4.5 Hydrology and Water Quality

This section evaluates the potential environmental effects related to hydrology and water quality associated with implementation of the plan. It discusses the regional and local watershed characteristics, including water quality, drainage and infiltration patterns, and flood hazards. The analysis includes a review of surface water, groundwater, water supply, water quality, flooding, and stormwater. Water supply is also discussed in Chapter 4.9, *Utilities and Service Systems*, as is wastewater conveyance and stormwater infrastructure. Issues regarding wetlands and waters of the U.S. are discussed in Chapter 4.3, *Biological Resources*. Erosion is further discussed in Chapter 4.9, *Effects Found Not to be Significant*.

4.5.1 Setting

The City of Santa Maria is located in the central coast area of California in northern Santa Barbara County. The weather in Santa Maria is characterized by a typical Mediterranean coastal climate, which is generally dry in the summer with mild, wet winters. Rainfall in the area is concentrated in the winter months with the wettest months being December, January, February, and March, which have average monthly rainfall totals of 2.12, 2.75, 2.99, and 2.64 inches, respectively (U.S. Climate Data 2025).

a. Surface Water

The California Department of Water Resources (DWR) divides surface watersheds in California into 10 hydrologic regions. Santa Maria lies within the Central Coast hydrologic region, a large coastal region in central California that consists of approximately 11,300 square miles and includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara counties, most of San Benito County, and portions of San Mateo, Santa Clara, and Ventura counties (DWR 2013).

Santa Maria is located within the Santa Maria watershed. The watershed drains approximately 1,880 square miles and includes all tributaries of the Cuyama River, Sisquoc River, and the Santa Maria River (City of Santa Maria 2020). The Santa Maria River, which flows 24 miles from the confluence of the Sisquoc River and Cuyama River to the Pacific Ocean flows around the northern edge of the city from west to east.

b. Groundwater

The city overlies the Santa Maria River Valley Groundwater Basin. A majority of the Santa Maria River Valley Groundwater Basin is adjudicated and is managed by the Northern Cities Management Area, Nipomo Mesa Management Area, and the Santa Maria Valley Management Area. There are some non-adjudicated areas within the Basin, which are managed by groundwater sustainability agencies formed by the County of San Luis Obispo, the City of Arroyo, and the County of Santa Barabara (County of San Luis Obispo 2025). The Santa Maria River Valley Groundwater Basin covers approximately 288 square miles (City of Santa Maria 2020). The Santa Maria Valley Management Area includes approximately 175 square miles of the Santa Maria River Valley Groundwater Basin in northern Santa Barbara and southern San Luis Obispo Counties (City of Santa Maria 2020). The entire basin has a storage capacity of 2,300,000 acre feet (City of Santa Maria 2020). Lopez Reservoir and Twitchell Reservoir store stormwater for groundwater basin recharge. Groundwater is used for industrial, municipal, and agricultural uses within the city (City of Santa Maria 2020).

c. Water Quality

Surface Water Quality

Land use affects the quality of surface water in the city. There are large agricultural operations within the city that contribute to surface water pollution. These operations are a substantial source of sediment which enters the city's storm drain system (City of Santa Maria 2020). Additionally, pesticides, herbicides, and fertilizer are pollutants associated with agricultural operations that affect surface water quality within the city. Pollutants within urbanized areas of the city, such as heavy metals hydrocarbons, detergents, fertilizers, and pesticides, and construction activities which can cause erosion are additional sources of surface water pollution which impact water quality within the city (City of Santa Maria 2020).

Pollutants of known concern in the Santa Maria Watershed include fecal coliform, nitrates, sediments, and ammonia in surface water; nitrates and total dissolved solids in groundwater; organochlorine pesticides in the Santa Maria River Estuary (located approximately 10 miles west of Santa Maria); and petroleum production by-product (diluent) in surface water of the Guadalupe Dunes which is located directly north and south of the Santa Maria River mouth and estuary and nearby areas (City of Santa Maria 2020). The Clean Water Act Section 303(d) requires States to keep registers of impaired waters that do not meet water quality standards. The Santa Maria River is included on the Section 303(d) list for nitrate pollutants from agriculture, domestic animals/livestock, natural sources, and urban runoff/storm sewers. In addition, Arsenic, Chloride, Chlorpyrifos, Cypermethrin, Cyhalothrin, DDD, DDE, DDT, Diazinon, Dieldrin, Endrin, Imidacloprid, Lead, Linurion, Manganese, Malathion, Nitrate, Oxyfluorfen, Prometryn, Pyrethroids, Selenium, Specific Conductivity, Temperature, Total Dissolved Solids, Toxicity, and Toxaphene are all listed pollutants for the Santa Maria River (California State Water Board 2024). The Santa Maria Watershed Toxicity and Pesticides total maximum daily load (TMDL)[1] is applicable to the following pollutants: Chlorpyrifos, Cypermethrin, DDD, DDE, DDT, Diazinon, Dieldrin, Endrin, Malathion, Nitrate, Toxicity, Pyrethroids, and Toxaphene. For all other pollutants TMDL are currently being drafted and are expected to be completed in 2035. The TMDL for Imidacloprid is expected to be completed in 2027 (California State Water Board 2024).

Groundwater Quality

Groundwater quality varies within the Santa Maria Valley. Total dissolved solids are known pollutants in groundwater within the Santa Maria Watershed. Additionally, petroleum production by-product (diluent) has been found in groundwater below the Gudalupe Dunes and nearby areas (City of Santa Maria 2020). The use and reuse of groundwater, coupled with the introduction of additives from municipal and agricultural use, and evaporation of much of the applied water, result in increasing mineralization of the groundwater (City of Santa Maria 2020). Surface waters serve as a major source of recharge for the Santa Maria River Valley Groundwater Basin.

d. Flood Hazards

Flood hazards can occur when the amount of rainfall exceeds the infiltration capacity of the surrounding landscape or the conveyance capacity of the stormwater drainage system. Flood risk is defined as an annual percent chance of flooding, or the probability that flooding would occur in any given year. Although a 100-year flood will, on average, occur once every 100 years, the probability

[1] A total maximum daily load (TMDL) is the maximum amount of a pollutant allowed to enter a waterbody to meet water quality standards (USEPA 2024).

of a 100-year flood is one percent for any particular year. Two 100-year floods could occur in the same year or even in the same month, but the likelihood that two 100-year flood events would occur consecutively is very small.

According to Flood Insurance Rate Maps prepared by FEMA, portions of Santa Maria lie within 1 percent annual chance (100-year) flood zones; these areas are located throughout the city, but are predominately concentrated along the city's northern border, along the Santa Maria River. Additionally, portions of Santa Maria lie within 0.2 percent annual chance (500-year) flood zones. These areas are concentrated near Main Street (S.R. 166) and Orcutt Creek (City of Santa Maria 2020). These areas are shown in Figure 4.5-1.

Santa Maria is approximately 11.4 miles east of the Pacific Ocean. According to the California Department of Conservation, no part of the city is within a tsunami hazard zone (DOC 2025). The city is approximately three miles from Gudalupe Lake. Due to the distance and intervening topography, the city is not at risk of being inundated due to a seiche.

4.5.2 Regulatory Setting

a. Federal Regulations

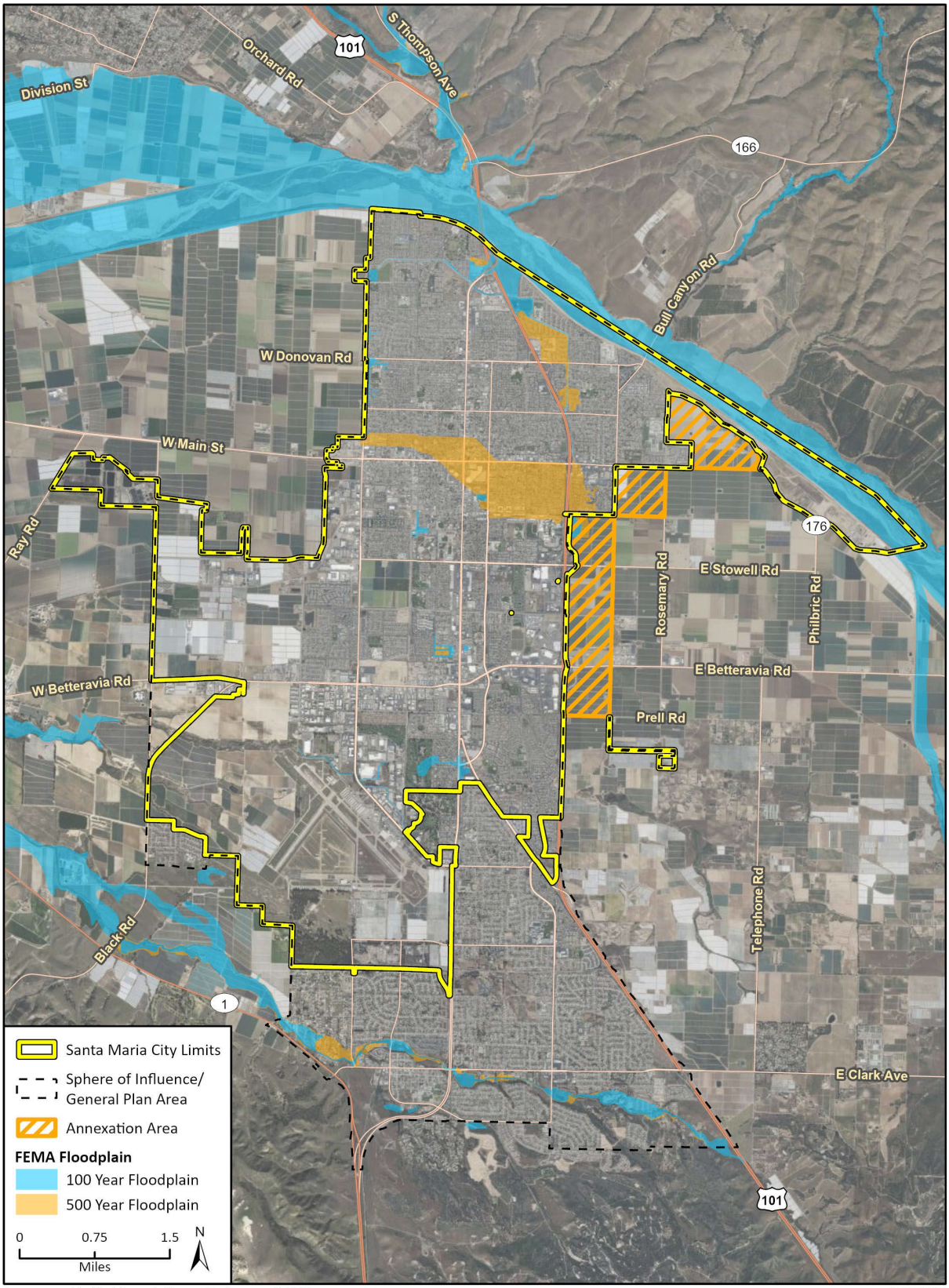
Clean Water Act

The federal Clean Water Act, enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the United States Environmental Protection Agency (USEPA) the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the USEPA and United States Army Corps of Engineers (USACE). At the state and regional levels in California, the Clean Water Act is enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

Clean Water Act Section 303(d)

Section 303(d) of the Clean Water Act requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated biennial list, called the 303(d) list, to the USEPA. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a priority for developing a control plan to address the impairment. If a water body is designated as "impaired," then a TMDL is developed and identified for the affected water body. A TMDL establishes the maximum daily amount of a pollutant allowed in an identified water body and is used as a planning tool in addressing water quality impairments and improving water quality.

Figure 4.5-1 Flood Hazards in Santa Maria



Imagery provided by Microsoft Bing and its licensors © 2025.
Additional data provided by FEMA, 2025.

19-07303 EPS
Fig X Flood Hazards

Clean Water Act Section 401

Under Section 401 of the Clean Water Act, the RWQCBs have regulatory authority over actions in waters of the United States and/or the State of California through the issuance of water quality certifications, which are issued in conjunction with any federal permit (e.g., permits issued by the USACE under Section 404 of the Clean Water Act, described below). Section 401 of the Clean Water Act provides the SWRCB and the RWQCBs with the regulatory authority to waive, certify, or deny any proposed activity that could result in a discharge to surface waters of the State. To waive or certify an activity, these agencies must find that the proposed discharge would comply with State water quality standards, including those protecting beneficial uses and water quality. If these agencies deny the proposed activity, the federal permit cannot be issued. This water quality certification is generally required for projects involving the discharge of dredge or fill material to wetlands or other bodies.

Clean Water Act Section 402

Section 402 of the Clean Water Act establishes the National Pollution Discharge Elimination System (NPDES) regulations for stormwater and other pollutant discharges. Section 402 prohibits discharge of pollutants to waters of the United States unless they are regulated by an NPDES permit. Stormwater discharges are regulated under a variety of NPDES permits, including municipal, agricultural, industrial, construction, and low-threat discharge permits.

In 1987, Congress amended the Clean Water Act to require the implementation of a two-phased program to address stormwater discharges. Phase I of the NPDES program, promulgated by the USEPA in November 1990, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s)[2] serving populations of 100,000 or greater, construction sites disturbing greater than five acres of land, and 10 categories of industrial activities.

The USEPA recognized that smaller construction projects (disturbing less than five acres) and small MS4s (serving populations smaller than 100,000) were also contributing substantially to pollutant discharges nationwide. Therefore, in order to further improve stormwater quality, the USEPA promulgated the NPDES Phase II program in January 2000, which requires NPDES permits for stormwater discharges from regulated small MS4s and for construction sites disturbing between one and five acres of land.

In California, the NPDES program is administered by SWRCB through the nine RWQCBs. Further discussion of the NPDES program and permits in California relevant to the project are provided in discussion of state and local regulations, below.

Clean Water Act Section 404

Under Section 404 of the Clean Water Act, proposed discharges of dredged or fill material into waters of the United States require USACE authorization. Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands).

[2] An MS4 is a conveyance or system of conveyances designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches) that are owned by a state, city, town, or other public entity.

National Flood Insurance Program

The National Flood Insurance Program is a program administered by the Federal Emergency Management Agency (FEMA) to provide subsidized flood insurance for property owners in communities. The National Flood Insurance Program established regulations that limit development in flood-prone areas. The boundaries of flood-prone areas are delineated on FEMA's Flood Insurance Rates Maps, which provide flood information and identify the flood hazard in the community. In certain high-risk areas, federally regulated or insured lenders require property owners to have flood insurance before issuing a mortgage.

b. State Regulations

Porter-Cologne Water Quality Control Act of 1970

The federal Clean Water Act places the primary responsibility for the control of water pollution and planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs. California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of California's responsibility under the federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface water and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product. Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The City is within the jurisdictional boundaries of the Central Coast RWQCB (Region 3).

Phase II Municipal Storm Water Permit

The Municipal Storm Water Permitting Program regulates storm water discharges from Municipal Separate Storm Sewer Systems (MS4s). The NPDES MS4 permits in California are issued in two phases by the SWRCB and RWQCBs. Phase I MS4 permits are issued by the RWQCBs to medium (i.e., serving between 100,000 and 250,000 people) and large (i.e., serving more than 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Phase II MS4 Permit is issued by the SWRCB and is applicable to smaller municipalities (i.e., populations of less than 100,000 people) and nontraditional small MS4s (e.g., military bases, public campuses, and prison and hospital complexes). The Phase II MS4 Permit (*Waste Discharge Requirements [WDRs] for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems [MS4s] General Permit],* Order No. 2013-0001-DWQ, NPDES No. CAS000004) became effective on July 1, 2013 and covers Phase II permittees statewide, including the City of Santa Maria. The Phase I and Phase II MS4 Permits require the permittees to develop a storm water management program and individual dischargers to develop and implement Storm Water Management Plans (SWMP) to manage discharges to municipal storm drain systems.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 is a comprehensive three-bill package that California Governor Jerry Brown signed into State law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention if necessary to protect the resource. The plan is intended to ensure a reliable groundwater supply for California for years to come. The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The Santa Maria River Valley Basin is classified as a very low prioritization basin by the California department of Water Resources (DWR 2025). Because of this, and because the Basin is adjudicated as discussed previously, this basin is not subject to SGMA.

General Construction Activity Stormwater Permit

The *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. The Construction General Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the Construction General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) that will reduce pollution in stormwater discharges to the Best Available Technology/Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage in accordance with the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include:

- Notice of Intent, including Risk Level determination;
- Site Drawings and Maps;
- SWPPP;
- Applicable plans, calculations, and other supporting documentation for compliance with existing permitted Phase I or Phase II municipal separate storm sewer system post-construction requirements or the post-construction standards of the Construction General Permit;
- Annual fee per the current 23 California Code of Regulations Chapter 9 fee schedule for NPDES stormwater permits; and
- All applicable additional Permit Registration Document information.

Typical BMPs included in in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials.

Industrial General Permit

The Industrial General Permit is a regulatory framework issued by SWRCB under the NPDES program. The Industrial General Permit applies to various types of industrial facilities in California identified within the SWRCB's *List of Potentially Regulated Standard Industrial Classification Codes*. These facilities include manufacturing plants, commercial printing, air courier services, refuse systems, and others, which have the potential to discharge stormwater runoff into water bodies. To comply with the Industrial General Permit, the operators of these regulated industrial facilities must implement a SWPPP that outlines measures and BMPs the operator of an industrial facility must implement to prevent stormwater pollution. Operators of facilities regulated by the Industrial General Permit are also required to conduct stormwater monitoring of pollutants including, but not limited to, sediment, metals, oils, and total suspended solids. In addition, the Industrial General Permit requires industrial discharge to comply with TMDL implementation requirements for impaired water bodies.

California Toxics Rule

In May 2000, the USEPA promulgated the California Toxics Rule, which established numeric water quality criteria for toxic pollutants for waters in California. The California Toxics Rule provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The California Toxics Rule is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the California Toxics Rule criteria do not apply directly to discharges of stormwater runoff, they are utilized as benchmarks for toxics in urban runoff and to evaluate the potential ecological impacts of stormwater runoff to receiving waters.

Antidegradation Policy

The State Antidegradation Policy (Resolution No. 68-16) was adopted by SWRCB in 1968 to protect surface water and groundwater from degradation. The Antidegradation Policy applies to the disposal of waste to high-quality surface water and groundwater. The Antidegradation Policy requires the water quality of these water bodies be maintained unless SWRCB finds the change will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses of the waters, and will not result in water quality less than that prescribed in policies regulating water quality. The Antidegradation Policy also requires the best practicable treatment or control of discharges to high-quality waters to assure pollution or nuisance will not occur and the highest possible water quality will be maintained.

c. Local Regulations

Water Quality Control Plan

The Central Coast RWQCB has adopted the *Water Quality Control Plan for the Central Coast Basin* (the Basin Plan), which delineates water resource area boundaries based on hydrological features. For the purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the surface waters and groundwater management zones described in the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives are established, and

programs that maintain or enhance water quality are implemented to ensure the protection of beneficial uses.

The Basin Plan also established implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs. These objectives must comply with the State antidegradation policy (SWRCB Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

Groundwater Sustainability Plan

SGMA requires that GSAs prepare Groundwater Sustainability Plans (GSPs) for high and medium priority basins. As discussed above, the Santa Maria River Valley Basin is a very low priority basin (DWR 2025). Because of this, and because the Basin is adjudicated as discussed previously, a groundwater sustainability plan has not been prepared for this basin.

Low Threat Discharge Permit

The Central Coast RWQCB has a general permit for discharges that pose a low threat to water quality (*Waste Discharge Requirements National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges with Limited Threat to Water Quality;* Order No. R3-2022-0035, NPDES No. CAG99304). The permit's provisions cover discharges that contain minimal amounts of pollutants and pose little or no threat to water quality and the environment, including discharges of highly treated groundwater generated during aquifer pumping tests, dual-phase extraction or other remedial pilot tests, excavation dewatering, and pumping to contain groundwater plumes.

Central Coast Regional Water Quality Control Board Post-Construction Stormwater Management Requirements

The Central Coast RWQCB adopted the *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (Resolution R3-2013-0032) in July 2013, which outlines runoff reduction and treatment requirements. Specifically, Resolution R3-2013-0032 outlines post-construction requirements for development projects in the Central Coast Region. The post-construction requirements mandate that development projects use Low Impact Development (LID) to detain, retain, and treat runoff. LID incorporates and conserves on-site natural features, together with constructed hydrologic controls to more closely mimic pre-development hydrology and watershed processes.

Santa Maria Municipal Code

The Santa Maria Municipal Code includes Chapter 8-12A Stormwater Runoff Pollution Prevention which regulates stormwater discharge throughout the city. These requirements include the control of the volume, rate, and potential pollutant load of water runoff from new development and redevelopment projects. Additionally, this section requires any person engaged in activities or operations, or owning facilities or property which will, or may, result in pollutants entering storm water, to implement BMPs to reduce the discharge of pollutants through operational activities such as use of chemicals, pressure washing, and car washing. Chapter 8-12A also includes requirements for construction activities to implement BMPs to reduce the release of pollutants and erosion during and immediately following construction activities. In addition to regulating stormwater discharge, Chapter 8-12A of the Santa Maria Municipal Code incorporates the Central Coast RWQBB *Post*

Construction Stormwater Requirements for Development Projects in the Central Coast Region (Resolution R3-2013-0032). Chapter 9-68 Flood Damage Prevention includes regulations to reduce flood losses associated with development in floodplains.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

The impact analysis is based on an assessment of baseline conditions compared to land use changes and development that would be facilitated by the 2045 General Plan Update. This analysis identifies potential impacts related to hydrology and water quality resulting from construction, operation, and maintenance activities of future development that could occur under the plan. Potential impacts to hydrology and water quality are evaluated based on the adherence to local, State, and federal standards and implementation of BMPs for control of surface runoff and reduction of pollutants in stormwater runoff.

Significance Thresholds

CEQA Guidelines Appendix G provides the following significance thresholds to determine if a project would have a potentially significant impact on hydrology and water quality. For the purposes of this EIR, implementation of the plan may have a significant adverse impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    i. Result in a substantial erosion or siltation on- or off-site;
    ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    iii. 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; or
    iv. impede or redirect flood flows;
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact HYD-1 DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE WOULD RESULT IN CONSTRUCTION AND OPERATIONAL ACTIVITIES WHICH MAY CONTRIBUTE TO SOIL EROSION AND DEGRADED WATER QUALITY. DEVELOPMENT FACILITATED BY THE PLAN WOULD BE REQUIRED TO ADHERE TO EXISTING NPDES PERMITS AND MUNICIPAL CODE REQUIREMENTS WHICH WOULD MINIMIZE THE POTENTIAL FOR DEVELOPMENT TO DEGRADE WATER QUALITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Future development facilitated by the 2045 General Plan Update would result in construction activities which may contribute to soil erosion and degraded water quality. Construction activities that would disturb one or more acres of land are subject to the NPDES Construction General Permit, which requires the development of a SWPPP developed by a certified Qualified SWPPP Developer. The SWPPP would include project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs include, but are not limited to, installation of silt fences, erosion control blankets, anti-tracking pads at site exits to prevent off-site transport of soil materials, and good-housekeeping BMPs to prevent leaks and spills. Additionally, all projects would be required to comply with the following policies included in the Safety and Public Facilities and Services Elements:

> **Policy S-3.2 Agricultural runoff reduction.** Work with the County of Santa Barbara to reduce off-site and urban flooding caused by agricultural runoff.
>
> **Policy S-3.3 Low impact design.** Require new development and redevelopment projects to incorporate low -impact design measures for stormwater management, such as bioswales, permeable pavement, and onsite detention ponds.
>
> **Policy S-3.4 Stormwater drainage system.** Maintain and upgrade the City's stormwater drainage system to increase the system's capacity and reduce flooding.
>
> **Policy PFS-3.1 Conveyance of surface drainage**. Convey surface drainage safely through the use of retardation basins, storm drains, recharge basins, and other infrastructure.

These policies would regulate surface drainage on individual project sites and reduce runoff during construction of future development. Additionally, future development would be subject to the Santa Maria Municipal Code Chapter 8-12A which further regulates stormwater discharge. Compliance with these regulations and policies would minimize potential impacts to water quality during construction. Therefore, this impact would be less than significant.

Operation

Operation of future development facilitated by the plan would be required to comply with the provisions of California's Phase II MS4 Permit (for residential and commercial projects) and the Industrial General Permit (for industrial projects). Compliance with these permits would ensure that the amount of polluted stormwater runoff released from development facilitated by the plan would be minimized. This would reduce water quality impacts associated with future development.

As discussed in the Regulatory Setting section above, Chapter 8-12A of the Santa Maria Municipal Code requires the control of the volume, rate, and potential pollutant load of water runoff from new development and redevelopment projects. Additionally, this section requires any person engaged in activities or operations, or owning facilities or property which will, or may, result in pollutants entering storm water, to implement BMPs to reduce the discharge of pollutants through operational activities such as use of chemicals, pressure washing, and car washing. Implementation of these required BMPs would reduce the operational impact of development on surface or groundwater quality. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 2:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HYD-2 DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE WOULD INCREASE THE AMOUNT OF IMPERVIOUS SURFACE AREA AND INCREASE GROUNDWATER DEMAND IN SANTA MARIA. COMPLIANCE WITH THE CENTRAL COAST RWQCB, MUNICIPAL CODE, AND 2045 GENERAL PLAN UPDATE POLICIES WOULD ENSURE THE PROPOSED PLAN WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the plan would incrementally increase the amount of impervious surface area overlying the Santa Maria River Valley Basin within Santa Maria which could reduce the potential for groundwater recharge from surface water infiltration. As discussed in Impact HYD-1, compliance with the City's Municipal Code, as well as the Central Coast RWQCB post-construction requirements for stormwater management would reduce polluted stormwater runoff for new development and redevelopment projects within Santa Maria. The reduction of stormwater runoff can be achieved by increasing on site filtration through bio retention areas would also reduce the amount of impervious surface on the project site and therefore preserve groundwater recharge on site through pervious surfaces.

Development facilitated by the plan would be required to comply with proposed general plan policy S-3.3, listed above under Impact HYD-1, which would require low impact design, including permeable pavement, to be incorporated into new development. This would also further reduce the amount of impervious surface on site thereby preserving groundwater recharge through pervious surfaces.

Furthermore, as discussed in the setting section above, the Santa Maria River Valley Basin is adjudicated. This means that the Santa Maria Valley Management Area has water rights to a set amount of groundwater from the Basin. Development facilitated by the plan would not utilize water that exceeds this allocation and therefore would not substantially decrease groundwater supplies. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 3:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in a substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) 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; or iv) impede or redirect flood flows.

Impact HYD-3 DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE WOULD POTENTIALLY ALTER THE EXISTING DRAINAGE PATTERN ON INDIVIDUAL PROJECT SITES THROUGHOUT THE CITY. DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE WOULD BE REQUIRED TO ADHERE TO EXISTING NPDES PERMIT AND MUNICIPAL CODE REQUIREMENTS WHICH WOULD ENSURE DEVELOPMENT WOULD NOT SUBSTANTIALLY ALTER EXISTING DRAINAGE PATTERNS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction facilitated by the plan would alter the existing drainage patterns of individual project sites which has the potential to cause erosion and flooding, exceed stormwater drainage capacity, provide additional sources of polluted runoff, or alter flood flows. As described in Impact HYD-1, projects subject to the NPDES Construction General Permit would be required to prepare a SWPPP which includes project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater.

There are small areas within Santa Maria that would be rezoned under the plan that are within a flood zone, as shown in Figure 4.5-1. Section 9-68.104 of the Santa Maria Municipal Code includes methods of reducing flood losses including the protection of land uses vulnerable to floods from flood damage during construction, controlling the alteration of natural floodplains, and controlling filling, dredging, and other development activities which could increase flood damage. Compliance with these regulations in addition to the existing stormwater runoff regulations described in HYD-1 would reduce the risk of construction activities significantly impeding or redirecting flood flows. Overall, impacts would be less than significant.

Operation

Runoff during operation of development facilitated by the plan would be regulated under the Phase II MS4 Permit and the Industrial General Permit. Projects that create or replace greater than or equal to 2,500 square feet of impervious surface must implement post-construction BMPs and submit a Stormwater Control Plan listing applicable BMPs to the City for review and approval. Pursuant to the Santa Maria Municipal Code, post construction requirements for all non-industrial projects must comply with the RWQCB Central Coast Region Resolution No. R3-2013-0032. Industrial projects must comply with the Industrial General Permit. Compliance with existing regulations would ensure development facilitated by the plan would not substantially alter the existing drainage pattern of a site or area such that substantial erosion or siltation on- or off-site, exceedance of the capacity of existing or planned stormwater drainage systems, or provision of additional sources of polluted runoff would occur.

As discussed above, there are small areas within Santa Maria that would be rezoned under the proposed project that are within a flood zone, as shown in Figure 4.5-1. Future subdivision projects facilitated by the plan would be required to adhere to Section 11-5.07 of the Santa Maria Municipal Code which requires proper drainage of the site including the development of drainage easements for flood control channels, conduits, or laterals inside or abutting the subdivision. Compliance with these regulations in addition to the existing stormwater runoff regulations described in Impact HYD-1 would reduce the risk of construction activities significantly impeding or redirecting flood flows. Overall, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Threshold 4:	In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Impact HYD-4 DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE MAY OCCUR IN FLOOD HAZARD AREAS. COMPLIANCE WITH APPLICABLE MUNICIPAL CODE REQUIREMENTS AND PROPOSED SAFETY ELEMENT POLICIES WOULD ENSURE DEVELOPMENT WITHIN AREAS SUBJECT TO INUNDATION WOULD BE SITED, DESIGNED, AND CONSTRUCTED AS TO NOT EXACERBATE RISKS FROM RELEASE OF POLLUTANTS FROM INUNDATION. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Santa Maria is approximately 11.4 miles east of the Pacific Ocean. According to the California Department of Conservation, no part of the city is within a tsunami hazard zone (DOC 2025). The city is approximately three miles from Gudalupe Lake. Due to the distance and intervening topography, the city is not at risk of being inundated due to a seiche. Additionally, the city is not within the dam inundation area for Lopez Reservoir or Twitchell Reservoir (California Division of Safety of Dams [DSOD] 2025). As shown in Figure 4.5-1 portions of Santa Maria are within a 100-year or 500-year floodplain. Future development facilitated by the plan in a flood hazard zone would not risk pollutant release due to inundation since the city is not within a dam inundation hazard area. The California Building Code provides guidelines for development within flood hazard areas, including requirements that new development be elevated above the base flood elevations. Section 9-68.104 of the Santa Maria Municipal Code includes methods of reducing flood losses including the protection of land uses vulnerable to floods from flood damage during construction, controlling the alteration of natural floodplains, and controlling filling, dredging, and other development activities which could increase flood damage.

In addition to existing Municipal Code requirements, future development would be required to be consistent with the following proposed general plan policies included in the Safety Element

Policy S-3.1 Santa Maria River Levee development buffer. Require new development and sites undergoing redevelopment to provide a non-development buffer of 60 feet, measured from the toe of the Santa Maria River Levee, to provide access to the Santa Maria River levee for maintenance and repairs.

Policy S-3.5 NFIP participation. Continue to participate in the National Flood Insurance Program.

Policy S-3.6 Dam and levee inundation safety. Coordinate with the Santa Barbara County Flood Control District (SBCFCD) and other local and state agencies as required to remain current with dam and levee safety protocols.

Compliance with these policies would reduce flood damage to future development within the floodplain. With adherence to the Santa Maria Municipal Code requirements and General Plan Safety Element policies discussed above, development facilitated by the plan would not risk the release of pollutants due to inundation. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Significance After Mitigation

Less Than Significant without Mitigation

Threshold 5:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-5 THERE IS NO SUSTAINABLE GROUNDWATER MANAGEMENT PLANS FOR THE SANTA MARIA VALLEY GROUNDWATER BASIN; HOWEVER, DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN UPDATE WOULD BE SUBJECT TO THE BASIN PLAN. FUTURE DEVELOPMENT FACILITATED BY THE PLAN WOULD NOT CONFLICT WITH THE BASIN PLAN AS IT WOULD BE REQUIRED TO ADHERE TO FEDERAL, STATE, AND LOCAL REGULATIONS TO MINIMIZE WATER QUALITY IMPACTS IN COMPLIANCE WITH THE BASIN PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The California Department of Water Resources has designated the Santa Maria River Valley Groundwater Basin as a very low priority basin (DWR 2025). As such there is no sustainable groundwater management plan prepared for this basin. Therefore, the plan would not conflict with a sustainable groundwater management plan.

Santa Maria is in the jurisdiction of the RWQCB Central Coast Region. The RWQCB Central Coast Region's Basin Plan functions as the master water quality control planning document for the region. The Basin Plan includes implementation programs to achieve water quality objectives (RWQCB 2019). As a result, construction of future development facilitated by the plan would be required to implement State and local regulatory requirements, including the provisions of the Construction General Permit, and the Santa Maria Municipal Code. Operations of future development facilitated by the plan would comply with the MS4 Permit, the Industrial General Permit, and the Santa Maria Municipal Code requirements for post-construction stormwater control. These regulatory requirements support the goal of the Basin Plan to minimize adverse impacts to water quality. Therefore, the plan would not conflict with or obstruct the implementation of a water quality control plan. This impact would be less than significant.

Mitigation Measures

No mitigation measures are required because this impact would be less than significant.

Significance After Mitigation

Less Than Significant without Mitigation

4.5.4 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065[a][3]). Regional cumulative impacts consider the City-wide impacts together with similar impacts of reasonably anticipated regional projects/programs. The general approach to cumulative impact analysis used in this EIR, as well as the determination of the cumulative impact analysis area, is discussed in Section 3, *Environmental Setting,* Subsection 3.3, *Cumulative Development*.

By its nature, a general plan considers cumulative impacts insofar as it considers cumulative development that could occur within the City Limits and annexation areas. The analysis in this section examines impacts of the plan on hydrology and water quality throughout the Santa Maria Watershed and the Santa Maria River Valley Groundwater Basin. Cumulative development would gradually increase development and population growth and would therefore increase the potential for impacts to hydrology and water quality, including increased stormwater runoff, erosion, pollutant discharge to waterbodies, increased risk of release of pollutants from inundation, increased demand for groundwater supplies, and decreased groundwater infiltration capacity. Impacts to hydrology and water quality that may be additive in nature, and thus cumulative. Potential cumulative impacts include violation of water quality standards, interference with groundwater recharge, increased erosion, increased non-point source pollution, and increased runoff. Cumulative development would increase erosion and sedimentation resulting from grading and construction, as well as changes in drainage patterns which could degrade surface and ground water quality. In addition, new development would increase the generation of urban pollutants that may adversely affect water quality in the long term.

All new development in the City and annexation areas would be required to comply with applicable water quality regulations. Compliance with these existing requirements would require implementation of BMPs to reduce impacts associated with stormwater and pollutant discharge during construction and operation of projects and reduce adverse changes to hydrology water quality. Therefore, cumulative impacts related to water quality and drainage patterns would be less than significant.

New development throughout the cumulative impact area would increase impervious surfaces and reduce groundwater recharge, but compliance with applicable policies related to impervious surfaces, such as the Central Coast RWQCB post-construction requirements for stormwater management, would reduce the amount of impervious surfaces and preserve groundwater recharge. Therefore, cumulative impacts related to groundwater recharge would be less than significant.

Cumulative development overlying the Santa Maria River Valley Basin would increase the amount of impervious surfaces and could combine with the effects of the development within Santa Maria to potentially reduce groundwater recharge to the basin. However, cumulative development relying on groundwater as a source of water supply would not combine with increased development within Santa Maria to decrease available water supplies in the Santa Maria River Valley Basin because the groundwater basin is adjudicated and the City has a set allotment of groundwater supplies. As a result, cumulative development could not legally utilize excess groundwater beyond the adjudicated allotment, and potential cumulative impacts to groundwater recharge and storage would be less than significant.

Compliance with applicable laws and regulations, such as the California Building Code and Section 9-68.104 of the Santa Maria Municipal Code would regulate development in flood prone areas and minimize the potential for release of pollutants from inundation. Therefore, cumulative impacts related to risk of release of pollutants would be less than significant.

The Santa Maria River Valley Groundwater Basin does not have a sustainable groundwater management plan. However, cumulative development would be subject to compliance with the Water Quality Control Plan for the Central Coast Basin. Cumulative development would be required to comply with the MS4 Permit, the Industrial General Permit, and the Santa Maria Municipal Code. These regulatory requirements support the goal of the Basin Plan to minimize adverse impacts to water quality. Therefore, cumulative impacts would be less than significant with compliance with these regulations.

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