

2.2.2 WATER QUALITY AND STORMWATER RUN-OFF

REGULATORY SETTING

Federal

The 1972 Federal Clean Water Act (CWA) addresses issues regarding water pollution control and water quality protection. The CWA was enacted to restore and maintain the integrity of waters of the United States for their beneficial uses. Discharges from sources such as municipal separate storm systems (roads with drainage systems, municipal streets, catch basins, and storm drains) and construction activities (clearing, grading, and excavation) were brought under the National Pollution Discharge Elimination System (NPDES) permit process by amendments to the CWA in 1987 and the EPA's 1990 storm water regulations.

State

In California, the State Water Resources Control Board (SWRCB) and the nine (9) Regional Water Quality Control Boards (RWQCB) have been delegated the administration of the federal NPDES program. Under these regulations, an NPDES permit is required for all projects where construction activity would disturb more than 0.5 ha (1.0 acre) of total land area. The Sheldon Road/SR 99 interchange is located in the Central Valley Region (Region 5) of the RWQCB (CVRWQCB). The CVRWQCB is responsible for the protection of beneficial uses of water resources within the Central Valley Region. The CVRWQCB uses planning, permitting, and enforcement authorities to meet this responsibility, and has adopted the Central Valley Region *Water Quality Control Plan* (Basin Plan) (CVRWQCB, 1998) to implement plans, policies, and provisions for water quality management. Beneficial uses of surface waters are described in the Basin Plan and are designated for major surface waters and their tributaries. In addition to identification of beneficial uses, the Basin Plan also contains water quality objectives that are intended to protect those beneficial uses.

Regional Agencies

The NPDES stormwater permitting program, under Section 402(p) of the Federal Clean Water Act is administered by the RWQCB on behalf of the Environmental Protection Agency (EPA). The CVRWQCB administers the NPDES stormwater permitting program in the Central Valley Region. Any construction activity that include clearing, grading, or excavation resulting in land disturbance of 0.5 ha (1.0 acre) or greater must be conducted in accordance with the lead agencies NPDES permit.

NPDES permits generally require the following measures:

- Submit a Notice of Intent to the CVRWQCB prior to any ground disturbing activities as covered by the permit;
- Eliminate or reduce non-storm water discharges to storm water systems and other "Waters of the U.S.";

- Develop and implement a storm water pollution prevention plan (SWPPP);
- Perform inspections of storm water control structures and pollution prevention measures; and
- Submit a Notice of Termination to the CVRWQCB when construction is complete.

Local

The County of Sacramento, and the cities of Citrus Heights, Elk Grove, Folsom, and Galt (co-permittees) currently operate under a permit dated May 1996 and have jointly submitted for renewal of waste discharge requirements under the National Pollutant Discharge Elimination System (NPDES) to discharge urban runoff from Municipal Separate Storm Sewer Systems (MS4s) within their municipal jurisdictions. The permit requires that the City of Elk Grove implement Best Management Practices (BMPs) on activities that would affect the city's storm water and drainage system. The permit includes requirements for the operation of projects and construction activities.

City of Elk Grove General Plan

The City of Elk Grove General Plan identifies policies and action items that relate to water quality issues within the City, as they relate to the proposed project:

- **CAQ-12** The City shall seek to ensure that the quality of groundwater and surface water is protected to the extent possible.
 - **CAQ-12-Action 1** Continue to cooperate with the County, other cities, and the Regional Water Quality Control Board regarding compliance with the NPDES permit system, and support other water quality improvement projects in order to maintain compliance with the Basin Plan.
 - **CAQ-12-Action 2** Implement the City's NPDES permit on all public and private development projects and activities.
 - **CAQ-12-Action 3** Collect information on design, construction, and operation techniques, which help prevent water pollution, and provide this information to the public and the development community.
- **CAQ-13** Implement the City's NPDES permit through the review and approval of development projects and other activities regulated by the permit.
- **CAQ-14** The City shall seek to minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and use on-site infiltration of runoff in areas with appropriate soils where the infiltration of storm water would not pose a potential threat to groundwater quality.

2.2 PHYSICAL ENVIRONMENT

City of Sacramento General Plan

The City of Sacramento has no General Plan policies that relate to water quality issues within the City as they relate to the proposed project.

AFFECTED ENVIRONMENT

Water Features

Whitehouse Creek is located southeast of the project site and flows westerly to its confluence with Laguna Creek. The majority of stormwater flows from the project site into Whitehouse Creek. Other features noted within project limits include two (2) detention basins and an excavated channel (associated with residential construction) and another excavated channel associated with the pump station located on the west side of SR 99, south of Sheldon Road. There is also a temporary channel located in the southwest corner of the project area, which is the result of the permitted fill of Whitehouse Creek, west of SR 99, on the Park Meadows North project site (formerly Kramer Ranch North).

Surface Water Quality

The project vicinity consists of commercial and rural land uses that may have introduced small amounts of pollutants from stormwater runoff into area water sources. Water resources in the project area are influenced by stormwater runoff and tailwater from urban uses.

IMPACTS

No Build Alternative

Under the No Build alternative, there would be no impacts to water quality above those under the existing conditions because the project would not be implemented.

Build Alternatives (2A and 3A)

Site improvements associated with the proposed project would not appreciably change the general drainage pattern. Slightly more storm water would be generated due to the increase in impervious surfaces.

The project would not introduce substantially greater urban pollutant sources than what is already experienced in the project area. Urban runoff typically consists of oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals) and other household pollutants. These constituents could result in water quality impacts to onsite and offsite drainage flows. These pollutants have the potential to degrade water quality and may result in adverse impacts. Precipitation during the early portion of the wet season (the rainy season is from approximately October to April) displaces these pollutants into the stormwater runoff resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff with peak pollutant levels can be referred to as the “first flush” of storm events. It is

estimated that during the rainy season, the first flush of heavy metals and hydrocarbons occurs during the first five inches of seasonal rainfall.

The quantity of runoff generated by the project would not be substantially greater than under existing conditions, since the proposed project would not substantially increase the amount of impervious surfaces. There would not be an increase in urban runoff pollutants and “first flush” roadway contaminants such as heavy metals, oil, grease, as well as an increase in nutrients (i.e., fertilizers), and other chemicals from landscaped areas, since the project involves the improvement of an existing interchange and would not induce substantially greater numbers of vehicles traveling through the area.

The area served by the City of Elk Grove is subject to the requirements of the NPDES Stormwater Permit No. CA0082597 issued and enforced by the Central Valley Regional Water Quality Control Board (CVRWQCB). This permit requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable. Compliance with this standard requires that control measures be incorporated into the design of new development to reduce pollution discharges in runoff from the site over the life of the project.

Treatment Control Best Management Practices (BMPs) involve physical treatment of the runoff, usually through structural means. A variety of treatment control measures have been utilized for storm water quality. However, the effectiveness of these controls is highly dependent on local conditions, such as climate, hydrology, soils, groundwater conditions, and extent of urbanization. Other treatment controls that can be used include biofiltration systems, vegetated swales, and oil/water separators (designed to remove petroleum compounds and grease, but which will also remove floatable debris and settleable solids).

The Sacramento Water Resources Control Board (SWRCB) is responsible for administering NPDES permit requirements, such as the use of construction and operational BMPs, to ensure that projects are in compliance with water quality standards as set forth in the CWA. The SWRCB through the creation of a Storm Water Quality Task Force has published the California Storm Water Best Management Practice Handbook, which identifies a listing of acceptable BMPs to be used in meeting water standards as outlined by the CWA. BMPs incorporated into the project are identified by the SWRCB as an acceptable means to meet the water quality standards of the CWA.

Impact 2.2.2-1 Soil disturbance associated with construction activities for the proposed project could release pollutants to adjacent waterways. In addition, grading operations could impact surface runoff by increasing the amount of silt and debris carried by the storm water runoff. The release of pollutants could be increased during the rainy season, which generally begins in October and ends in April.

Impact 2.2.2-2 Refueling and the parking of construction equipment and other vehicles onsite during construction could result in spills of oil, grease, or related pollutants that may eventually discharge into water resources in the project vicinity. Improper handling, storage, disposal of fuels and materials, or improper cleaning of machinery could cause water quality degradation.

MITIGATION MEASURES

MM 2.2.2-1 Prior to grading activities, the construction contractor shall prepare a Storm Water Pollution and Prevention Plan (SWPPP) for the project to be administered through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. The SWPPP shall address spill prevention and include a countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. These measures shall be consistent with the City of Elk Grove's Drainage Manual and Land Grading and Erosion Control Ordinance may include (1) restricting grading to the dry season; (2) protecting all finished graded slopes from erosion using such techniques as erosion control matting and hydro-seeding; (3) protecting downstream storm drainage inlets from sedimentation; (4) use of silt fencing and hay bales to retain sediment on the project site; and (5) any other suitable measures. The SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board and to the City for review and approval.

CEQA FINDINGS

Under CEQA, the proposed project would have a significant impact if it would result in any of the following impacts to hydrology and water quality:

- Violate any water quality standards or waste discharge requirements;
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.

The potential for erosion and water quality degradation associated with construction activities is considered a **potentially significant impact**. Mitigation Measure MM 2.2.2-1 would reduce the potential for harm to a **less than significant impact**.