPs

The primary pollutant of concern during construction is sediment and siltation from disturbed construction areas. Thus, it is important that appropriate construction site BMPs are deployed, implemented, and maintained during construction activities (by the Contractor) to avoid and

reduce potential water quality impacts. To that end, due the nature of work described within the Environmental Study Request, no water quality impacts are expected. Moreover, the proper application and appropriate use of construction site BMPs is anticipated, so that potential environmental impacts are minimized or avoided. Although not detailed in this study, specific project related temporary BMPs will be selected and identified in the Storm Water Pollution Prevention Plan (SWPPP) with the intent of protecting water bodies, within or near the project limits, from (among other things) potential storm water runoff resulting from construction activities. In view of this, anticipated temporary sediment and erosion control measures for the project will most likely include, and not be limited to, the following:

- Fiber rolls and/or silt fences;
- Gravel bag berm;
- Rolled erosion-control product (e.g., netting);
- Designated construction entrance/exit;
- Re-establishment of vegetation or other stabilization measures (hydroseeding, mulch) on disturbed soil areas and newly constructed slopes; and
- Wind erosion control.

V. Recommendation to Minimize and Avoid Impacts to Water Quality

In addition to the above items, adherence to the following is recommended to help insure NPDES Permit compliance and to further prevent receiving water pollution as a result of construction activities and/or operations related to the project:

1. All temporary equipment and material storage areas on State property must be accounted for and included in the total DSA estimate, unless a stabilization method has been implemented, reviewed, and approved by NPDES or storm water staff.
2. At this time, treatment BMPs for the project have not been identified or recommended. Further specifics and detailed information relating to this topic can be found in Caltrans' Storm Water Management Plan (SWMP) and the Project Planning and Design Guide (PPDG) Section 4. Additional BMPs, not previously mentioned, may be included as Line Items BMPs during the Plans Specifications and Estimate (PS&E) project phase.
3. The project shall adhere to the conditions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) MS4 Permit CAS No. 000003 (Order No. 2012-0011-DWQ, and all associated adopted amendments) and Sacramento County's Phase I MS4.
4. Projects with DSA equal to or exceeding 1 acre must adhere to the compliance requirements of the NPDES Construction General Permit (CGP) CAS No. 000002 (Order No. 2009-0009-DWQ) for General Construction Activities (see special considerations within the SWDR). Under certain conditions, a rainfall erosivity value can be calculated to determine if a project qualifies for a waiver and exemption from CGP requirements. In which case, a Storm Water Pollution Prevention Plan (SWPPP) would not be necessary and the project could be covered under a Water Pollution Control Program (WPCP). Both

of these (SWPPP and WPCP) specify the level of temporary pollution control measures required for a project.

5. Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operations from this project:
 - a. The project shall adhere to the conditions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) MS4 Permit CAS No. 000003 (Order No. 2012- 0011-DWQ) and the compliance requirements of the NPDES Construction General Permit (CGP) CAS No. 000002 (Order No. 2009-0009-DWQ) for General Construction Activities (see special considerations within the SWDR).
 - b. Under certain conditions, outlined in the CGP, an erosion value associated with rainfall, climate, and geomorphic conditions for a particular area, can be calculated to determine if a project qualifies for a waiver and exemption from CGP requirements. In which case, a Storm Water Pollution Prevention Plan (SWPPP) would not be necessary and the project could be covered under a Water Pollution Control Program (WPCP). Both of these (SWPPP and WPCP) specify the level of temporary pollution control measures required for a project.
 - c. All temporary equipment and material storage areas on State property must be accounted for and included in the total soil disturbance estimate, unless a stabilization method has been implemented, reviewed, and approved by NPDES or Storm Water Staff.
 - d. Caltrans' Storm Water Management Plan (SWMP), Project Planning and Design Guide (PPDG) Section 4, and Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project requires the consideration of permanent Treatment BMPs. This information and related conclusions, specific to and corresponding with the project, can be found in the SWDR.
 - e. The project must follow all applicable guidelines and requirements listed in the 2015 Caltrans Standard Specifications (2015 CSS), Section 13, regarding water pollution control and general specifications for preventing, controlling, and abating pollutant discharges into streams, waterways, and other bodies of water. Specifically, a concerted effort and focus should be placed on 2015 CSS, Section 13-4 (Job Site Management), to control potential sources of water pollution before they encounter storm water conveyance systems or receiving waters. This can be accomplished by controlling and managing materials, discarded waste, and non-storm water pollution at the construction site and within the project boundaries. Some operations may require attention to Sections 13-9.02C and 13-9.02D, of the 2015 CSS, which relates to and addresses the handling of concrete waste during construction operations.
 - f. The Contractor prepared SWPPP (or WPCP, if applicable) shall provide and incorporate appropriate and approved Temporary Construction Site BMPs that addresses the effective implementation, placement, handling, storage, use and

- disposal practices of all BMPs used during construction operations and field activities for the duration of the project.
- g. Prior to the start of construction, existing drainage facilities should be identified and protected by the application of appropriate Temporary Construction Site BMPs.
 - h. If and where applicable, shoulder backing areas should be stabilized by Temporary Construction Site BMPs, or rolled and compacted in place, by the end of each day and prior to the onset of precipitation.

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Date