

4.10 HYDROLOGY AND WATER QUALITY

This section evaluates the potential effects of implementing the 2040 General Plan on hydrology and water quality, including groundwater quantity and quality, surface water quantity and quality, hydraulic hazards, seiche and tsunami hazards, and flood control facilities and watercourses. As described in the “Approach to the Environmental Analysis” section, the following assessment of impacts is based on the characterization of existing environmental conditions and regulatory setting provided in the January 2020 Background Report (Appendix B). Where necessary, each section identifies changes (e.g., new information, regulatory changes) to the environmental and regulatory setting included in the Background Report that are relevant to understanding the 2040 General Plan’s potential impacts.

Comments on the notice of preparation included concerns regarding establishing thresholds for analysis of hydrology and water quality. Comments on the notice of preparation also included concerns regarding groundwater infiltration, surface water quality, and flooding. These comments are addressed in this section, as appropriate. The NOP and comments on the NOP are included in Appendix A.

For additional discussion of impacts related to potential public health issues resulting from perchlorate and trichloroethylene (TCE) contamination of groundwater related to rocket engine testing in the county, refer to Section 4.9, “Hazards, Hazardous Materials and Wildfire.” For additional discussion of potential impacts to surface water quality related to erosion, refer to Section 4.7, “Geologic Hazards.”

4.10.1 Background Report Setting Updates

REGULATORY SETTING

The Background Report (Appendix B) accurately describes the regulatory setting for the purpose of this evaluation. Specifically, the pertinent regulations are provided in Section 10.2, “Legal and Regulatory Framework for Water Management,” of Chapter 10, “Water Resources.” In addition, Section 11.2, “Flood Hazards,” of Chapter 11, “Hazards and Safety” addresses regulations related to flood hazards. There is no additional information necessary to understand the potential hydrology and water quality impacts of the 2040 General Plan.

ENVIRONMENTAL SETTING

The Background Report (Appendix B) accurately describes the environmental setting for the purpose of this evaluation. Within Chapter 10, “Water Resources,” Section 10.1, “Major Findings,” addresses water quality and groundwater issues; Section 10.4, “Existing Conditions,” provides background information; and Section 10.5, “Trends and Future Conditions,” summarizes trends related to water supply. In Chapter 11, “Hazards and Safety,” Section 11.1, “Geologic and Seismic Hazards,” addresses seiche and Section 11.2, “Flood Hazards,” describes the existing potential for flooding. There is no additional information necessary to understand the potential hydrology and water quality impacts of the 2040 General Plan.

4.10.2 Environmental Impacts and Mitigation Measures

METHODOLOGY

This program-level analysis evaluates hydrology and water quality conditions based on the location of where development would occur based on the proposed land use diagram for unincorporated Ventura County. Potential hydrology and water quality impacts are evaluated against existing conditions outlined in the Background Report. The evaluation of potential hydrological and water quality impacts is based on a review of documents pertaining to the plan area, including previous studies conducted for the County, topographic maps, previous EIRs, and published and unpublished hydrologic data and literature, as summarized in the Background Report.

In analyzing impacts to groundwater quantity, for the purposes of this program-level analysis, conditions of existing basins in the Background Report are outlined and compared against areas where future development under the 2040 General Plan is likely to occur to evaluate potential groundwater overdraft conditions. Pursuant to the methodology in the ISAG, potential surface water and groundwater quality impacts of discretionary projects Ventura County are typically compared to the water quality objectives in the applicable Basin Plan to determine whether the 2040 General Plan would degrade surface water and groundwater quality. Most of Ventura County falls within the *Basin Plan for the Coastal Watershed of Los Angeles and Ventura Counties* (LARWQCB 2019); however, the northwest corner of the county is within the *Water Quality Control Plan for the Tulare Lake Basin* (CVRWQCB 2018), and the western edge of the county is within the *Water Quality Control Plan for the Central Coast Basin* (CCRWQCB 2019). The analysis also considers potential stormwater quality impacts in accordance with the Municipal Separate Storm Sewer System (MS4) Permit or any other National Pollutant Discharge Elimination System (NPDES) Permit requirements.

The 2040 General Plan's impacts on surface water quantity and drainage are evaluated based on a review topographic maps, drainage studies performed for the County, and other geographic resources. The existing features and drainage are compared to the location of future development under the 2040 General Plan to determine if the project would increase or decrease the quantity of surface water or significantly alter drainage patterns. The analysis also evaluates, at the program-level, how anticipated changes in surface water flow would affect the beneficial uses listed in Section 2c-B of the ISAG.

To evaluate potential flooding impacts, the analysis includes a review of Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (DFIRMs); the Ventura County Floodplain Management Ordinance; Section 1612A, "Flood Loads," of the Ventura County Building Code adopted from the California Building Code (2019); Ventura County Flood Control District Design Manual, as amended; and the Watershed Protection District Hydrology Manual, as amended. Areas of potential flood hazards are compared against areas where future land use changes are likely to occur under the 2040 General Plan, to evaluate whether development would occur within flood hazard areas. The analysis also compares existing seiche and tsunami hazard areas with proposed land use and projected growth under the 2040 General Plan based on existing maps and reports.

In response to 2019 revisions to the State CEQA Guidelines (Public Resources Code Section 15126.2) and the 2015 California Supreme Court case, *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, impacts from exposure of a project to environmental hazards are not considered significant effects unless a project exacerbates the risks from such hazards. However, lead agencies retain the authority, separate and apart from CEQA, to include a review of potential impacts of the environment on a project when a project is undertaken by a lead agency, such as the 2040 General Plan. The 2040 General Plan is a comprehensive document that broadly establishes policy, not only related to the environment, but also related to public health and safety. Therefore, the analysis of seiche, tsunami, and flood hazards in this section considers whether the 2040 General Plan could cause or exacerbate impacts and whether the 2040 General Plan could result in impacts from exposure to such hazards. The discussion of potential impacts from exposure to seiche, tsunami, and flood hazards is provided for information purposes only and is neither required by CEQA nor subject to its requirements.

THRESHOLDS OF SIGNIFICANCE

As discussed in the “Approach to the Environmental Analysis” section, the thresholds used to determine the significance of the 2040 General Plan’s impacts are based on Ventura County’s adopted ISAG, which include threshold criteria to assist in the evaluation of significant impacts for individual projects. Appendix G of the State CEQA Guidelines also provides considerations for determining the significance of a project’s impacts, in the form of initial study checklist questions.

To develop thresholds of significance for this section of the draft EIR, the County has deviated from the ISAG threshold criteria, where appropriate, to appropriately consider the programmatic nature of a general plan for the entire unincorporated area and to incorporate the 2019 revisions to the Appendix G checklist.

Specifically, ISAG Sections 17a, 17b, 29a and 31b are revised to condense the threshold discussions for purposes of the programmatic nature of the analysis. However, the analysis follows the methodologies outlined in ISAG. For additional discussion of impacts related to potential public health issues resulting from perchlorate and TCE, which could result from existing or former rocket engine testing in the county, refer to Section 4.9, “Hazards, Hazardous Materials, and Wildfire.” For additional discussion of impacts related to erosion, refer to Section 4.7, “Geologic Hazards.”

For the purpose of this draft EIR, implementation of the 2040 General Plan would have a significant hydrology and water quality impact if it would:

- ▶ Directly or indirectly decrease the net quantity of groundwater in a groundwater basin that is overdrafted or create an overdrafted groundwater basin.
- ▶ Result in net groundwater extraction that causes overdraft in groundwater basins that are not overdrafted or are not in hydrologic continuity with an overdrafted basin.
- ▶ Result in any net increase in groundwater extraction from that groundwater basin and/or hydrologic unit, in areas where the groundwater basin and/or hydrologic unit condition is not well known or documented and there is evidence of overdraft based upon declining water levels in a well or wells.

- ▶ Degrade the quality of groundwater and cause groundwater to exceed groundwater quality objectives set by the applicable Basin Plan.
- ▶ Result in the use of groundwater, in any capacity, and would be located within 2 miles of the boundary of a site with documented groundwater contamination associated with a former or current test site for rocket engines.
- ▶ Increase surface water consumptive use (demand) in a fully appropriated stream reach, as designated by SWRCB, or where unappropriated surface water is unavailable.
- ▶ Increase surface water consumptive use (demand) including, diversion or dewatering downstream reaches, resulting in an adverse impact to one or more of the beneficial uses listed in the applicable Basin Plan.
- ▶ Degrade the quality of surface water, causing it to exceed the water quality objectives of the applicable Basin Plan.
- ▶ Cause stormwater quality to exceed water quality objectives or standards in the applicable MS4 Permit or any other NPDES Permits.
- ▶ Be located within 10 to 20 feet of vertical elevation from an enclosed body of water such as a lake or reservoir, resulting in a seiche hazard.
- ▶ Locate development in a mapped area of tsunami hazard.
- ▶ Result in erosion, siltation, or flooding hazards.
- ▶ Be located in a mapped area of flood hazards.
- ▶ Adversely affect flood control facilities and watercourses by obstructing, impairing, diverting, impeding, or altering the characteristics of the flow of water, resulting in exposing adjacent property and the community to increased risk of flood hazards, through activities such as:
 - Reducing the capacity of flood control facilities and watercourses. This includes the planting of any vegetation within the watercourse or on the banks thereof;
 - Eroding watercourse bed and banks due to high velocities, changes in adjacent land use, encroachments into the channel such as bridges, and loading the top of the channel embankment with structures;
 - Depositing any material of any kind in a watercourse; and
 - Placing a structure that encroaches on a flood control facility or that does not have sufficient setback from a watercourse.
- ▶ Result in conflicts with the Ventura County Watershed Protection District's (WPD) Comprehensive Plan through potential deposition of sediment and debris materials within existing channels and allied obstruction of flow; overflow of channels during design storm conditions; and increased runoff and the effects on Areas of Special Flood Hazard and regulatory channels both on- and off-site.

- ▶ Result in noncompliance with building design and construction standards regulating flow to and from natural and man-made drainage channels.
- ▶ Result in noncompliance with applicable requirements for onsite wastewater treatment systems (OWTS) .

2040 GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS

Policies and implementation programs in the 2040 General Plan related to hydrology and water quality and, specifically, the thresholds of significance identified above, include the following:

Public Facilities, Services, and Infrastructure Element

- ▶ **Policy PFS-6.1: Flood Control and Drainage Facilities Required for Discretionary Development.** The County shall require discretionary development to provide flood control and drainage facilities, as deemed necessary by the County Public Works Agency and Watershed Protection District. The County shall also require discretionary development to fund improvements to existing flood control facilities necessitated by or required by the development. (RDR) *[Source: Existing GPP Policy 4.6.2.2, modified]*
- ▶ **Policy PFS-6.2: Multi-Purpose Flood Control Projects.** The County shall encourage the integration of design features into flood control projects, when feasible: to address resource conservation and restoration and preservation of natural riparian habitats, to provide groundwater recharge, to enhance water quality, to protect scenic vistas, and to incorporate recreational areas or opportunities. (RDR, SO) *[Source: New Policy]*
- ▶ **Policy PFS-6.5: Stormwater Drainage Facilities.** The County shall require that stormwater drainage facilities are properly designed, sited, constructed, and maintained to efficiently capture and convey runoff for flood protection and groundwater recharge. (RDR) *[Source: New Policy]*
- ▶ **Policy PFS-6.6: Natural Drainage Courses.** The County shall retain drainage courses in their natural state to the extent feasible. (SO) *[Source: Existing Oak Park Area Plan Policy 2.2.2.3, modified]*
- ▶ **Policy PFS-6.7: Flood Control and Beach Sand Nourishment.** The County shall include beach sand nourishment as an important factor in the design and maintenance of flood control facilities. (SO) *[New Policy]*

Conservation and Open Space Element

- ▶ **Policy COS-2.10: Saltwater Intrusion.** The County shall work with Federal, State, and local jurisdictions, agencies, and organizations to monitor saltwater intrusion and take proactive steps to reduce intrusion, including:
 - working to maintain and restore coastal wetlands buffers;
 - enhancing groundwater management to prevent excessive pumping in order to restore groundwater levels needed to reduce saltwater intrusion; and
 - implementing mitigation measures to prevent saltwater intrusion into estuaries and groundwater basins including, but not limited to, implementation of reactive barriers and use of pumps to divert saltwater. (PSR, IGC, JP) *[Source: New Policy, OPR Sea-Level Rise Guidance]*

Hazards and Safety Element

- ▶ **Policy HAZ-2.1: Principal Floodway Purpose.** The County should limit land use in the regulatory floodway, as identified in the Ventura County Flood Plain Management Ordinance, limited to open space, agriculture, or passive to low intensity recreational uses, subject to the approval of the County Public Works Agency. The floodway's principal use should be maintained for safely conveying floodwater away from people and property while protecting ecological functions of the river. (RDR) *[Source: Existing GPP Policy 2.10.2.1, modified]*
- ▶ **Policy HAZ-2.8: Natural Flood Protection Solutions.** The County shall consider natural, or nature-based flood protection measures for discretionary development or County-initiated development, when feasible. (PSR, IGC) *[Source: New Policy, OPR Sea-Level Rise Guidance]*
- ▶ **Policy HAZ-4.12: Slope Drainage.** Drainage plans that direct runoff and drainage away from slopes shall be required for construction in hillside areas. (RDR) *[Source: Existing GPP Policy 2.7.2.3]*
- ▶ **Policy HAZ-4.14: Development in Seiche Hazard Areas.** The County shall not allow development in potential seiche hazard areas unless a geotechnical engineering investigation is performed and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design. (RDR) *[Source: Existing GPP Policy 2.5.2.2, modified]*
- ▶ **Policy HAZ-4.18: Preparation of Plans in Seiche Hazard Areas.** The County shall consider Seiche Hazard Areas during the preparation of regional and Area Plans and special studies and be used to guide future investigations of the hazard. (RDR) *[Source: Existing GPP Policy 2.5.2.1, modified]*

Implementation Programs

- ▶ **Program E: Update Tsunami Information.** The County shall update planning documents, maps, and the Operational Area Tsunami Evacuation Plan, when necessary to reflect the most current tsunami information, and identify actions necessary to mitigate property damage, and maintain evacuation readiness. (MPSP, SO) *[Source: New Program, NBVC JLUS Strategy MAR-3A]*
- ▶ **Program I: Estuaries, Wetlands, and Groundwater Basins Resilience.** The County shall coordinate with regional stakeholders to assess vulnerabilities from the effects of, and opportunities to enhance the resiliency to, sea level rise on estuaries, wetlands, and groundwater basins. This assessment should consider factors that influence the conditions of an estuary or wetland, including sea level rise, rainfall, surface heat budget, wind, and ocean acidification. *[Source: New Program]*

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.10-1: Directly or Indirectly Decrease the Net Quantity of Groundwater in a Groundwater Basin That Is Overdrafted or Create an Overdrafted Groundwater Basin

The land use diagram of the 2040 General Plan would accommodate future development of relatively higher intensity residential, commercial, mixed use, and industrial land uses within the Existing Community area designation (boundary) and the Urban area designation (boundary). These are areas with existing residential, commercial, and/or industrial uses developed with urban building intensities generally located adjacent to the boundaries of

incorporated cities or along highway corridors such as SR 33, SR 118, SR 126, and Highway 101. The residential, commercial, mixed use, and industrial land use designations of the 2040 General Plan would apply to approximately 1.2 percent of land in the unincorporated county. Potential uses within these designations include small- and large-lot detached single-family homes, one- to three-story attached single-family dwellings and lower density multifamily developments, mixes of commercial, office, residential, civic, and/or recreational uses, one- to two-story structures for retail and commercial services, and industrial employment-generating uses, such as production, assembly, warehousing, and distribution.

The Rural land use designation would allow for low-density and low-intensity land uses such as residential estates and other rural uses which are maintained in conjunction with agricultural and horticultural uses or in conjunction with the keeping of farm animals for recreational purposes, such as greenhouses, principal and accessory structures related to agriculture, and also oil and gas wells, and would apply to approximately 0.9 percent of land in the unincorporated county.

Approximately 97.1 percent of the unincorporated county would remain designated as either Open Space (approximately 88 percent) or Agriculture (approximately 9 percent) under the 2040 General Plan. The Open Space land use designation would allow low intensity development with a minimum parcel size of 10 acres and 1 dwelling unit per parcel. Other uses could include composting operations, greenhouses, correctional institutions, fire stations, and oil and gas wells. The Agriculture land use designation would allow for development of one dwelling unit per parcel and a minimum parcel size of 40 acres. Other uses could include greenhouses, principal and accessory structures related to agriculture, and composting operations. Proposed policies of the 2040 General Plan addressing flaring and trucking associated with new discretionary oil and gas wells could result in the construction and operation of new pipelines for the conveyance of oil, gas, or produced water.

As described in Section 10, "Existing Conditions," in the Background Report, several groundwater basins exist within the county. The Sustainable Groundwater Management Act (SGMA) provides a framework for sustainable management of groundwater supplies by local authorities, with the potential for State intervention, if necessary. SGMA requires the formation of local groundwater sustainability agencies (GSAs) for high- or medium-priority basins, which include critically overdrafted basins. For critically overdrafted high- or medium-priority basins, GSAs are required to create and adopt groundwater sustainability plans (GSPs) by January 31, 2020. GSAs will require an assessment of the condition of groundwater basins, managing groundwater demand, and undertaking groundwater recharge projects to achieve long-term sustainability (Appendix B). As defined in SGMA, a basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts (Appendix B). Three overdrafted basins are present in the county, as identified by the California Department of Water Resources (DWR). These include the Cuyama Groundwater Basin¹, Pleasant Valley Groundwater Basin, and the Oxnard Plain Basin. All three basins provide water potable and agricultural water supplies.

Groundwater from the Cuyama Groundwater Basin is primarily used to serve populations outside of the plan area, as well as some agricultural uses throughout the county (Appendix B).

¹ Although the basin as a whole is considered to be in overdraft, the U.S. Geological Survey estimates the portion in Ventura County not to be in overdraft (Appendix B).

The area overlaying the Cuyama Groundwater Basin would be designated as Open Space under the 2040 General Plan, which allows for development of one dwelling unit per approximately 10 acres (or 20 acres if the Open Space designation is contiguous with Agricultural land use). Other uses could include composting operations, greenhouses, correctional institutions, fire stations, and oil and gas wells.

The Pleasant Valley Groundwater Basin is located within the City of Camarillo and in the unincorporated area surrounding the City of Camarillo and provides water supply to various areas of the county for a variety of uses, including residential, municipal, industrial, and agricultural (Fox Canyon Groundwater Management Agency 2019a). Land use designations under the 2040 General Plan in the areas overlaying the Pleasant Valley Groundwater Basin would include Agricultural, Very Low Density Residential, and limited Rural and Low-Density Residential designations. The Agricultural land use designation allows for development of one dwelling unit per 40 acres, the Very Low Density Residential land use designation allows for four dwelling units per acre, the Rural land use designations allow for one dwelling unit per 2 acres, and the Low Density Residential allows for six dwelling units per acre.

The Oxnard Plain Groundwater Basin supplies large amounts of groundwater for municipal users including the City of Oxnard, the county's largest city, as well as more than half the county's agricultural industry (Appendix B). The Oxnard Plain Groundwater Basin is in the middle-south portion of the county and is overlaid by the City of Port Hueneme and the City of Oxnard, as well as unincorporated areas of the county surrounding these cities. Land use designations under the 2040 General Plan in the areas overlaying the Oxnard Plain Groundwater Basin include largely Agricultural uses, but also include the Naval Base Ventura County, which is designated as State or Federal Facility on the proposed land use diagram. In addition, a few areas outside of the City of Port Hueneme are proposed to be designated Commercial, ECU²-Open Space, and Residential Beach. Commercial land use designations under the 2040 General Plan would allow for 60 percent lot coverage, ECU-Open Space would allow for one dwelling unit per parcel, while Residential Beach would allow for 36 dwelling units per acre. However, Residential Beach areas would be limited to a small land area (approximately 185 acres for the entire planning area, although the majority of which would be located within the Oxnard Plain Groundwater Basin).

The Cuyama Groundwater Basin GSP is within the jurisdiction of the Cuyama Valley GSA, which includes the counties of Ventura, San Luis Obispo, and Kern, as well as the Santa Barbara County Water Agency, Cuyama Basin Water District, and Cuyama Community Services District. The Final Cuyama Valley Groundwater Basin GSP was released to the public in in June 2019. The Cuyama Valley Groundwater Basin GSP incorporates monitoring methods, sustainability thresholds, and projects and management actions to ensure sustainability of the basin (Cuyama Basin Groundwater Sustainability Agency 2019). Both Pleasant Valley Groundwater Basin and the Oxnard Plain Groundwater Basin are under the jurisdiction of the Fox Canyon Groundwater Management Agency. The Draft GSPs for the Oxnard Subbasin and the Pleasant Valley Basin were both released to the public in July 2019 (Fox Canyon Groundwater Management Agency 2019a; Fox Canyon Groundwater Management Agency 2019b). Similar to the Cuyama Valley Groundwater Basin GSP, the Draft GSPs for the Oxnard Subbasin and the Pleasant Valley Basins include sustainable management criteria, monitoring networks and project and management actions to ensure sustainability of these basins (Fox Canyon Groundwater

² The acronym "ECU-" preceding a designation name refers to land use designations that apply only within the boundaries of an Existing Community.

Management Agency 2019a; Fox Canyon Groundwater Management Agency 2019b). Future development under the 2040 General Plan would be required to be consistent with these GSPs. The 2040 General Plan includes policies such as Policy COS-2.10, which requires the County to enhance groundwater management to prevent excessive pumping and reduce saltwater intrusion. Further, Program I, included in Section 7.13 of the 2040 General Plan, requires coordination with regional stakeholders regarding effects on, and opportunities to enhance, the resiliency of groundwater basins.

County Ordinance 4468 prohibits new wells for the extraction of groundwater in many groundwater basins. This prohibition applies to property that is both located in groundwater basins within the Ventura River Watershed, Santa Clara River Watershed, Cuyama River Watershed, or portion of the Calleguas Creek Watershed that includes the Oxnard Plain Basin, Pleasant Valley Basin, Los Posas Valley Basin, and Arroyo Santa Rosa Basin and within groundwater basins designated by the California Department of Water Resources (DWR) as High or Medium Priority Basins on or before January 31, 2015, pursuant to Water Code Section 10722.4, or in the event DWR did not make a priority designation by January 31, 2015, within groundwater basins designated as High or Medium Priority under DWR's California Statewide Groundwater Elevation Monitoring Program (CASGEM) Groundwater Basin Prioritization until a priority designation has been made pursuant to Water Code Section 10722.4.

Development that occurs over the planning period is anticipated to both increase water demand and introduce impervious features with potential to impair groundwater recharge. Through compliance with GSPs and Ordinance 4468, which prohibits new wells for the extraction of groundwater in many groundwater basins, and 2040 General Plan Policy COS-2.10, the 2040 General Plan would not directly or indirectly decrease the net quantity of groundwater in a groundwater basin that is overdrafted or create an overdrafted groundwater basin. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-2: Result in Net Groundwater Extraction That Causes Overdrafted Basins in Groundwater Basins That Are Not Overdrafted or Are Not in Hydrologic Continuity with an Overdrafted Basin

Aside from the overdrafted groundwater basins discussed under Impact 4.10-1, above, several additional groundwater basins are present throughout the county. These include the Ojai Valley Groundwater Basin, Simi Valley Groundwater Basin, and Piru Groundwater Basin. As discussed in Section 4.17, "Utilities," future development under the 2040 General Plan would increase demand for water supply. Water supply sources in the county include water from local lakes and reservoirs as well as groundwater, which is currently estimated to provide 67 percent of the water supply in the plan area (Appendix B).

However, as discussed under Impact 4.10-1, above, SGMA requires the formation of local GSAs for high- or medium-priority basins and preparation of GSPs to ensure sustainability of groundwater in these basins. Seven basins in the county are designated as medium priority, which include Ojai Valley, Upper Ventura River, Cuyama Valley, Arroyo Santa Rosa Valley, Mound, Santa Paula, and Filmore Groundwater Basins. Four high priority basins are also located within the county. These include Oxnard Plain, Pleasant Valley, Las Posas, and Piru Groundwater Basins. Two of the four high-priority basins (Oxnard Plain and Pleasant Valley

Basins) and one medium-priority basin (Cuyama Valley Basin) are also considered to be in critical overdraft and have been analyzed above, under Impact 4.10-1. As defined in SGMA, a basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts such as persistent lowering of groundwater levels, drying of wells, reductions in groundwater storage, sea water intrusion, degradation of water quality, land subsidence, and reduction of water in streams and lakes (Appendix B). GSPs for all 11 basins must be completed and adopted by their respective GSA by January 31, 2022. Further, all high- and medium-priority groundwater basins must achieve sustainability within 20 years of GSP adoption (Appendix B). Through compliance with SGMA and adopted GSPs for these basins, the 2040 General Plan would not result in net groundwater extraction that results in the overdrafting of the basins or associated hydrologic units. Further, until adoption of these GSPs, Ordinance 4468 prohibits the installation of new groundwater wells in the unincorporated county for many groundwater basins. These prohibitions would not be removed until such time that GSAs are formed and GSPs are prepared in compliance with the SGMA (Appendix B). Lastly, the 2040 General Plan includes Policy COS-2.10, which requires that the County enhance groundwater management to prevent excessive pumping in coastal aquifers. Because new groundwater wells are restricted throughout the county until GSPs for each high priority basin are adopted, and because SGMA would manage groundwater resources in the future, development under the 2040 General Plan would not result in net groundwater extraction that results in overdrafting the groundwater basins or associated hydrologic units. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-3: Result in Any Increase in Groundwater Extraction in Areas Where the Groundwater Basin and/or Hydrologic Unit Condition Is Not Well Known or Documented and There Is Evidence of Overdraft Based upon Declining Water Levels in a Well or Wells
As discussed under Impacts 4.10-1 and 4.10-2, above, several groundwater basins are located throughout the county. Through compliance with SGMA and adopted GSPs for these basins, the 2040 General Plan would not result in groundwater extraction that results in the overdrafting of groundwater basins. Because of the programmatic nature of the 2040 General Plan, a precise, project-level analysis of impacts to underlying groundwater basins of any future development under the 2040 General Plan cannot be performed at this time. Also as discussed above, SGMA requires the evaluation and management of groundwater basins. In the future there will be more definitive information about groundwater basin conditions because of SGMA requirements. Therefore, it is anticipated that there will be less reliance on anecdotal evidence of overdraft, such as declining water levels in nearby wells, in the future. Currently, however, indirect indicators provide insight on areas of the county that may be incapable of supporting additional groundwater extraction. For example, there are areas of land subsidence (i.e., in the Oxnard Plan area) that have been attributed to a combination of tectonic movement, hydrocarbon extraction, and groundwater pumping, as discussed further in Section 4.7, "Geologic Hazards."

However, it is reasonable to assume that all future development subject to the County's discretionary approval during the plan horizon of the 2040 General Plan would be analyzed for potential impacts according to CEQA. This is currently guided by the County's ISAG. Section 2a of the ISAG provides specific methodology to determine whether a project would result in

any increase in groundwater extraction from a groundwater basin and/or hydrologic unit, and whether adverse impacts would occur. Project-level study of the groundwater conditions may be conducted to support this analysis.

Further, County Ordinance 4468 prohibits new water wells in the unincorporated county in many groundwater basins, limiting groundwater extraction within the county. These prohibitions would not be removed until GSAs are formed and have completed GSPs per the SGMA (Appendix B). The regulatory framework established by SGMA sets forth requirements under which groundwater basins will be characterized, monitored, and regulated. This is anticipated to substantially reduce the uncertainty of consequences associated with groundwater extraction. Further, because any additional groundwater extraction above existing conditions is limited by County Ordinance 4468, and because any future discretionary projects would be required to perform project-specific CEQA analysis that would include analysis of whether the project is proposed in an area where there is evidence of overdraft and little known about the groundwater condition, implementation of the 2040 General Plan would not result in a net increase in groundwater extraction that would adversely affect the underlying groundwater basins. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-4: Degrade the Quality of Groundwater and Cause Groundwater to Exceed Groundwater Quality Objectives Set by the Applicable Basin Plan

Pursuant to ISAG, potential effects on groundwater quality are determined in relationship to the objectives and beneficial uses in the applicable Basin Plan to ensure consistent and complete assessment of potential impacts. The Basin Plans contain the regulations adopted by the RWQCB to control the discharge of waste and other controllable factors affecting the quality of waters of the State. The Basin Plans, as amended periodically, establish the beneficial uses of water within the region; the water quality objectives necessary to protect those uses, including an antidegradation policy; the prohibitions, policies, and action plans, by which protections are implemented; and the monitoring, which is conducted to ensure attainment of water quality standards. The Basin Plan is adopted by the RWQCB and approved by the State Water Resources Control Board, and the Office of Administrative Law. The United States Environmental Protection Agency approves the water quality standards contained in the Basin Plan, as required by the Clean Water Act. The Basin Plan is used as a regulatory tool by the RWQCB. RWQCB orders cite the Basin Plan's water quality standards, prohibitions, and other programs of implementation applicable to a particular discharge or category of discharge.

The types of land uses that could be accommodated by the 2040 General Plan could generate new sources of pollution, which could enter groundwater from point sources (e.g., an industrial site or faulty septic system) or from nonpoint sources over a broad area (e.g., infiltration of water contaminated with pesticides in agricultural areas). During construction activities, materials such as gasoline, diesel fuel, lubricating oils, grease, solvents, and paint, could be accidentally spilled. Where the depth to groundwater is shallow or excavation has exposed the water table, such upset conditions could affect the groundwater table. As indicated above, most of the unincorporated county would remain designated as either Open Space or Agriculture under the 2040 General Plan. Specific land uses in these areas could include animal husbandry and oil and gas exploration and production. Following buildout pursuant to the 2040 General Plan, these uses have the potential to adversely affect groundwater quality if not properly managed.

As discussed in Section 10.4, “Existing Conditions,” of the Background Report, the *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (LARWQCB 2019) provides detail on beneficial uses for specific Ventura River reaches. Objectives related to groundwater outlined in this Basin Plan include ensuring maintenance of healthy levels of ammonia, nitrates, bacteria such as coliform organisms, chemical constituents and radionuclides, inorganic constituents, and nitrogen. Further, groundwater cannot have taste or contain odor-producing substances in concentrations that cause a nuisance or adversely affect beneficial uses. All waste discharges, including discharges to groundwater, are subject to California Water Code Sections 13260 and 13263 and are issued Waste Discharge Requirements (WDRs) by the RWQCB. Water discharges are also subject to California Code of Regulations Title 23 (Los Angeles Regional Water Quality Control Board 2019). Compliance with applicable regulations (e.g., Municipal Permit, Construction General Permit, Stormwater Pollution Prevention Plans) governing the quality of groundwater would ensure that future development under the 2040 General Plan would not degrade the quality of groundwater and cause groundwater to exceed groundwater quality objectives set by the Basin Plans. The Low Impact Development designs and Best Management Practices required by existing federal and State laws, regulations, and permits would protect the quality of groundwater and promote infiltration of treated runoff to contribute to the replenishment of groundwater resources.

Various other groundwater quality regulations exist throughout the county. For instance, the County Subdivision Ordinance includes provisions meant to ensure adequate provision of water, to protect water supply, and to protect surface water and groundwater quality. Provisions to protect groundwater quality include requiring that water courses and existing or abandoned water wells be identified on tentative maps and requiring a description of the proposed method and plan for sewage disposal for each proposed lot (Appendix B). Further, Ordinance 4468 would protect groundwater quality by regulating the construction, maintenance, operation, use, repair, modification, and destruction of groundwater wells and engineering test holes in such a manner that the groundwater of the county will not be contaminated or polluted. Oil and gas development would be required to comply with Section 8107-5.6 of the Non-Coastal Zoning Ordinance, which requires that permittees for all oil and gas development projects submit a plan to the County for controlling oil spillage and preventing saline or other polluting or contaminating substances from reaching surface or subsurface waters, consistent with local, State, and federal regulations (Ventura County 2019a). Similarly, oil and gas development within the Coastal Zone must comply with Section 8175-5.7.8 of the Coastal Zoning Ordinance, which requires that any oil, produced water, drilling fluids, cuttings, and other contaminant associated with the drilling, production, storage, and transport of oil is contained on the site unless properly transported off-site or injected into a well, treated, or reused in an approved manner. All appropriate permits shall be secured and the permittee shall also submit a plan for preventing oil spillage and prevent saline or other polluting or contaminating substances from reaching subsurface waters (Ventura County 2017). Lastly, all oil and gas drilling activities are subject to the California Division of Oil, Gas, and Geothermal Resources (DOGGR) which outlines additional water quality requirements for oil, gas, and geothermal projects (Department of Conservation 2019). Further, 2040 General Plan Policy COS-2.10 requires monitoring of saltwater intrusion into groundwater basins.

As stated above, there are numerous regulations and requirements in place to protect groundwater quality. Compliance with these requirements would eliminate or substantially lessen the generation of pollutants that could degrade groundwater quality and exceed groundwater quality objectives of applicable Basin Plans. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-5: Result in the Use of Groundwater, in Any Capacity, and Would Be Located within 2 Miles of the Boundary of a Former or Current Test Site for Rocket Engines

As discussed under Impacts 4.10-1 through 4.10-3, above, Ordinance 4468 generally prohibits new water wells in the unincorporated county in many groundwater basins (Appendix B). Groundwater resources would be managed in a manner consistent with the SGMA, which provides guidance for sustainable groundwater management, including best management practices.

As discussed in Impact 4.9-2, in Section 4.9, “Hazards, Hazardous Materials and Wildfire,” two constituents associated with rocket engine testing, perchlorate and TCE, have been detected in southeast Ventura County at the Santa Susana Field Laboratory site. This location is a 2,850-acre site located to the southwest of the City of Simi Valley, that was previously utilized for research, development, and testing of rocket engines (Appendix B). No development is proposed to occur at this site as a result of the 2040 General Plan. This area and the areas that surround it would be designated as Open Space under the 2040 General Plan, which limits development to one dwelling unit per 10 acres, or 20 acres if contiguous with Agricultural land use. Permissible uses in Open Space include composting operations, greenhouses, correctional institutions, fire stations, and oil and gas exploration and production. Further, if discretionary development in this limited area were to occur, the construction of any new groundwater wells associated with the proposal would be subject to County review, which would assess the location of the proposal relative to known sites of groundwater contamination. Also, as described in Impact 4.9-2 applicants for all discretionary projects proposing to utilize groundwater in any capacity that are located within 2 miles of the boundary of a former or current test site for rocket engines are required to test the groundwater for perchlorate and TCE. Therefore, the 2040 General Plan is not expected to result in the pumping of groundwater within 2 miles of areas used for rocket testing. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-6: Increase Surface Water Consumptive Use (Demand) in a Fully Appropriated Stream Reach, as Designated by SWRCB, or Where Unappropriated Surface Water Is Unavailable

Fully appropriated streams within the county include the Cuyama River, Piru Creek, Santa Ana Creek, Ventura River, Santa Clara River, San Antonio Creek, Thatcher Creek, and Reeves Creek. Lake Casitas and Lake Piru are also part of the fully appropriated stream reach, as designated by the State Water Resource Control Board (SWRCB) (SWRCB 1991). Fully appropriated stream systems (FASS) are those where there is insufficient supply, during specified months or year-round, for new water right applications. Pursuant to SWRCB Order WR 98-08, the SWRCB is precluded from accepting applications to appropriate water for consumptive use from a fully appropriated stream reach (SWRCB 1998).

Water supply sources in the county include water from local lakes and reservoirs, groundwater, and the State Water Project. Recently, because of decreased supply of groundwater and reservoirs due to drought, the County began purchasing water from Lake Casitas (Appendix B). Although project-specific details of future development under the 2040 General Plan are not known, it is assumed that water supply sources for future development could include the same sources of supply as existing conditions. Population growth is forecast to occur during the planning horizon of the 2040 General Plan, which would result in increased development and, thus, increased water demand. Depending on the conditions present (e.g., normal or dry year conditions), future development may rely on Lake Casitas to meet its water supply demands. Lake Casitas is part of a fully appropriated stream reach and is managed by the Casitas Municipal Water District (CMWD). The CMWD Urban Water Management Plan/Agricultural Water Management Plan (UWMP/AWMP) identifies and evaluates the reliability and quantity of available water supply sources. As discussed in the UWMP/AWMP, projected demand within CMWD would equal supply under a multiple dry year condition through 2040 (Casitas Municipal Water District 2016). Therefore, while Lake Casitas is part of a fully appropriated stream reach, CMWD has identified that sufficient water supplies are available to meet long-term projected growth within its service area. This CMWD assumption is based on the Southern California Association of Government's population estimates for the period between 2020 and 2040. Therefore, the population projections accommodated by the 2040 General Plan would be consistent with this plan.

As discussed further in Section 4.17, "Utilities," the Ventura County Waterworks Manual includes standards to address water availability for land development projects. Per Section 1.3.6 of the manual, water purveyors that serve or plan to serve any land development project subject to any approval by the County or a County-dependent special district must prepare a water availability letter declaring that the purveyor's water system has the necessary water capacity available to supply the domestic and firefighting requirements for the project or service area (PWA 2014). Through this process, a study of available water supply would be conducted that would determine whether there is sufficient water available without the presumed use of water from a fully appropriated stream reach.

Therefore, all future discretionary development that would occur in these areas would be required, to identify sources of water supply, including groundwater withdrawal or water allocation from a local water district. As described above, existing State regulations preclude the SWRCB from accepting applications for consumptive use in fully appropriated stream reaches. Where surface water is diverted for such use as agriculture, it is anticipated that this would be consistent with established water rights. As discussed under Impact 4.17-4, policies included in the 2040 General Plan also encourage various planning efforts, including: sustainable water supply plans for water suppliers and groundwater agencies (WR-1.1); development of a diverse water supply portfolio (WR-1.3); participation in regional planning committees to coordinate planning efforts for water and land use (WR-1.5); and, continued support and participation with the Watershed Coalition Ventura County in implementing and updating the Integrated Regional Water Management Plan (WR-1.10).

Because the appropriation of water occurs at the State level, the County cannot authorize additional consumptive use of these waters. Further, discretionary development is required to demonstrate provision of access to adequate water supply through the permit application process. Therefore, the 2040 General Plan would not increase demand for surface water consumptive use from a fully appropriated stream reach, or where unappropriated surface water is unavailable. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-7: Increase Surface Water Consumptive Use (Demand) Including Diversion or Dewatering Downstream Reaches, Resulting in an Adverse Impact on One or More of the Beneficial Uses Listed in the Applicable Basin Plan

As discussed under Impact 4.10-6, above, the County's water supply currently comes from lakes and reservoirs, including Lake Casitas, groundwater, and the State Water Project (Appendix B). Although project-specific details of future development under the 2040 General Plan are not known, it is assumed that water supply sources for future development would use the same sources of supply as existing conditions. Demand for water supply under implementation of the 2040 General Plan is described further in Impact 4.17-4 in Section 4.17, "Utilities."

As described above, the Basin Plans identify the beneficial uses of the waterbodies regulated by the plan. The Basin Plans are adopted by the applicable RWQCB, approved by the State Water Resources Control Board and the Office of Administrative Law, and used as a regulatory tool by the RWQCB. Beneficial uses of the *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (LARWQCB 2019), which covers the majority of the plan area, include agricultural supply, industrial process supply, groundwater recharge, freshwater replenishment, navigation, and hydropower generation.

Future development under the 2040 General Plan would increase water demand. For the plan area, demand related to population growth would be approximately 491,900 gallons per day (approximately 550 acre feet per year), assuming a use rate of 120 gallons per day per capita. Increases to industrial and commercial areas would also increase water demand in the county. However, as discussed above under Impact 4.10-7, water purveyors that serve or plan to serve any land development project subject to approval by the County or a County-dependent special district must prepare a water availability letter declaring that the purveyor's water system has the necessary water capacity available to supply the domestic and firefighting requirements for the project or service area (PWA 2014). This determination would be consistent with State law, including consistency with the beneficial uses of the waterbodies, as identified in the applicable Basin Plan.

In the case of water purveyors classified as Urban Water Suppliers under the Urban Water Management Planning Act, the adoption of a current UWMP that has been accepted by the State Department of Water Resources, the County relies on the UWMP to verify water availability. These UWMPs would ensure that water supplies are properly managed and, thus, would not result in adverse effects to beneficial uses listed in the applicable Basin Plans. Further, State and local regulations require water rights for stream diversion. Therefore, through compliance with existing federal and State regulations, the 2040 General Plan would not result in diversion or dewatering downstream reaches that would result in an adverse impact on one or more of the beneficial uses listed in the Basin Plans. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-8: Degrade the Quality of Surface Water, Causing It to Exceed the Water Quality Objectives Contained in the Applicable Basin Plan

Future development under the 2040 General Plan has the potential to result in direct and indirect impacts on surface water quality. Construction materials, such as gasoline, diesel fuel, lubricating oils, grease, solvents, and paint, would be brought on various project sites and could result in accidental spills or increase the pollutant load in runoff that could adversely affect surface water quality. Development under the 2040 General Plan would increase impervious surfaces. Increased rates of surface water runoff associated with new impervious surfaces could promote increased erosion and sedimentation or other stormwater contamination and adversely affect surface water quality. The main sources of long-term stormwater pollution from development are roads, automobiles, landscaping, industrial activity, spills, and illegal dumping. Developed areas can produce stormwater runoff that contains oil, grease, and heavy metals, that can be carry sediment into drainage pathways, and ultimately to adjacent water bodies. Further, permitted uses under the Open Space, Agricultural, Residential, and Special Purpose Zones such as animal husbandry and agricultural uses and oil and gas exploration and production, could result in polluted stormwater runoff.

However, the purpose of the Basin Plans is to manage the quality of surface water and groundwater in Ventura County to provide the highest water quality reasonably possible. The Basin Plans include various objectives for the protection of surface water quality, including ensuring maintenance of healthy levels of ammonia, nitrates, bacteria such as coliform organisms, chemical constituents and radionuclides, inorganic constituents, and nitrogen. Further, future development would comply with Section 8109-0.5 of the County's Non-Coastal Zoning Ordinance, which requires compliance with Ventura Countywide Stormwater Quality Management Program (SQMP), the NPDES permit issued by the appropriate RWQCB, and the Ventura Stormwater Quality Management Ordinance. The SQMP would require future development to implement stormwater BMPs, such as treatment control measures during construction and implementation of biofiltration basins during operations, while compliance with the NPDES permit and the Ventura Stormwater Quality Management Ordinance would prohibit discharge of pollutants from any point source unless the discharge is in compliance with the NPDES permit (Ventura County 2019a).

Oil and gas development would be required to comply with Section 8107-5.6 of the Non-Coastal Zoning Ordinance, which requires that permittees for all oil and gas development projects submit a plan to the County for controlling oil spillage and preventing saline or other polluting or contaminating substances from reaching surface or subsurface waters, consistent with local, State, and federal regulations (Ventura County 2019a). Similarly, oil and gas development within the Coastal Zone shall comply with Section 8175-5.7.8 of the Coastal Zoning Ordinance, which requires that any oil, produced water, drilling fluids, cuttings, and other contaminant associated with the drilling, production, storage, and transport of oil be contained on the site unless properly transported off-site or injected into a well, treated, or reused in an approved manner on-site or, if allowed, on-site. All appropriate permits shall be secured and the permittee shall also submit a plan for preventing oil spillage and prevent saline or other polluting or contaminating substances from reaching surface waters (Ventura County 2017).

Further, all waste discharges, including discharges to surface water, are subject to California Water Code Sections 13260 and 13263, which requires that each RWQCB to prescribe discharge requirements for waste discharges. Water discharges are also subject to California Code of Regulations Title 23, which incorporates waste discharge requirements for discharges to surface water (Los Angeles Regional Water Quality Control Board 2019). Lastly, all oil and gas drilling activities are subject to the DOGGR which outlines additional water quality requirements for oil, gas, and geothermal projects (Department of Conservation 2019). Therefore, through compliance with existing federal and State regulations, as enforced through NPDES permit requirements, new point sources generated by future development under the 2040 General Plan would not result in degradation of surface water quality, causing it to exceed the water quality objectives contained in the Basin Plan. For these reasons, the 2040 General Plan also would not result in substantial risk of release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-9: Cause Stormwater Quality to Exceed Water Quality Objectives or Standards in the Applicable MS4 Permit or Any Other NPDES Permits

The SWRCB and the RWQCBs, through powers granted by the federal Clean Water Act, require specific permits for a variety of activities that have potential to discharge pollutants to waters of the State and adversely affect water quality. To receive an NPDES permit, a notice of intent to discharge must be submitted to the RWQCB and design and operational best management practices (BMPs) must be implemented to reduce the level of contaminated runoff (SWRCB 2004). BMPs can include the development and implementation of regulatory measures (local authority of drainage facility design), various practices, including educational measures (workshops informing public of what impacts result when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures (label storm drain inlets as to impacts of dumping on receiving waters), and structural measures (filter strips, grass swales, and retention basins). All NPDES permits also have inspection, monitoring, and reporting requirements (SWRCB 2004).

The NPDES program also regulates stormwater discharges from municipal separate storm sewer systems (MS4). Pursuant to the Federal Water Pollution Control Act (Clean Water Act) Section 402(p), storm water permits are required for discharges from an MS4 serving a population of 100,000 or more. The Municipal Storm Water Program manages the Phase I Permit Program (serving municipalities over 100,000 people), the Phase II Permit Program (for municipalities less than 100,000), and the Statewide Storm Water Permit for the State of California Department of Transportation. The SWRCB and RWQCB implement and enforce the Municipal Storm Water Program (SWRCB 2019). All stormwater discharge conveyance from future development under the 2040 General Plan would be required to occur within MS4 systems. For these reasons, the 2040 General Plan also would not result in substantial risk of release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. Thus, through compliance with existing regulations and permits, such as NPDES and MS4 permits, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-10: Be Located within 10 to 20 Feet of Vertical Elevation from an Enclosed Body of Water Such as a Lake or Reservoir, Resulting in a Seiche Hazard

Projects located within about 10 to 20 feet of vertical elevation from an enclosed body of water such as a lake or reservoir are considered more likely to be exposed to a seiche hazard; the precise height of hazard above the water level is dependent on the ground motion intensity, duration of shaking, and subsurface topography of the lake or reservoir and surface topography of the shoreline (Ventura County 2011). Lakes and reservoirs within the plan area include the Matilija Reservoir, Lake Casitas, and Lake Piru Reservoir (Appendix B).

Development under the 2040 General Plan could occur within seiche hazard zones. However, the 2040 General Plan includes policies such as Policy HAZ-4.14, which restricts development in these areas unless a geotechnical investigation has been performed and appropriate standards are incorporated into project design to protect structures from seiche hazards.

Further, Policy HAZ-4.18 requires that the County considers Seiche Hazard Areas during the preparation of regional and Area Plans and special studies, and that these areas are used to guide future investigations of the hazard. Policies are in place that would ensure future development under the 2040 General Plan would incorporate appropriate measures to protect structures from seiche hazards. This discussion of potential exposure to risk involving seiche hazards is provided for information purposes only and is neither required by CEQA nor subject to its requirements.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-11: Be Located in a Mapped Area of Tsunami Hazard

The tsunami hazard zone extends along the coastal portion of the county (Ventura County 2019b). For most portions of the north and south coastal areas, the tsunami hazard does not extend to areas more than 30 feet above sea level. Land use designations within these areas would mostly consist of Open Space, with very limited areas designated as Industrial, Agricultural, Low-Density Residential, and Commercial. Although limited development is projected to occur within these areas under the 2040 General Plan, people and structures in may be located in areas at risk. County plans to assess and address these hazards are outlined in the *Tsunami Operational Area Response Guide* (Ventura County 2017) contained within the Ventura County Emergency Operations Plan. For tsunamis hazards, a warning system and evacuation plan is in place that is considered to provide adequate protection in the event of a major tsunami being generated beyond the Santa Barbara Channel. For projects subject to potential hazards from wave action or tsunamis, the owners are required to understand the potential hazards and to record a "Restrictive Covenant and Notice of Responsibilities" on the subject property (Ventura County 2011).

The County has roadways dedicated for tsunami evacuation routes (Ventura County 2019b). The 2040 General Plan incorporates Program E, which requires that the County update planning documents, maps, and the *Tsunami Operational Area Response Guide* (Ventura County 2017), when necessary to reflect the most current tsunami information, and identify actions necessary to mitigate property damage, and maintain evacuation readiness. This discussion of potential exposure to risk involving tsunami hazards is provided for information purposes only and is neither required by CEQA nor subject to its requirements.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-12: Result in Erosion, Siltation, or Flooding Hazards

Construction activities associated with future development under the 2040 General Plan would include grading, demolition, and vegetation removal which have the potential to temporarily alter drainage patterns. These activities could expose bare soil to rainfall and stormwater runoff, which could accelerate erosion and could result in sedimentation or siltation of stormwater and, eventually, water bodies. For example, removal of vegetation, excavation, grading, stockpiling of soils for new buildings, and building foundations would create soil disturbance that could accelerate erosion, especially during storm events. If not properly planned for, alteration of the existing drainage pattern could also result in increased runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. However, all future development under the 2040 General Plan would be required to comply with the Ventura Countywide Stormwater Quality Management Program (SQMP), meant to improve water quality and mitigate potential water quality impacts. Compliance with the SQMP would require implementation of stormwater BMPs, such as treatment control measures during construction (Appendix B).

During operation, future development under the 2040 General Plan could alter the existing drainage pattern of the site through the addition of impervious surfaces throughout the county. Increased rates of surface water runoff associated with new impervious surfaces could promote increased erosion and sedimentation or other stormwater contamination and negatively impact surface water and groundwater quality. Similar to potential construction impacts, the County's SQMP would require implementation of stormwater control BMPs, such as biofiltration basins, to ensure stormwater runoff from future development under the 2040 General Plan does not result in additional sources of polluted runoff (Appendix B). Finally, the 2040 General Plan incorporates comprehensive policies that require drainage studies and BMPs for future development projects. For instance, Policy PFS-6.1 requires that all discretionary development provides flood control and drainage facilities, as deemed necessary by the County Public Works Agency and Watershed Protection District, and that discretionary development projects fund improvements to existing flood control facilities necessitated by or required by the development. Policy HAZ-4.12 requires drainage plans that direct runoff and drainage away from slopes, for construction in hillside areas. These policies would ensure that alteration of drainage patterns do not result in erosion, siltation, or flooding hazards. Further, for all future development within the El Rio/Del Norte Area Plan, development would be required to fund a deficiency study to identify existing flooding and erosion or siltation problems and, if necessary, an improvement plan to determine appropriate flood control and drainage facilities necessary to reduce potential impacts. Development within the Oak Park Area Plan, Ojai Valley Area Plan, Piru Area Plan, and Lake Sherwood/Hidden Valley Area Plan is also required to incorporate design that would avoid aggravating flood hazards. With implementation of BMPs required under the County's SQMP, proposed policies under the 2040 General Plan, and Area Plans, future development under the 2040 General Plan would not result in substantial erosion, siltation, or flooding hazards. For these reasons, the 2040 General Plan also would not result in substantial risk of release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-13: Be Located in a Mapped Area of Flood Hazards

Various areas of the county are mapped as areas susceptible to flood hazards, as identified by FEMA's Ventura County DFIRM and Ventura County Watershed Protection District (Appendix B). Inundation hazards in the county include inundation because of location of development within a 100-year flood zone, as defined by FEMA, and dam failure inundation. Various dams, including 16 dams that constitute failure hazards exist throughout the county. These dams include Bouquet Canyon Dam, Casitas Dam, Castaic Dam, Matilija Dam, Pyramid Dam, and Westlake Reservoir Dam (Appendix B). Because of the programmatic nature of this draft EIR, project-specific evaluation of future development under the 2040 General Plan cannot be performed. However, various policies have been incorporated into the 2040 General Plan to reduce potential impacts related to flooding. These include Policy HAZ-2.1, which limits development within these zones, and HAZ-2.8, which requires that the County consider natural, or nature-based flood protection measures for discretionary development or County-initiated development, when feasible. Further, Policy PFS-6.1 requires discretionary developments to provide flood control facilities.

The DWR, Division of Dam Safety, is charged with the inspection of dams greater than 6 feet in height with impoundments of 50 acre-feet of water or more and all dams greater than 25 feet in height that impound more than 15 acre-feet of water. The State dam safety program includes an annual inspection program to ensure dams are safe and performing as intended, and includes an assessment of seismic, hydrologic, and static parameters. If reviews indicate any areas of concern, further studies are completed to fully understand the potential area of weakness and corrective actions are taken. For very large dams, daily visual inspections are also completed (DWR 2019). Further, to minimize loss of life, injury, property damage related to dam failure, the 2040 General Plan includes Policy HAZ-2.6, which requires the County to record a Notice of Dam Inundation Hazard with the County Recorder for new discretionary entitlements (including subdivisions and land use permits) within areas subject to flooding from a dam breach as identified by DWR's Dam Inundation Maps. This discussion of potential exposure to risk involving flood hazards is provided for information purposes only and is neither required by CEQA nor subject to its requirements.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-14: Impact Flood Control Facilities and Watercourses by Obstructing, Impairing, Diverting, Impeding, or Altering the Characteristics of the Flow of Water, Resulting in Exposing Adjacent Property and the Community to Increased Risk of Flood Hazards

The growth anticipated during the planning horizon for the 2040 General Plan could result in development that directly obstructs, diverts, or impedes the flow of water in a manner that could expose adjacent property or the community to increased risk of flood hazards. Further, future development projects would introduce impervious surfaces to sites that were previously undeveloped which could alter the flow of surface runoff in the area and potentially result in erosion and deposition of additional materials into watercourses (see Impact 4.10-12). Development that occurs during the plan horizon of the 2040 General Plan could place structures in locations that encroach on flood control facilities or that do not have sufficient setback from a watercourse. However, the 2040 General Plan incorporates Policy PFS-6.1, which requires discretionary developments to provide flood control facilities and drainage facilities, as deemed necessary by the County Public Works Agency and Watershed Protection District. Policy PFS-6.1 would ensure adequate flood control facilities are provided for future

development under the 2040 General Plan. Lastly, the County has existing regulations, such as the Ventura County Flood Plain Management Ordinance 4521, the Ventura County Flood Control District Design Manual and the Watershed Protection District Hydrology Manual 2006, that also address flood control and drainage facilities. Compliance with these would be required for all future development under the 2040 General Plan. These regulations incorporate design standards to reduce potential overflow of watercourses would occur that would result in flooding. Further, for all future development within the El Rio/Del Norte Area Plan, development would be required to fund a deficiency study to identify existing flooding and erosion or siltation problems and, if necessary, an improvement plan to determine appropriate flood control and drainage facilities necessary to reduce potential impacts. Development within the Oak Park Area Plan, Ojai Valley Area Plan, Piru Area Plan, and Lake Sherwood/Hidden Valley Area Plan is also required to incorporate design that would avoid aggravating flood hazards.

The 2040 General Plan would result in land use development that could adversely affect flood control facilities by reducing their capacity, introducing impervious surfaces that could increase erosion and sedimentation, and/or encroaching on flood control facilities. However, the 2040 General Plan incorporates Policy PFS-6.1, which would ensure that adequate flood control facilities are provided for future development, as deemed necessary by the County Public Works Agency and Watershed Protection District. The County's existing regulations, such as the Ventura County Flood Plain Management Ordinance 4521 the Ventura County Flood Control District Design Manual and the Watershed Protection District Hydrology Manual 2006, also address flood control and drainage facilities and implement design standards to ensure that no overflow of watercourses would occur that would result in flooding. Through compliance with existing regulations and implementation of policies incorporated into the 2040 General Plan, this impact on flood control facilities would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-15: Result in Conflicts With the Ventura County Watershed Protection District's Comprehensive Plan Through Potential Deposition of Sediment and Debris Materials within Existing Channels and Allied Obstruction of Flow; Overflow of Channels during Design Storm Conditions; and Increased Runoff and the Effects on Areas of Special Flood Hazard and Regulatory Channels Both On- and Off-Site, for Projects Not Located within the Ventura County Watershed Protection District's Comprehensive Plan

As discussed under Impact 4.10-12, future development under the 2040 General Plan could result in sedimentation into existing channels during both construction and operation. For instance, construction materials, such as gasoline, diesel fuel, lubricating oils, grease, solvents, and paint, would be brought on site. If existing drainage patterns are substantially altered, this could result in increase to the pollutant load, such as sediment and debris, in runoff, and eventually in nearby water bodies. Future development could also alter the existing drainage pattern of the site through the addition of impervious surfaces. Increased rates of surface water runoff associated with new impervious surfaces could promote increased sedimentation within existing channels that could obstruct flow. However, all future development under the 2040 General Plan would be required to comply with the Ventura Countywide SQMP. Compliance with the SQMP would result in implementation of stormwater BMPs, such as treatment control measures during construction as well as implementation of stormwater control BMPs, such as biofiltration basins, to ensure stormwater runoff from future development does not result in additional sources of polluted runoff during operation (Appendix B).

As discussed under Impact 4.10-13, various areas of the county are mapped as areas susceptible to flood hazards, as identified by FEMA's Ventura County DFIRM and Ventura County Watershed Protection District. In the absence of stormwater improvements at future development sites, alterations of the drainage pattern could substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. However, various 2040 General Plan policies are incorporated that require drainage studies and BMPs for future development projects. For instance, Policy PFS-6.1 requires that all discretionary development provides flood control and drainage facilities, as deemed necessary by the County Public Works Agency and Watershed Protection District and that discretionary development projects fund improvements to existing flood control facilities necessitated by or required by the development. Thus, the 2040 General Plan would not result in projects that would result in potential deposition of sediment and debris materials within existing channels and allied obstruction of flow, overflow of channels during design storm conditions, or increased runoff and the effects on Areas of Special Flood Hazard and regulatory channels both on- and off-site. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-16: Result in Noncompliance with Building Design and Construction Standards Regulating Flow to and from Natural and Man-Made Drainage Channels

As described in the ISAG, any project that does not comply with the applicable requirements of the listed regulations, manuals and standards is considered to have a potentially significant impact. These regulations include the Ventura County Building Code, Ventura County Land Development Manual, and the Ventura County Subdivision Ordinance, among others. Any future development under the 2040 General Plan would be required to comply with all applicable federal, State, and local regulations, including County regulations related to drainage. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-17: Be Designed to Meet All Applicable Requirements for Onsite Wastewater Treatment Systems

Areas not serviced by wastewater disposal service providers typically have septic systems, also referred to as onsite wastewater treatment systems (OWTS), for public sewer utility. Under the 2040 General Plan, proposed land uses would largely consist of Open Space and Agricultural uses. These land use designations allow for sparse development within large undeveloped land, which could result in the need for OWTS. Residential, Commercial, and Industrial land use designations are also proposed in some areas of the county and are generally located in the vicinity of existing cities, which generally have local or regional sewage disposal systems in place.

Certain areas of the county may have geologic features or soils that are incapable of supporting, or incompatible with, the installation of OWTS, thereby causing adverse groundwater impacts. The County requires OWTS be properly sited pursuant to the findings of a geotechnical report as part of the discretionary and ministerial review process required by the Local Agency Management Program for Onsite Wastewater Treatment Systems. If the moisture content and/or soil type differs at various locations, localized or nonuniform

movement may occur, which cause damage to the septic tank or alternative public sewer utility system. Damage caused by expansive soils can be slow and long term, and not attributable to any particular event. However, construction of OWTS would be required to comply with the existing local regulations including Ventura County Building Code, Articles 1 and 6, Ventura County Sewer Policy, Ventura County Ordinance Code, Division 4, California Plumbing Code, the Environmental Health Division Onsite Wastewater Treatment System Technical Information Manual, and the California Regional Water Quality Control Board Basin Plans (Ventura County 2011). Further, all future OWTS would be required to comply with the Local Agency Management Program for Onsite Wastewater Treatment systems, which includes requirements for permitting of OWTS and limitations of OWTS development (Ventura County Environmental Health 2018). The California SWRCB also adopted the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems in 2012, which sets standards for OWTS that are constructed or replaced, that are subject to a major repair, that pool or discharge waste to the surface of the ground, and that have affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking water or other uses, or cause a health or other public nuisance condition (SWRCB 2019). Through adherence with these regulations, this impact related to construction of OWTS would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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