SECTION 4.0

# 4.8 HYDROLOGY AND WATER QUALITY

# 4.8 HYDROLOGY AND WATER QUALITY

This Draft Environmental Impact Report (Draft EIR) analysis section considers the potential for the North Canyon Ranch residential project and the Required Island Annexations to result in hydrology and water quality impacts and identifies opportunities to avoid, reduce, or otherwise mitigate potential significant impacts where warranted.

This analysis consists of a description of the existing conditions at the proposed project site and surrounding area, a summary of the regulatory framework that guides the decision-making process, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and residual impacts (i.e., level of significance after mitigation). The significance of project impacts has been determined in accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, and additional regulatory agency requirements, where they apply. Sources used in the analysis are cited herein where relevant to the analysis; a comprehensive list of references is provided in Section 7.0, Organizations and Persons Consulted and References, of this EIR.

The analysis of the North Canyon Ranch component is based on the North Canyon Ranch Preliminary Drainage Report by Tetra Tech[1] and additional information from available publications and data from various regional and local sources. The TGA report includes calculations of the water runoff from within the proposed project site and describes proposed designs to meet flood control and water quality standards. Project-related reports and materials to support this analysis are provided in **Appendix G, Hydrology and Water Quality**.

## 4.8.1 Existing Conditions

The environmental setting and regulatory setting, below, establish existing conditions relevant to the project. The analysis of project impacts is based upon these baseline conditions.

## Environmental Setting

### *North Canyon Ranch*

The proposed project site is located in the northwest portion of the City of Simi Valley's Sphere of Influence, adjacent to the City boundary. The overall project site consists of approximately 160 acres and is bounded by the Simi Valley Town Center to the south, the Big Sky Ranch residential development to the east, and primarily undeveloped lands to the north and west. Some adjacent lands and portions of the project site have been previously used for livestock grazing. The proposed development plan's limits of disturbance would cover approximately 77.5 acres of the site, primarily in the southern portions, leaving the remainder of the site (roughly 82.5 acres) in its existing condition. Currently, the site is an undeveloped mountain/hillside area that generally slopes from north to south. The site is primarily drained by three watershed sub-drains that are separated by ridgelines generally aligned north to south within the subject property. The western sub-drain extends upslope to the west and north of the site onto adjacent property. The central and eastern sub-drains also extend off-site to the north onto adjacent undeveloped property, but to a lesser extent than the western sub-drain.

Although the subject property is currently undeveloped, under existing conditions the southern portion of the site has been previously altered somewhat in connection with development of the adjacent Simi Town Center Mall by placement of fill soil and construction of two temporary detention ponds located along the southern site boundary. Currently, a series of ditches, swales, and pipes help to convey stormwater flows

[1] Tetra Tech, North Canyon Ranch TTM5658 Preliminary Drainage Report, June 2023. Note: Mapping has been updated since the report and is included as Figure 4.8-2, Site Drainage Plan, in this EIR Section.

from undisturbed northern portions of the watershed to the two existing temporary detention ponds in the southern portion of the site.[2] The two temporary detention ponds currently intercept and capture stormwater flows from the site's watershed sub-basins. The western pond collects runoff from the western sub-drain, while the eastern pond collects runoff from the central and eastern sub-drains.

Stormwater flowing into these ponds is detained and peak discharges are attenuated. Currently, the western pond has a 36-inch RCP outlet pipe set at an invert elevation of 957 ft, while the eastern pond has a 48-inch RCP outlet pipe set at an invert elevation of 965 ft. These existing storm drain lines were designed to intercept and convey 100-year outflows from the existing basins. The pipes convey pond discharge outflows to the south through the Simi Valley Town Center Mall site.

Although natural drainages and ravines exist on the site, there are no perennial streams within the subject property. The northern portion of the site is primarily in its natural condition relative to drainage and hydrology, while man-made ditches and erosional features located in the southern portion of the site currently convey runoff around or across the previously filled-in areas to the two detention basins that have been constructed along the southern site boundary in connection with the existing development to the south. Existing drainage features of the site are shown on **Figure 4.8-1, Existing Hydrology**.

### *Required Island Annexations*

The project would include the annexation of nine Island Annexation areas from the County of Ventura to the City. The annexation areas are surrounded on at least three sides by City jurisdiction and consist of parcels that are mostly developed for residential use (i.e., single-family homes and several duplexes). A total of five undeveloped lots within these unincorporated areas, which are located adjacent to existing development, could potentially be developed with five dwelling units. These lots are dispersed within the islands, and no specific development projects are known at this time. For the purposes of CEQA, the only action for this part of the project is for the Ventura County Local Agency Formation Commission (LAFCo) to approve annexation of the Island properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project. As such, no changes in hydrology or water quality conditions would result as a part of the proposed project.

## Regulatory Setting

### *Federal*

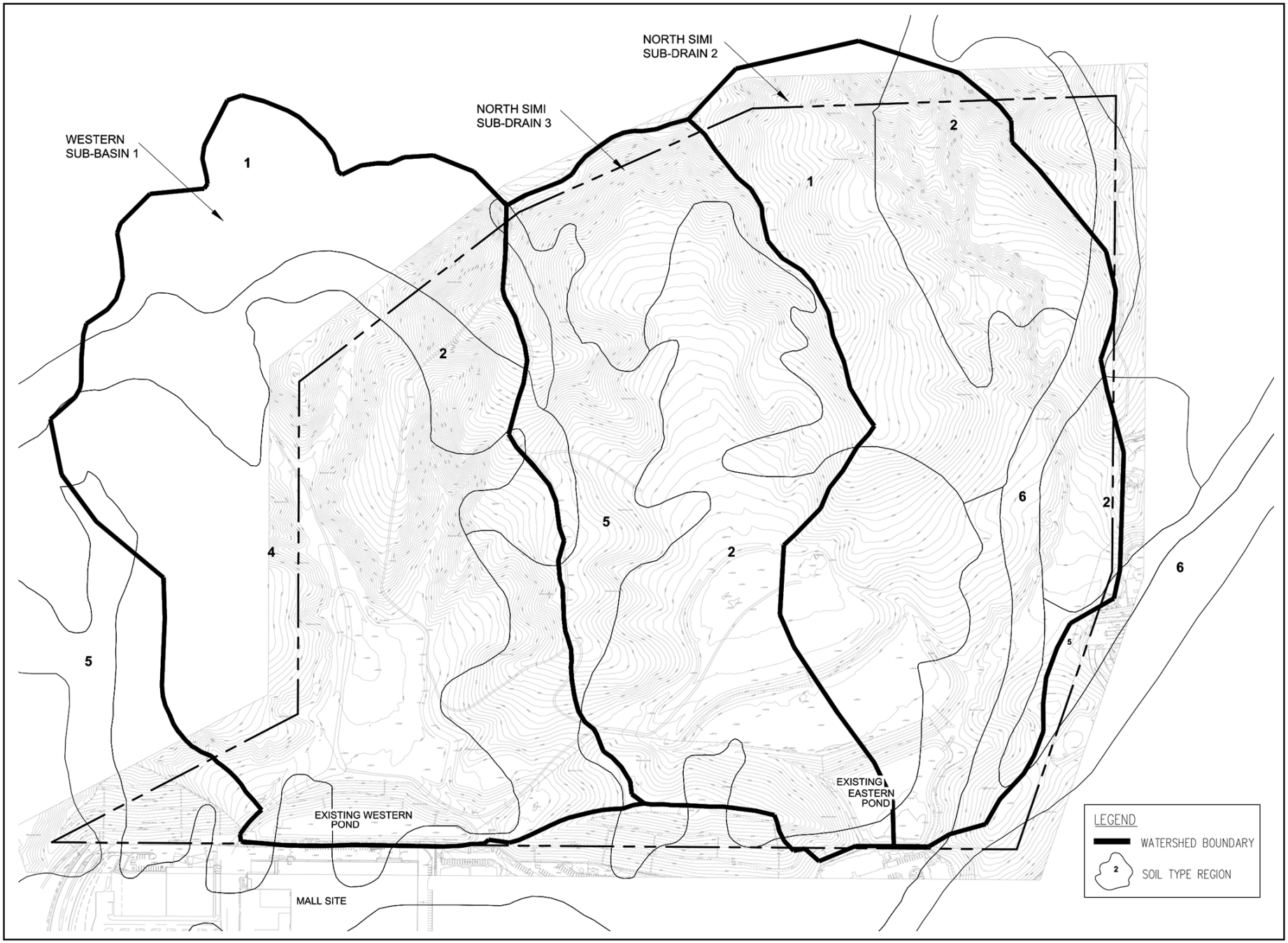
#### Clean Water Act

The Clean Water Act (CWA)[3] requires National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to waters of the United States from any point source. The CWA further requires the United States Environmental Protection Agency (US EPA) to establish regulations for permitting of municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) permit program. Final regulations for stormwater discharges include regulation of municipal separate storm sewer system (MS4) discharges to surface waters through the NPDES permitting process.

In addition to regulating discharges, the Clean Water Act provides water quality standards and criteria based on a water body's designated beneficial uses. Water quality standards indicate the goals for a water body

[2] TGA Engineering, Inc., North Canyon Ranch Storm Drainage Report Prepared for the City of Simi Valley Department of Public Works and Ventura County, Updated June 2023, p. 8.

[3] 33 U.S.C. section 1251, et seq.




Source: TGA Engineering, Inc., May 2016.



# Existing Hydrology

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FIGURE 4.8-1

by designating its uses, setting criteria to protect those uses, and establishing provisions to protect water bodies from pollutants. Water quality criteria are adopted to protect those designated uses.

When beneficial uses of a particular receiving water body are compromised by water quality issues, Section 303(d) of the CWA requires identification and listing of that water body as impaired. Once a water body has been listed, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). The TMDL allocates the loads among current and future pollutant sources to the water body. In addition to trash and debris, common pollutants of concern having the potential to affect water quality generally fall into one of the following seven categories: sediments, nutrients, bacteria/viruses, oil/grease, metals, organic compounds, and pesticides.

## *State*

### California Porter-Cologne Water Quality Control Act

California's primary statute governing water quality and water pollution for both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act), codified in Water Code Sections 13000-14958. The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and one of the nine Regional Water Quality Control Boards (RWQCBs) power to protect water quality through the adoption of appropriate plans and policies, the regulation of discharges of waste to surface and groundwater, regulation of waste disposal sites, and to the right to issue orders for the 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, or oil or petroleum product.

Each RWQCB must develop and adopt a Water Quality Control Plan ("Basin Plan") for its region. The Basin Plan must conform to the policies of the Porter-Cologne Act and those established by the SWRCB. To implement state and federal law, the Basin Plan lists beneficial uses for surface water and groundwater in the region and provides narrative and numeric water quality standards to protect those beneficial uses. The Porter-Cologne Act also allows a RWQCB to include water discharge prohibitions applicable to specific conditions, areas, or types of waste within its regional plan.

### Construction General Permit

The SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites (Water Quality Order 2009-0009-DWQ, originally adopted by the SWRCB in 2009 and modified by 2010-0014-DWQ [NPDES No. CAS000002]).[4] Construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit (CGP). Coverage under the CGP is accomplished by preparing a Stormwater Pollution Prevention Plan (SWPPP), a Construction Site Monitoring Program, and sediment basin design calculations. The primary objective of the SWPPP is to identify proper best management practices (BMPs) for construction sites to reduce or eliminate pollutants in stormwater discharges as well as authorized non-stormwater discharges from the site during construction. The SWPPP also outlines the monitoring and sampling program required for a construction site.

### California Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) creates a framework for sustainable, local groundwater management in California. SGMA directed the California Department of Water Resources (DWR) to identify priority groundwater basins for the purpose of implementing SGMA. SGMA requirements to create sustainable groundwater management agencies and sustainable groundwater

[4] State Water Resources Control Board, NPDES Order No. 2010-0014-DWQ, General Permit No. CAS000002, Accessed January 12, 2024 at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2010/wqo2010_0014dwq.pdf

management plans no later than 2022 applies only to high and medium priority basins. Local groundwater basins include the Simi Valley Groundwater Basin and Gillibrand subbasin. SGMA does not require a Sustainable Groundwater Management Plan for either the Simi Valley Basin or the Gillibrand subbasin, as they were not rated as inadequate or high or medium priority basins.[5]

## *Regional and Local*

### Ventura County Municipal Separate Storm Sewer Systems Permit

The Los Angeles Regional Water Quality Control Board (LARWQCB) issued a NPDES Permit and Waste Discharge Requirements (Order No. R4-2021-0105, NPDES Permit No. CAS004004)[6] under the CWA and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Ventura County. The Permittees are the Los Angeles County Flood Control District, County of Los Angeles, 85 incorporated cities within the coastal watersheds of Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and 10 incorporated cities within Ventura County (collectively "the Co-Permittees"). This permit regulates stormwater discharges from MS4s in the area of the project site. The NPDES permit provides requirements for new development and significant redevelopment, including implementation of treatment BMPs and flow control requirements. To implement the requirements of the NPDES permit, the County established development planning guidance and control measures that control and mitigate stormwater quality and quantity impacts to receiving waters as a result of new development and redevelopment. The County also implements other source detection and elimination programs (i.e., hydromodification controls) as well as maintenance measures.

### Ventura County Storm Water Quality Urban Impact Mitigation Plan

The Ventura County Stormwater Quality Urban Impact Mitigation Plan (SQUIMP)[7] was developed as part of the municipal storm water program to address storm water pollution from new development and redevelopment by the private sector. The Ventura Countywide Stormwater Quality Management Program (Ventura Program) was established pursuant to Section 402(p) of the Federal Clean Water Act, which requires that all point source discharges of pollutants into waters of the United States, including discharges from municipal storm drain systems, be regulated by an NPDES permit.

The County SQUIMP was developed as part of the municipal storm water program to address storm water pollution from new development and redevelopment by the private sector. The SQUIMP contains a list of the minimum required BMPs) to be implemented by projects listed as subject to SQUIMP requirements, which includes home subdivisions of 10 or more units.

### 2020 Urban Water Management Plan for Waterworks District No. 8

The 2020 Urban Water Management Plan (UWMP) is developed by Waterworks District No. 8 and the City of Simi Valley.[8] The UWMP evaluates water supply over 25-year period in five-year increments, identifies and quantifies adequate water supplies, and implements conservation and efficient use of urban water supplies. The fundamental finding of the UWMP, based on conservative water supply and demand

[5] California Water Resources Control Board, GIS Portal, Sustainable Groundwater Management Act Status Map, Accessed February 13, 20224 at: https://gispublic.waterboards.ca.gov/portal/apps/storymaps/stories/35d50036fbfe44e5ac3b1a6e8c1e8d21

[6] California Regional Water Quality Control Board, Los Angeles Region, Regional Phase I MS4 NPDES Order Permit, Order No. R4-2021-0105, NPDES Permit No. CAS004004, Accessed February 13, 2024 at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/public_docs/2022/1_Order(ACC-RPSignature).pdf

[7] Ventura County for the Ventura County Flood Control District, the County of Ventura, and the Cities of Ventura County, Ventura Countywide Stormwater Quality Urban Impact Mitigation Plan, July 27, 2000.

[8] Kennedy Jenks for Waterworks District No. 8 and City of Simi Valley, 2020 Urban Water Management Plan, June 1, 2021.

assumptions, it that the Waterworks District 8 anticipates adequate supplies in wet and dry years to meet customer demands.

### Groundwater Management Plan Gillibrand Groundwater Basin

The Groundwater Management Plan (GWMP) is a monitoring and management plan for the Gillibrand Groundwater Basin, which is located in Tapo Canyon north of the City of Simi Valley and is one of the two main groundwater basins underlying the City. The City of Simi Valley is a primary pumper within the Gillibrand Groundwater Basin for irrigation and municipal supplies. The GWMP provides two goals: to provide a standard methodology for the collection of geohydrologic data within the basin and to provide a standard methodology for the regular analysis and reporting of geohydrologic data to enable informed management decisions for the basin.[9]

## 4.8.2 Thresholds of Significance

The potential for the proposed project to result in impacts related to hydrology and water quality has been analyzed in relation to the thresholds below, in which are based upon the CEQA Guidelines Appendix G Checklist. The proposed project would be considered to have a significant impact when the proposed project has potential to (shorthand title in parentheses:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? ***(Water Quality Standards, Discharge Requirements, and Surface or Ground Water Quality)***
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin**.** ***(Groundwater Supplies)***
- 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: ***(Alteration of Existing Drainage Pattern)***
    - Result in a substantial erosion or siltation on- or off-site.
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    - 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
    - Impede or redirect flood flows?
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. ***(Inundation Impacts - Not Applicable)***
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. ***(Conflict with a Water Quality Control or Sustainable Groundwater Plan)***

The project site is not located in a flood hazard, tsunami, or seiche zones, as discussed in the project's Notice of Preparation. There are no special flood hazard areas mapped within the project site based on a review of the Federal Emergency Management Agency's Flood Insurance Rate Map, Panel Number 06111C0842E (January 20, 2010). Additionally, according to the City's General Plan, the project site is not located in an area subject to potential inundation in the event of a dam failure. As such, there would be no impact regarding placement of housing or structures within a 100-year flood hazard area or exposure of people or structures to significant risk of loss, injury, or death involving flooding including flooding as a result of the failure of a levee or dam. Also, the project site is not located within a tsunami hazard area and

[9] Geoscience, Groundwater Management Plan Gillibrand Groundwater Basin, May 21, 2007.

is not located near a substantial body of water subject to potentially damaging oscillations (sloshing) called seiches. According to the City's General Plan EIR, there is no history of substantial seiche in the City during earthquakes. As such, potential for inundation impacts due to these occurrences will not be evaluated further.

## 4.8.3 Project Impacts and Mitigation Measures

### North Canyon Ranch

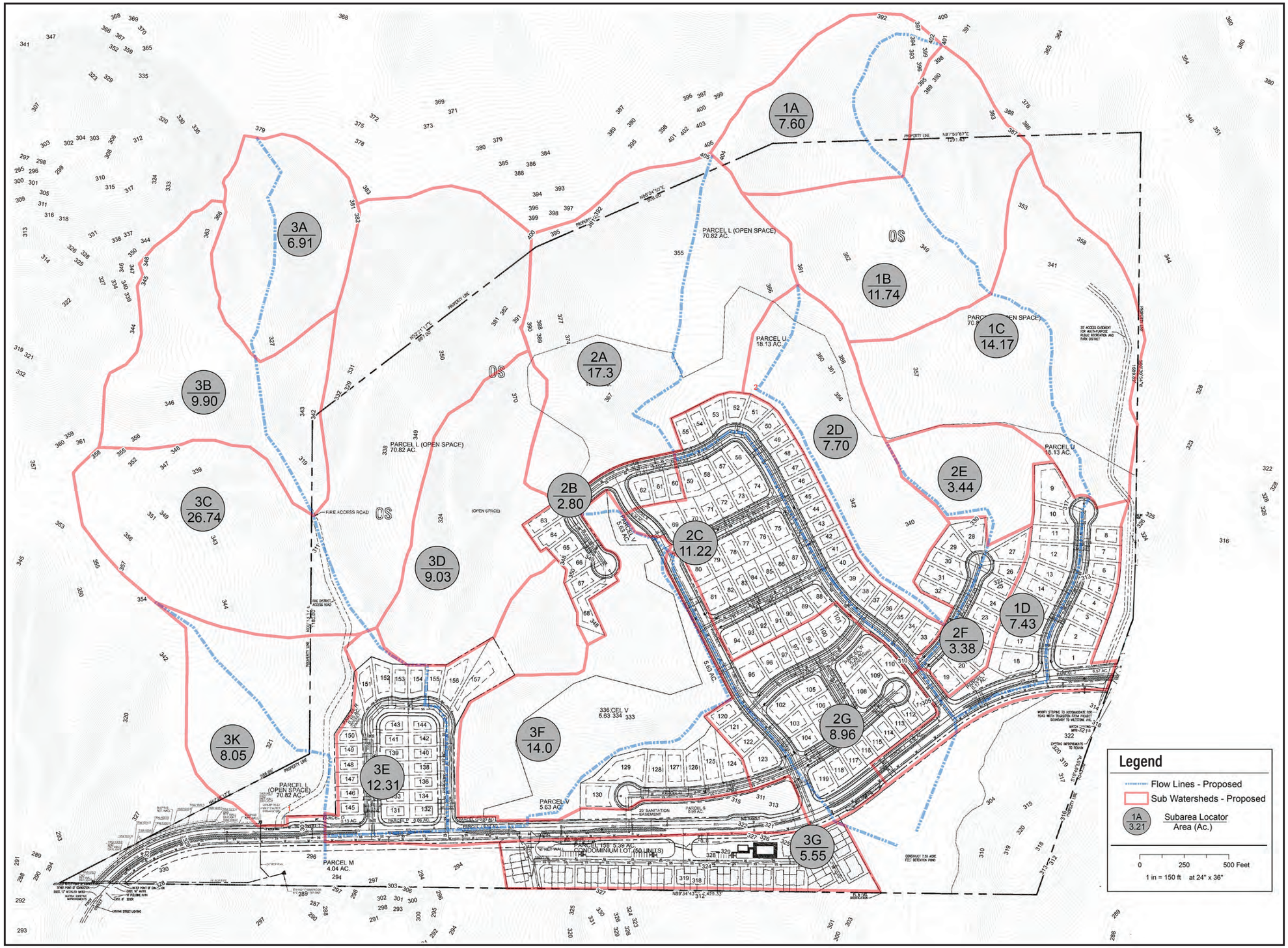
The proposed project would develop a residential community with single-family and multi-family units on approximately 75.5 acres of an approximately 160-acre site that is currently undeveloped. The project would include construction of streets for access and circulation within the site, a surface parking lot to serve the multi-family residential structures, installation of utilities and drainage structures, as well as landscaping. More detailed discussion of these and other project elements are discussed in Section 2.0 Project Description. **Figure 4.8-2, Site Drainage Plan**, shows the proposed drainage facilities including debris basins, surface and subsurface drainage conveyance infrastructure, and improvements to the existing temporary detention basins within the project site.

The project site is subject to requirements of the Simi Valley Hillside Ordinance that would reduce erosion and sedimentation impacts, including stabilization of slopes by creating steps on large cut or fill areas. All disturbed slopes will be stabilized by contour grading, and cut slopes will be further stabilized using "J" drains where applicable according to the City's hillside ordinance. All disturbed slopes will be vegetated following grading with native or drought tolerant plants to further reduce erosion.

As shown in Figure 4.8-2, the project would construct several debris basins at various points along the perimeter of the proposed development area to capture sediment and debris from the upslope portions of the site that would remain undeveloped. The design and capacity of the proposed debris basins would be based on the current Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. The proposed site drainage plan would include inlets and conveyance infrastructure to collect stormwater runoff from the developed portions of the site, including hardscape areas and streets. The proposed site drainage plan would also connect with the constructed upslope debris basins to convey flows from undeveloped portions of the site that are not infiltrated within the debris basins.

The proposed storm drain system would convey flows to the south to discharge into the improved detention basins along the southern boundary of the site. As under current conditions, flows would leave the two detention basins via existing storm drain inlets that would be either protected in place or connected to the improved detention basin. The project would be subject to the LARWQCB MS4 Permit for Ventura County. As such, this project is required to capture, treat, retain and infiltrate runoff from storm events in which stormwater runoff will be limited to five percent of the site's effective impervious area. The western detention pond improvements would include placement of gravel and sand under 14,300 square feet of the basin bottom to allow for bio-infiltration of runoff, which would exceed the calculated infiltration area necessary to ensure compliance with the MS4 Permit conditions.

The project would be required to submit a SWPPP for approval by the City and the LARWQCB that will describe BMPs to be implemented during construction activities. BMPs would be designed to minimize sediment or other construction-related pollutants from being carried off-site by stormwater runoff. The SWPPP would indicate the general locations to employ BMPs during construction.




Source: Tetra Tech.

## *Required Island Annexations*

No changes in hydrology or water quality conditions would result as a part of the proposed project. The LAFCo approval of annexation is the only action proposed.

### *4.8.3.1 Water Quality Standards, Discharge Requirements, and Surface or Ground Water Quality*

A significant impact could occur if the project would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. To address potential water quality impacts during construction and operations, the project developer must prepare a project-level SQUIMP in accordance with section 402(p) of the Federal Clean Water Act.

## *North Canyon Ranch*

### Construction

Potential water quality impacts of development projects during construction typically are related to pollutants being carried offsite by stormwater runoff. The project's construction activities could generate pollutants that may include, but not be limited to, sediment from graded areas, petroleum product spills or leaks associated with construction equipment operation or maintenance, and concrete washout residue.

Construction activities during grading, including cut and fill activities, soil compaction and transport, excavation, and trenching, would result in disturbed soils that are susceptible to erosion from wind and rain. Erosion of disturbed soils could result in sediment transport via stormwater runoff from the project area. As stated in the City's General Plan EIR, erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Runoff from construction sites may include sediments and pollutants such as oils, fuels, paints, and solvents, which could contribute to a degradation of water quality.

The project's grading would disturb approximately 75.5 acres of the project site, avoiding disturbance of over half of the 160-acre subject property that would be left in its existing condition. Under existing conditions, all runoff from the site is captured in two temporary detention ponds at the southern portion of the site. These detention ponds would be retained and improved as part of the project, and would remain in place and operable throughout construction, retaining runoff within the site, which would trap sediment and potentially other pollutants before being released offsite to the existing storm drain system.

The project permittee must submit a SWPPP for approval by the City and the LARWQCB. The SWPPP shall reference BMPs to be implemented during the construction process to minimize erosion and sedimentation, as well as impacts of other construction-related pollutants. The submittal of the SWPPP to the LARWQCB shall be memorialized by a Notice of Intent (NOI), to be included in the SWPPP, and the issuance of a Waste Discharge Identification Number from the state. The SWPPP shall be accompanied by an Erosion and Sediment Control Plan that will indicate the general locations where the required BMP's will be employed, as well as staging areas where materials with the potential to pollute stormwater would be stored and provided secondary containment such as a berm. Throughout construction, the developer would be required to have the site inspected to insure that BMPs are adequate and maintained in compliance with SWPPP conditions.

Typical BMPs appropriate for construction activities address four major categories:

1. Erosion Control: Measures to prevent erosion and thus reduce sediment loads in stormwater.
2. Sediment Control: Measures to trap eroded sediments to prevent increasing sediment loads in the storm drain system or waterways.

3. Site Management: Measures to properly locate and maintain staging areas so that pollutants that may be spilled or leaked may be captured onsite and cleaned up without entering the storm drain system or waterways.
4. Materials and Waste Management: Measures to ensure waste materials and trash are properly enclosed and stored while awaiting removal from the site.

Because the CGP is a NPDES permit for construction activities, implementation of BMPs identified by the project's SWPPP required for project coverage under the CGP would comply with NPDES requirements and therefore would not violate applicable waste discharge requirements.

Although a SWPPP for the project construction has not been prepared or approved at this time, an approved SWPPP that enumerates specific BMPs to be implemented during construction to manage potential pollutants will be required for project approval.

With implementation of BMPs pursuant to an approved SWPPP, no substantial addition of pollutants would occur, and no violation of waste discharge requirements would occur. Compliance with regulations discussed above would reduce the risk of water degradation due to construction activities. Since violations of water quality standards would be minimized or eliminated by regulatory compliance, impacts to water quality from construction activities would be considered less than significant.

## Operations

Development of the proposed project would create impervious surfaces on the currently undeveloped site, which could increase runoff from the site during operations. Runoff from urban development typically contains contaminants such as oil, grease, metals, and landscaping chemicals (pesticides, herbicides, fertilizers, etc.), which may be conveyed from the proposed streets and hardscape areas to the storm drain system and ultimately degrade water quality.

The project design incorporates features to conform with the City's Hillside Ordinance, which would reduce erosion on graded slopes during operations by use of contour grading for disturbed slopes, provision of "J" drains, and establishment of vegetation on disturbed areas. The project would retain and improve two stormwater detention basins that currently exist in the southern portion of the project site, where existing inlets allow flows to enter the City's storm drain system. During operations, all runoff from the project's drainage system would be discharged to either of these improved detention basins to attenuate flow volumes prior to leaving the site. The project would construct a series of debris basins at the upslope perimeter of the proposed development area, to capture and trap sediment and debris from undeveloped portions of the project site and associated sub-drain watersheds. The debris basins would be designed with capacities based on the current Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. From the detention basins, stormwater would enter the proposed storm drain system that would convey flows to the south to discharge into the improved detention basins along the southern boundary of the site.

The project permittee would be required to comply with the MS4 Permit for Ventura County, which requires the project to capture, treat, retain and infiltrate runoff from storm events in which stormwater runoff will be limited to five percent of the site's effective impervious area, which will be demonstrated in a Low Impact Development (LID) plan to be reviewed and approved by the City of Simi Valley Department of Public Works, prior to grading. The project design has incorporated improvements to the western detention pond to accommodate and infiltrate runoff by placement of gravel and sand under 14,300 square feet of the basin bottom to allow for bio-infiltration of runoff, which would exceed the calculated infiltration area necessary to ensure compliance with the MS4 Permit conditions.

During operations, stormwater pollutants of concern would be treated by use of the extended detention basins, which would provide medium to high removal efficiency of sediment, nutrients, metals, trash, debris, oxygen demand, and toxic organics. The project would direct runoff from parking areas to landscape areas where possible to infiltrate for pre-treatment, and pervious pavers may be incorporated in portions of the site. Storm drain inlets will be stenciled with language such as "Don't Dump! Drains to Ocean", and all public access points along channels will have signs to prohibit illegal dumping. Additional features that would address potential stormwater pollution include providing trash storage areas for the multi-family residential use area that incorporate walls to prevent off-site transport of trash, and parking lot islands with drought tolerant or native vegetation.

Compliance with MS4 Permit conditions and regulations discussed above, and approval of a site-specific LID would reduce the risk of water degradation due to operations. Since violations of water quality standards would be minimized or eliminated by regulatory compliance, project impacts to water quality from operations would be less than significant.

## *Required Island Annexations*

No changes in hydrology or water quality conditions would result as a part of the proposed project. Therefore, no impact would occur.

## *Mitigation Measures*

No mitigation measures would be required.

## *Residual Impacts*

Impacts would be less than significant before mitigation.

### *4.8.3.2 Groundwater Supplies*

Simi Valley's groundwater supply has been identified as impaired due to the presence of high levels of TDS and high chloride and nitrate concentrations, largely due to urban development and past agricultural activities. Accordingly, the majority of groundwater use in the City is for irrigation purposes. The project does not propose to construct water wells for production or dewatering, and so would not directly remove groundwater during construction or operations.

## *North Canyon Ranch*

### Construction

During construction, the project's temporary use of water for dust control or other uses would be nominal on a regional basis, and would not be produced by removing groundwater onsite. As such, construction impacts would be considered to be less than significant.

### Operations

The project would introduce impervious surfaces within the undeveloped project site, which could increase runoff, but would not substantially interfere with recharge to the underlying groundwater basin, which occurs from percolation of rainfall and irrigation runoff. According to the City's General Plan EIR, the groundwater basin is not identified in overdraft condition. The proposed development area represents a small percentage of the total acreage of the groundwater basin, which underlies significant amounts of open space that would remain undeveloped. Thus, the project's increase in impermeable surfaces would not substantially increase the overall impervious surfaces relative to the groundwater basin. Additionally, as discussed above, the project would retain two stormwater detention ponds at the southern portion of the site

and construct several debris basins at the upslope portions of the site as well, where infiltration of runoff would occur. Potable water uses and impacts on water supplies, which may include use of groundwater sourced from offsite locations, are evaluated in Section 4.15, Utility and Service Systems. As such, impacts regarding depletion of groundwater or interference with groundwater recharge would be considered to be less than significant.

## *Required Island Annexations*

No changes in hydrology or water quality conditions would result as a part of the proposed project. Therefore, no impact would occur.

## *Mitigation Measures*

No mitigation measures would be required.

## *Residual Impacts*

Impacts would be less than significant before mitigation.

### *4.8.3.3 Alteration of Existing Drainage Pattern*

## *North Canyon Ranch*

### Construction

During construction activities, the project permittee would be required to implement a SWPPP and monitor the adequacy of BMPs to minimize erosion and siltation impacts. BMPs that address erosion and siltation could include, but not be limited to, sandbags, straw or fiber rolls, and stabilization of slopes after grading. Compliance with implementing BMPs per an approved SWPPP would be required by existing regulations. These regulatory requirements are designed to direct and manage runoff during construction, avoiding siltation or flooding and directing flows to infiltration areas or drain to existing drainage facilities. As such, construction impacts would be less than significant regarding erosion or siltation through altering drainage patterns in a way that would result in substantial erosion or siltation, flooding or impediment of flood flows, or runoff in exceedance of the capacity of the existing or planned drainage system.

### Operations

Currently, drainage patterns within the site convey runoff from north to south, where flows are collected in two existing on-site detention ponds at the southern boundary of the site that were constructed to manage stormwater for the Simi Valley Town Center Mall development to the south. Stormwater flowing into these ponds is detained and peak discharges are attenuated. From the existing temporary detention ponds, stormwater outflows that leaves the site are conveyed to the south and west by existing stormwater drainpipes and drainage facilities to the Arroyo Simi. The proposed project would retain and improve the two existing detention ponds relatively near the existing locations of the temporary detention ponds. The proposed site drainage plan refers to the improved western pond as Pond A, and the improved eastern pond as Pond B. The improved detention ponds would continue to connect to offsite drainage facilities to the south of the project site.

An on-site storm drain system of inlets and drain pipes would be constructed throughout the development area to collect and convey stormwater runoff from the developed portions of the site including hardscape areas and streets. The on-site storm drain system would convey all flows collected from the site to be detained in Pond A or Pond B in the southern portion of the site, where all runoff from the site currently is collected.

In addition to the two detention ponds that would be retained in the southern portion of the site, several new debris basins would be constructed within the site along the upslope perimeter of the proposed development area to capture sediment or other debris carried by runoff from undeveloped portions of the site and graded slope areas. Runoff water not infiltrated within the debris basins would enter the project's storm drain system and conveyed to the two detention basins at the southern portion of the site. This proposed drainage system would not substantially alter the existing drainage pattern of the site and area as the existing drainage patterns onto the site and off of the site would be maintained.

The proposed new debris basins have been designed with sufficient capacity to comply with the current Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. Pursuant to requirements of the MS4 Permit for Ventura County, the project's drainage system has been designed to capture, treat, retain and infiltrate runoff from storm events in which stormwater runoff will be limited to five percent (5%) of the site's effective impervious area. For this project, the required infiltration volume has been calculated to be 0.325 acre-feet or 14,157 cubic feet. Based on the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures, the project would need to provide an infiltrating surface area of 13,308 square feet. The project proposes to line a portion of Pond A with gravel and sand to provide an infiltration surface area of 14,300 square feet, which would exceed the calculated requirement.

After development of the project, the peak discharge rates from Pond A and Pond B would be 92.5 cfs and 113.8 cfs, respectively. These release rates would represent a reduction in the release rates under existing conditions, and even more substantial reductions of approximately 63.6% and 65.9%, respectively compared to release rates of the affected watershed areas that existed prior to the construction of the temporary basins within the site and the Simi Valley Town Center Mall development.

The project has been designed so that the existing drainage patterns would not be substantially altered, and so that the improved detention ponds and proposed debris basins perform adequately and in accordance with the standards set forth by Ventura County. Inlets, headwalls, ditches, swales, and pipes have been preliminarily sized and designed per the project's Storm Drainage Analysis Preliminary Report, to be refined during final design. Water quality and first flush volumes would be adequately handled through the use of infiltration that intercept flows from disturbed and otherwise developed areas. As such, the project would have a less than significant impact related to erosion or siltation due to alteration of drainage patterns in a way that would result in substantial erosion or siltation, flooding or impediment of flood flows, or runoff in exceedance of the capacity of the existing or planned drainage system.

## *Required Island Annexations*

No changes in hydrology or water quality conditions would result as a part of the proposed project. Therefore, no impact would occur.

## *Mitigation Measures*

No mitigation measures are required.

## *Residual Impacts*

Impacts would be less than significant without the need for mitigation.

### *4.8.3.4 Conflict with a Water Quality Control or Sustainable Groundwater Plan*

A project could have a significant impact if it were to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater plan.

## *North Canyon Ranch*

### Construction

As described in the Regulatory Setting section and in Impact Analysis Section 3.8.3.1, the permittee will be required to provide a project-level SQUIMP in accordance with section 402(p) of the Federal Clean Water Act, and consistent with the County SQUIMP, which requires that all point source discharges of pollutants into waters of the United States, including discharges from municipal storm drain systems, be regulated by an NPDES permit. The County SQUIMP contains a list of the minimum required BMPs to be implemented by projects listed as subject to the SQUIMP, which includes home subdivisions of 10 or more units.

The project (permittee) must also submit a SWPPP for approval by the City and the LARWQCB. The SWPPP shall reference BMPs to be implemented during the construction process to minimize erosion and sedimentation, as well as impacts of other construction-related pollutants. The submittal of the SWPPP to the LARWQCB shall be memorialized by an NOI, to be included in the SWPPP, and the issuance of a Waste Discharge Identification Number from the state. The SWPPP shall be accompanied by an Erosion and Sediment Control Plan that will indicate the general locations where the required BMP's will be employed, as well as staging areas where materials with the potential to pollute stormwater would be stored and provided secondary containment such as a berm. Throughout construction, the developer would be required to have the site inspected to insure that BMPs are adequate and maintained in compliance with SWPPP conditions.

Typical BMPs appropriate for construction activities address four major categories:

1. Erosion Control: Measures to prevent erosion and thus reduce sediment loads in stormwater.
2. Sediment Control: Measures to trap eroded sediments to prevent increasing sediment loads in the storm drain system or waterways.
3. Site Management: Measures to properly locate and maintain staging areas so that pollutants that may be spilled or leaked may be captured onsite and cleaned up without entering the storm drain system or waterways.
4. Materials and Waste Management: Measures to ensure waste materials and trash are properly enclosed and stored while awaiting removal from the site.

A compliant SWPPP for the project construction phase must be reviewed and approved by the City of Simi Valley Department of Public Works prior to project grading, enumerating which specific BMPs will be implemented to manage potential pollutants. As such, project regulatory compliance through the SWPPP review and approval process will assure the project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater plan, and project impacts would be less than significant impact.

### Operations

To control water quality and to reduce runoff and provide adequate groundwater infiltration, consistent with state and local regulations, the project permittee would be required to comply with the MS4 Permit for Ventura County, which requires the project to capture, treat, retain and infiltrate runoff from storm events in which stormwater runoff will be limited to five percent of the site's effective impervious area, which will be demonstrated in a project LID plan to be reviewed and approved by the City of Simi Valley Department of Public Works, prior to project grading. The project design has incorporated improvements to the western detention pond to accommodate and infiltrate runoff by placement of gravel and sand under 14,300 square feet of the basin bottom to allow for bio-infiltration of runoff, which would exceed the calculated infiltration area necessary to ensure compliance with the MS4 Permit conditions. Conflicts with water quality control

plans and sustainable groundwater plans are unlikely for typical development projects, given the extensive network of regulatory compliance documents and requirements, including UWMPs and Groundwater Management Plans, where they exist. Regulatory compliance through the LID review and approval process will assure the North Canyon Ranch project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater plan, and project impacts would be less than significant impact.

### *Required Island Annexations*

No changes in hydrology or water quality conditions would result as a part of the proposed project. Therefore, no impact would occur.

### *Mitigation Measures*

No mitigation measures are required.

### *Residual Impacts*

With regulatory compliance, impacts would be less than significant without the need for mitigation.

## 4.8.4 Cumulative Impacts

A project's impact under CEQA is cumulatively considerable when 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. In considering the effects of probable future projects, Chapter 3.0, Cumulative Projects, considers buildout of the General Plan to be the overall cumulative project set, with specific known projects in the vicinity listed as a part of that related project set (Table 3-1). As the proposed project (the combined effects of North Canyon Ranch and the Required Island Annexations) would not result in a significant hydrology or water quality impact, it would not have a cumulatively considerable impact on any hydrology or water quality issues. Further, none of the related projects are located adjacent to the North Canyon Ranch site, which is the only project component where development is proposed, or would create a localized combined impact. The proposed project would abide by all regulations related to water quality standards, discharge requirements and surface or groundwater quality; would not substantially deplete groundwater supplies or substantially alter existing drainage patterns; and would not conflict with a water quality control or sustainable groundwater plan. As such, the project would not contribute significantly to a cumulative impact.