

**HYDROLOGY AND WATER RESOURCES**

This chapter provides an evaluation of the potential hydrology and water resource effects of implementing the proposed 2035 San Benito County General Plan (2035 General Plan). As established in the Notice of Preparation (see [Appendix A, Notice of Preparation](#)), urban development and other activities resulting from implementation of the 2035 General Plan may result in degradation of hydrology and water resources.

The following environmental assessment includes a review of hydrology and water resources potentially affected by the implementation of the 2035 General Plan, including the availability and quality of water resources and the potential for flooding. Potential effects to water supplies and stormwater conveyance facilities arising from implementation of the 2035 General Plan are evaluated separately in Chapter 20, Utilities and Service Systems, of this RDEIR.

This review addresses applicable federal and state laws, regulations, and programs that relate to surface- and groundwater quality, resource management and protection, and floodplain management and protection. The existing condition of San Benito County (County) water resources was determined through, among other things, a review of local groundwater resource reports, including the Annual Groundwater Reports of the San Benito County Water District (SBCWD) (SBCWD 2006-2014) and recent water resource management plans, including the Hollister Urban Area Water and Wastewater Master Plan (City of Hollister 2008) and the Hollister Urban Area Urban Water Management Plan (City of Hollister 2011). Flood conditions were assessed via Federal Emergency Management Agency (FEMA) regulatory maps and information, as well as maps produced by the California Department of Water Resources (DWR). Potential impacts related to water resources were analyzed based on CEQA assessment criteria and guidelines provided by the County.

## 13.1 SETTING

The environmental and regulatory setting of the County with respect to water resources described below are based on the General Plan Background Report (Background Report)(San Benito County 2010b). Pursuant to §15150 of the State CEQA Guidelines, this document is incorporated into this RDEIR by reference as though fully set forth herein. Where necessary, setting information originating from the 2010 Background Report has been updated with the best available and most current data, as previously discussed in Section 4.3. The Background Report document is available for download at: <http://sanbenitogpu.com/docs.html>. Copies of the Background Report may also be viewed during standard business hours (8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m.), Monday through Thursday, at the San Benito County Planning and Building Department, 2301 Technology Parkway, Hollister, CA 95023-9174. County offices are closed to the public on Fridays.

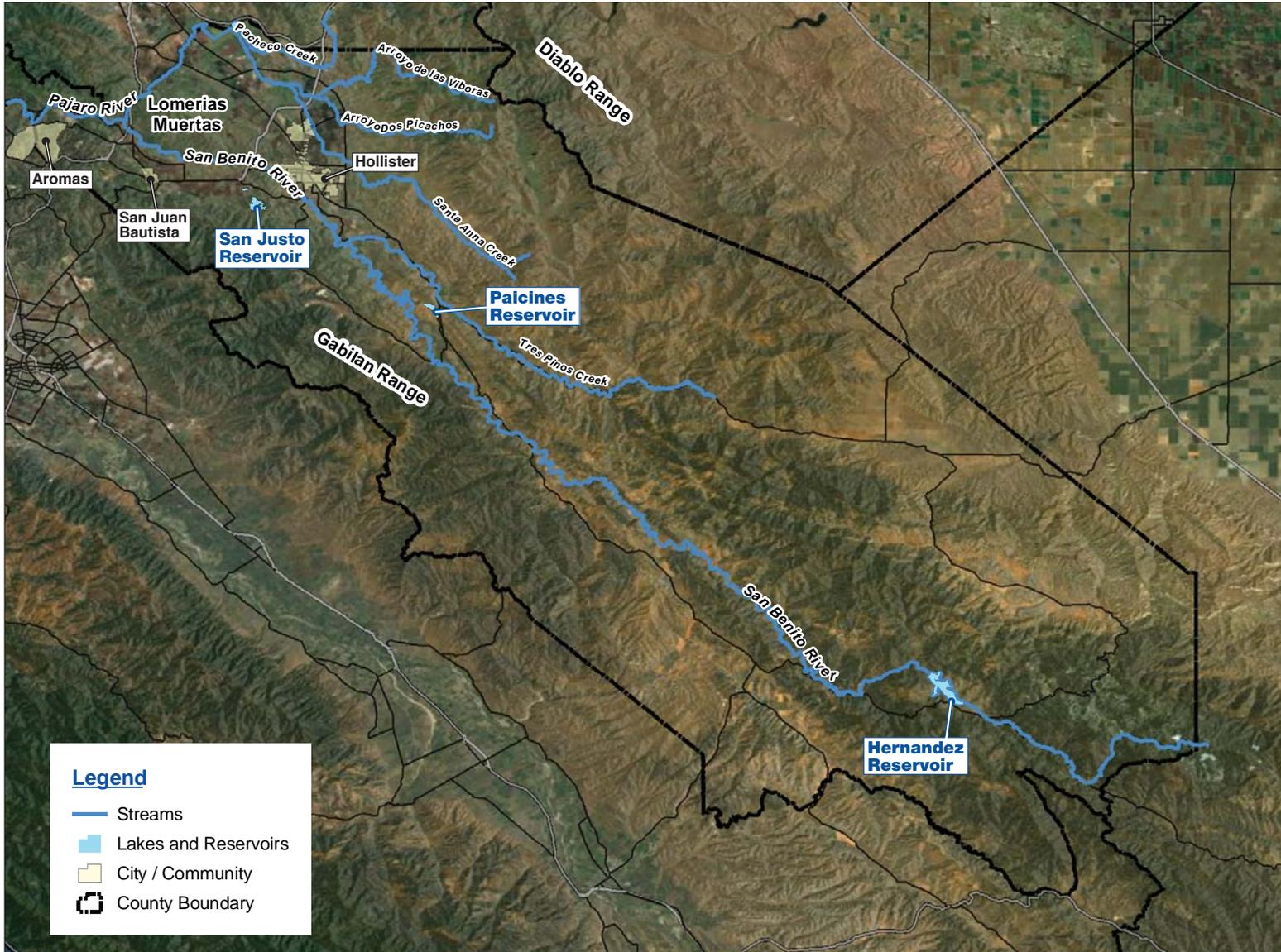
### 13.1.1 Environmental Setting

#### Annual Precipitation

The County has a moderate California coastal climate with a hot and dry summer season typically lasting from May through October. Average annual rainfall ranges from seven inches in the drier eastern portion of the County to 27 inches per year in high elevations to the south. Snowfalls in the mountains are infrequent and relatively light. A comparatively long growing season of 265 days or more prevails, and year-round cropping is practiced to some extent. The County has a high percentage of sunny days, particularly in summer. Most of the annual rainfall occurs in the fall, winter, and to a lesser extent spring, generally between November and April. As a result, agricultural operations require significant irrigation during summer months.

#### Surface Water Resources

The San Benito River runs northward through the County and joins the Pajaro River near Chittenden Gap in the northwest as shown in [Figure 13-1](#). The river is dry most of the year, flowing mainly during wet winter conditions. The drainage for the river is over 600 square miles. Local surface water from the San Benito River is captured and stored in two reservoirs. These reservoirs are operated by SBCWD for flood control and to recharge downstream areas. The available water for percolation depends on hydrologic conditions, in particular, how much rain fall occurred in a given year. Historically, controlled percolation of surplus Central Valley Project (CVP) was managed by SBCWD along selected creeks. Due to concerns about invasive mussels and high groundwater levels within the basin, SBCWD no longer directly percolates



Source: Todd Engineers 2010, Mintier Harnish 2012

# San Benito County Major Rivers and Reservoirs

Figure 13-1

2035 San Benito County General Plan Revised DEIR



0 10 miles



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CVP supplies into local creeks. Percolation of local surface water to the groundwater aquifer is managed by SBCWD in Pacheco Creek, Arroyo De Las Viboras, Arroyo Dos Picachos, Santa Ana Creek, San Benito River, and Tres Pinos Creek. The Pajaro River forms the northern boundary of the County. This watershed covers approximately 1,300 square miles and part of four different counties. Flow in the river is controlled by Pacheco Pass Dam operated by Pacheco Pass Water District. As of 2010, there are five active USGS stream gauges in the County, located on the Pajaro River, San Benito River, Tres Pinos Creek, and Clear Creek. Smaller creeks in the County that have not been or are no longer monitored include Arroyo Dos Picachos, Arroyo Los Viboras, and Santa Ana Creek in the Hollister Valley area; Pacheco Creek in the northern part of the County; Willow Creek and Pescadero Creek in the western part of the County; and Panoche Creek in the eastern part of the County.

### **Groundwater Resources**

Groundwater is the major source of water supply in the County. Groundwater is generally available throughout the County. The County includes all or portions of 12 groundwater basins from which the majority of groundwater in the County is extracted. The groundwater basins drain northward as part of the San Benito River and Pajaro River systems, with the exception of Bitter Water Valley, which drains generally south to the Salinas River Valley, and Panoche and Vallecitos Valleys, which drain to the east toward the San Joaquin River. Most groundwater production occurs in the northern part of the County in the Gilroy-Hollister groundwater basin. The amount of groundwater used in other basins is unknown. For management purposes the Gilroy-Hollister basin is divided into nine groundwater subbasins. These subbasins were originally delineated by SBCWD. The subbasins are referred to as Bolsa, Bolsa Southeast, Pacheco, Northern and Southern Hollister East, Tres Pinos, Hollister West, and San Juan subbasins. The Llagas subbasin is also within the Gilroy-Hollister groundwater basin, but in Santa Clara County. The subbasin boundaries are based on a combination of infrastructure (CVP subsystems), political boundaries, major roads, and geologic structures such as faults.

### **Hydrogeologic Setting**

The Gilroy-Hollister groundwater basin is the primary geologic feature relating to water resources and encompasses most of the northern portion of the County. This basin lies within the Coast Ranges of California, which are a series of elongated ranges and valleys with a predominantly northwesterly trend. The Hollister Valley origin and shape has been controlled by folding and faulting of basement rocks in the area, resulting in low-lying areas that have been infilled with unconsolidated to poorly consolidated alluvium of Tertiary and Quaternary age. The Quaternary alluvial deposits compose the valley floor and generally define the groundwater basin. Numerous investigators have recognized the difficulty in describing the subsurface

stratigraphy of the basin, due in part to sparse geophysical log data and a lack of distinctive textures and composition among the sedimentary units.

Major geologic faults, including the San Andreas and Calaveras faults, cut through the area disrupting rock units and shaping the valley. Numerous additional faults that are related to the San Andreas system have been mapped in the area and trend parallel or subparallel to the San Andreas Fault trace. Of these, the Calaveras fault is the most extensively mapped. It branches off of the San Andreas south of Hollister and trends north-northwest from Hollister to the Pajaro River at San Felipe Lake, separating the northern valley into two distinct geologic units at depth. The fault is thought to impact groundwater flow locally, perhaps due to the presence of low permeability rock fragments and blocks displaced upward and adjacent to more permeable alluvial material along the fault zone. Other faults related to the San Andreas system, such as the Sargent, Zayante, Quien Sabe, and Vergeles faults, have shaped the eastern side of the Gilroy-Hollister basin. Although some of these faults have been mapped in the outcropping bedrock, fault traces across the valley floor are unknown.

The Quaternary-age alluvium contains the main aquifers in the Gilroy-Hollister basin. The aquifers are the coarse-grain layers of sands and gravels with interbedded layers of silts and clays. The geometry of the basin suggests that basin-fill units were deposited in alluvial fan and fluvial environments from a variety of source rocks and directions. These deposits interfinger in the subsurface, making the differentiation of discrete aquifer packages difficult on a regional basis. This also results in variable aquifer properties across the basin. Previous investigators indicate wide variability in aquifer transmissivities. Although poorly defined, regional variations in permeability likely create preferential pathways for groundwater, especially in paleo-channel deposits, which may exist beneath current major stream courses or elsewhere in the basin. Groundwater generally occurs under unconfined and confined conditions. Surficial clay deposits, especially in the Bolsa and San Juan Valley subbasins, create confining layers. These layers created artesian conditions historically and water in wells flowed to the surface. A 1924 USGS study delineated a 25-square mile area of artesian flow in the Bolsa subbasin. Since about 1945, groundwater extraction has lowered the water table in these areas, but artesian conditions are still observed.

#### **Groundwater Water Quality**

The quality of groundwater in the Gilroy-Hollister groundwater basin is highly mineralized in some areas and of marginal quality for drinking and agricultural purposes. The mineralized water quality is typical of other relatively small Coast Range groundwater basins, but has also been impacted by decades of human-related activities, both agricultural and urban. Chemicals of concern for the Gilroy-Hollister groundwater basin include boron, chloride, hardness, nitrate, and total dissolved solids. In some parts of the basin, these chemicals of concern do not meet water quality standards necessary to support beneficial uses of water resources.

SBCWD, water purveyors, and other agencies are examining ways to improve quality in these localized areas. In addition to the historical chemicals of concern, current operations by regulated facilities have introduced new local chemicals of concern including perchlorate, metals, and volatile organic chemicals. All areas where these chemicals of concern have been discovered are regulated by the CCRWQCB. Water quality has remained stable in recent years in most areas in the Gilroy-Hollister basin. Some areas, such as the eastern portion of the San Juan subbasin, have shown variable but increasing trends in key constituents like nitrate and chloride, which are from local factors including nearby regulated facilities, land use changes, and high groundwater levels. Total dissolved solids, nitrate, and chloride vary both over time and space in the basin and indicate general trends in basin water quality.

### **Groundwater Levels**

In general, groundwater in the basin flows from the southeast and eastern portions of the basin toward the western and northwestern portions of the basin to the Pajaro River. However, general flow directions have been reversed in the Bolsa subbasin due to groundwater pumping. Groundwater in the Bolsa subbasin near the Pajaro River flows southeast toward lower water levels. Groundwater levels have been recorded in the basin since at least 1913 by various agencies including the U.S. Bureau of Reclamation (USBR), DWR, Pacheco Pass Water District, the County, University of California Cooperative Extension, and USGS. Since 1981, SBCWD has monitored water levels in approximately 80 to 100 wells on a semiannual and, more recently, a quarterly basis. Water levels and trends are presented in SBCWD annual reports.

Water levels over time have varied in response to varying precipitation, groundwater pumping, and artificial recharge conditions. Water levels are estimated to have been at historic highs prior to 1913 (i.e., before development of groundwater pumping). In drought conditions of the late 1970s, water levels in some areas had declined more than 150 feet from the estimated highs. With the exception of a few areas of persistent water level lows, by 1998 groundwater levels had recovered close to the historic highs as a result of decreased pumping (following CVP importation), increased precipitation, and artificial recharge.

Water levels in wells typically fluctuate 5 to 15 feet on a seasonal basis except in the Bolsa subbasin where water levels in confined aquifers have seasonal fluctuations of 30 to 40 feet. The recent multi-year drought that began in 2012 has resulted in groundwater declines of 10 to 20 feet within the majority of the subbasins in the San Benito Gilroy-Hollister groundwater basin. Water levels in the Bolsa subbasin appear to have dropped further between July 2014 and October 2014. However, this conclusion is based on water levels measured in only two wells and those wells may be subject to localized effects. Additional data are needed to confirm this decline. The majority of the San Benito-Gilroy Hollister basin remains well above historic lows and groundwater storage appears to be available for short term use. If dry conditions persist,

either the basin must be replenished with natural or imported water, or water demand must be decreased to prevent additional declines. The need for conservation during such drought periods is true throughout California and existing identified County and State policies exist to address such drought periods (see Chapter 20, Utilities and Service Systems). The major findings of the Background Report and the SBCWD Annual Groundwater Reports on which the Background Report is based with respect to water resources are set forth below.

### **Floodplain Flooding**

Flooding along river and stream corridors is a natural occurrence in the major river valleys and tributary basins within the County. The largest low lying area of the County is at its north end. In this area the topography between the Gabilan Range to the west and the Diablo Range to the east is dominated by two structural basins, the San Juan Valley and the Hollister Valley. The generally level topography on these valley floors contributes to flooding problems, since once water rises above (or flows around) streambanks or levees, it may spread out over very large areas. However, the valley margins have low foothills and sloping alluvial fans. The southern portion of the County has relatively confined valleys and narrow tributary canyons, with local basins and floodplains at moderate elevations within the watersheds.

Normal flooding processes in the County are driven by rainfall precipitation associated with regional frontal storm systems that occur from November through April. While the surrounding mountain ranges reach relatively high elevations, the regional climate is relatively warm and snowmelt processes are not common. In the headwater areas, steep terrain, narrow canyons, and unstable geologic materials can result in landslides that temporarily block drainage. These temporary blockages can then fail, thereby releasing sediment laden floodwaters. Floodplains within the County are generally narrow. In the two northern valleys the floodplains do not cover the entire valley floors, although some of the more densely populated communities and cities have small portions within designated floodplains.

*Flood Management.* Flood management within the County is primarily a local government function, as there are no major State or Federal flood protection systems or facilities within the County. As such, the County is the responsible local agency for overseeing floodplain land use decisions and for planning emergency preparedness and response measures.

*FEMA Floodplains.* FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding for each community on their Flood Insurance Rate Maps (FIRM). The 100-year flood is the base flood event for land use planning and protection of property and human safety. The delineation of areas within the 100 year floodplain represents a statistical probability for the long-term average occurrence of flooding of 1 percent annually. Flooding in a 100 year floodplain can occur more or less frequently than once in a hundred years, and is considered a high risk area. FEMA also maps lower risk floodplains that have a 0.2 percent annual chance of flooding (the 500-year event). Roughly 4 percent of the County is mapped

within high risk (100 year) floodplains on the FEMA effective FIRMs. Less than 1 percent of the County is within FEMA designated low risk floodplains (500 year).

As might be expected, the largest continuous area of 100-year floodplain is along the San Benito River corridor. The floodplain is confined through the headwaters, the Hernandez Reservoir, and middle reach of the river. Downstream of Willow Creek the floodplain broadens, and there are contiguous floodplain connections at the Pescadero/Thompson Creek and Tres Pinos Creek confluences. The San Benito River 100-year floodplain skirts the west side of the city of Hollister, and remains moderately broad along the north side of the San Juan Valley until it meets the Pajaro River along the northern edge of the County. A narrow 100-year floodplain is present on several of the tributaries to the San Benito River, including some isolated valleys with broad floodplains on Quien Sabe Creek and Las Aguilas Creek, both tributaries to Tres Pinos Creek.

There are large areas of 100-year floodplains northeast and north of the city of Hollister, in the Tequisquita Slough watershed. There are active floodplains along Santa Ana Creek, Arroyo Dos Picachos, Arroyo de Los Viboras, and Pacheco Creek, as well as where they converge into the Pajaro River. In the Panoche and Silver Creek watersheds, which drain east off the Diablo Range into the Central Valley, narrow 100-year floodplains are identified in southeastern the County near the communities of Panoche and New Idria, respectively. Each of the three watersheds of southwestern County that drain west off the Gabilan Range into the Salinas Valley, Chalone, Topo, and Lewis Creeks, have 100-year floodplains. Floodplains in these dispersed and remote locations, while not affecting large populations, pose risks to rural residential use, agricultural lands, and the transportation networks that provide access to mining and recreation.

*DWR Awareness Floodplains.* The DWR Awareness Floodplain maps are for areas that are not currently mapped as a regulated floodplain but, based on approximate assessment procedures, are flood-prone areas. The DWR awareness floodplain maps are not FEMA regulatory maps, but may be included on FEMA maps at the request of affected communities. The DWR mapping is overlain on 1:24,000 USGS topographic quadrangles, and nearly all of the County quadrangles are complete. Figure 13-2 depicts the DWR Awareness Floodplain areas within the County. The awareness floodplain areas are generally narrow corridors along stream channels that are connected to, and typically extend up stream/up valley from, the identified FEMA high risk (100-year) floodplains. These DWR mapped floodplains, while developed from approximate methods, are useful indicators of flood prone areas to be avoided and/or studied in detail prior to potential development.

*Local Flooding.* Some areas of the County that are vulnerable during major floods can also experience damaging flood flows during events smaller than the 100-year event due to channel capacity problems, low topography, or blocked drainage. Localized flooding in the area near

Fallon and Fairview in the Santa Ana Creek watershed has been the subject of drainage improvement studies that have been adopted and are now used.

*Dam Failure Inundation.* Several dams in or adjacent to the County provide beneficial water supply storage and serve irrigation and recreation needs. However, the reservoirs could inundate portions of the County in the event of a dam failure. Dam failure can occur as a result of various natural or human causes. Dams are evaluated regularly to verify their structural integrity, including additional stresses that may result from local or regional earthquakes. Flooding associated with dam failure on one of the local or upstream dams has a low probability for occurrence. However, a dam failure has the potential to cause loss of life, damage to property, and other related hazards, along with displacement of residents and/or damage to water resource and other infrastructure facilities (e.g., irrigation, electric power generation or transmission, transportation).

The dams and reservoirs affecting the County include several that are isolated in remote valleys and two (San Justo and Leroy Anderson Dams) that are larger and close to populated areas. Emergency planning and preparedness by the San Benito County Office of Emergency Services (SBOES) includes consideration of possible dam failure inundation areas. The SBOES receives updated dam inundation information from the State Office of Emergency Services (OES), and is responsible for identifying evacuation routes and other response measures within the County. The San Justo Dam and Reservoir is part of the U.S. Bureau of Reclamation's CVP. It is an offstream storage facility constructed in 1987, located about three miles southwest of Hollister. The San Justo Dam is an earthfill structure 151 feet high with a crest length of 1,116 feet. It includes a dike structure 79 feet high with a crest length of 1,296 feet. These features form a reservoir with 9,785 acre feet of capacity. CVP water brought into the County is delivered and stored in the San Justo Reservoir; it is used to supplement deliveries during high demand. It is also used to percolate into the groundwater supplies, and for recreation.

Management of water distribution, water systems, and lake levels are under SBCWD by contract with the Federal Bureau of Reclamation. The SBOES has a copy of the San Justo Dam Emergency Action Plan (EAP) and its potential inundation area map. In the event of a complete failure, water from the reservoir behind San Justo Dam could inundate the San Juan Valley and flow across the lower San Benito River floodplain to the Parajo River. While the City of San Juan Bautista would not be expected to experience inundation, unincorporated lands throughout the San Juan Valley could be affected. The Leroy Anderson Dam is located in Santa Clara County; however, its inundation zones could affect the County in the unlikely event of a failure. The SBOES has participated in multi-jurisdictional planning with the SCVWD for updates to their Anderson Dam EAP, which is maintained by the SCVWD. The Hernandez Reservoir and other remotely located reservoirs in the County, in the event of a failure, would cause little damage to existing developed areas and/or existing infrastructure, but future land use planning decisions should consider the potential risks from dam failure inundation.

### **13.1.2 Regulatory Setting**

#### **Federal**

- **FEMA's National Flood Insurance Program.** The County is a participant in FEMA's National Flood Insurance Program, and must meet FEMA standards for flood protection facilities and floodplain management.
- **Clean Water Act (CWA).** The CWA is the cornerstone of surface water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Section 303 of the CWA requires states to adopt water quality standards for all surface water of the United States. In 1972, the CWA was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Section 401 of the CWA requires review by the CCRWQCB for projects that involve modifications to, or the filling of, a river or creek. Section 404 of the CWA requires a permit from the Army Corps of Engineers for the discharge of dredged fill material into navigable waters at specified disposal sites. The 1987 amendments to the CWA added Section 402(p), which establish a framework for regulating municipal and industrial stormwater discharges, including discharges associated with construction activities, under the NPDES program. The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA.
- **U.S. Environmental Protection Agency (USEPA).** The USEPA is responsible for developing and enforcing regulations that implement environmental laws enacted by Congress. It is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits, and for monitoring and enforcing compliance. The USEPA Office of Wastewater Management (OWM) supports the CWA by promoting effective and responsible water use, treatment, disposal, and management, and by encouraging the protection and restoration of watersheds. The OWM is responsible for directing the NPDES permit, pretreatment, and municipal bio-solids management programs (including beneficial use) under the CWA. In 1990, USEPA published final regulations establishing stormwater permit application requirements known as Phase I of the NPDES program that cover medium to large municipal separate storm sewer systems (MS4) serving populations greater than 100,000, industrial sites, and construction sites greater than five acres. Phase II of the NPDES program requires operators of small MS4s (serving less than 100,000) in urbanized areas and small construction sites between one and five acres to be covered under a NPDES permit, and to implement programs and practices to control polluted

stormwater runoff. The Phase II Small MS4 General Permit (Order No. 2013-0001) was adopted and became effective on July 1, 2013.

### State

- **Groundwater Management Act (California Water Code §§ 10750-10755.4).** The Act provides a systematic procedure for management agencies to develop a groundwater management plan. SBCWD, in collaboration with local organizations, has developed a groundwater management plan consistent with the Water Code, and is actively managing groundwater resources. In 2014, the Legislature enacted the Sustainable Groundwater Management Act (Water Code §§ 10720–10728.6), which took effect January 1, 2015. Under that Act, local agencies, individually or in combination, will be required to develop groundwater sustainability plans for each basin or subbasin designated by the DWR. The Act requires that a plan demonstrate how the basin or subbasin will be operated within its sustainable yield within approximately 20 years of the plan’s adoption. The plans for most basins and subbasins will be due in 2022. Plans for basins and subbasins that DWR finds to be “critically overdraft” will be due in 2020. Currently, none of the basins or subbasins in the County have been identified by DWR as critically overdrafted.
- **Groundwater Monitoring Program Act (California Water Code §§ 10920 and 10936.4).** The Act established a monitoring program for all DWR-defined groundwater basins in California. SBCWD, the groundwater monitoring entity for County groundwater basins, maintains an active water resource monitoring program in the County portion of the Gilroy-Hollister basin, where most County groundwater pumping and management occurs.
- **California Water Code** The California Water Code, and related sections of the California Code of Regulations, establishes the governing law pertaining to all aspects of water management in California. Domestic water service in the unincorporated areas of the County is generally provided by special districts or private groundwater supply wells.
- **Title 22 of California Code of Regulations.** Title 22 regulates the use of reclaimed wastewater and its allowable application on edible and/or food crops, orchards, vineyards, parks, playgrounds, and landscaping. Regulation of reclaimed water is governed by the nine RWQCBs and the CDPH.
- **State Water Resources Control Board.** The SWRCB, in coordination with nine RWQCBs, performs functions related to water quality, including issuance of wastewater discharge permits (NPDES and Waste Discharge Requirements and other programs regulating stormwater runoff, and underground and above-ground storage tanks. San Benito County falls within the jurisdiction of the CCRWQCB. The Basin Plan of the

CCRWQCB includes designation of beneficial uses of waters, water quality objectives to meet those uses, and description of programs and actions that need to be implemented to achieve the objectives. The Basin Plan review determined that groundwater recharge area protection is a high priority. The SWRCB's Recycled Water Policy encourages water recycling and development of a salt and nutrient management plan by 2014. In 2014, the SWRCB took over responsibility for the Drinking Water Program from the CDPH.

- **NPDES General Permit.** In California, owners of construction projects that will disturb more than one acre may obtain NPDES general permit coverage by submitting Permit Registration Documents, including a Stormwater Pollution Prevention Plan (SWPPP) under SWRCB Order No. 2009-0009-DWQ (NPDES No. CAS000002), as amended by 2010-0014-DWQ and 2012-0006-DWQ. The California general permit requires a risk level determination based on site and receiving water characteristics, a range of monitoring, sampling and discharge requirements based on defined risk level, and post construction runoff reduction requirements that went into effect September 2012. The CCRWQCB requires all wastewater collection and disposal providers to prepare both a long-term wastewater management plan according to wastewater requirements, and a Sewer System Management Plan according to the Statewide General Order Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-003-DWQ), which was adopted in 2006 and requires wastewater collection and service providers to report all sanitary sewer overflows and management plans for all sanitary sewer systems.

No municipalities in San Benito County are covered under the Phase I NPDES program. Under Phase II, small MS4s in an urban area with a population of 50,000 and density of 1,000 persons/square mile are required to obtain coverage under the SWRCB General Permit. The City of Hollister is a current participant in the Phase II municipal NPDES program, but no communities in unincorporated areas participate in the Phase II program.

- **Total Maximum Daily Load (TMDL).** The RWQCBs, SWRCB, and USEPA also establish and approve TMDL programs for water bodies that are identified as impaired and in need of actions to implement applicable water quality standards under Section 303(d) of the CWA. In San Benito County several water bodies have approved TMDLs to address specific constituents of concern several of which are linked to stormwater runoff and surface erosion sources (see [Table 13-1](#)). The TMDLs establish implementation activities to achieve the numeric targets for the constituents and impose regulatory mechanisms for various discharge types. Point source pollution is regulated through NPDES permits, such as an MS4 permit or the construction general permit. Nonpoint source pollution is regulated under State law (Porter Cologne Water Quality Control Act) through WDRs, waivers of WDRs, and basin plan prohibitions. The streams and water bodies discussed below are identified as impaired under Section 303(d) of the CWA.

**Table 13-1 TMDL Status of 303(d) Impaired Water Bodies in San Benito County**

<b>TMDL Project</b>	<b>Status</b>	<b>Implementation Actions</b>
Pajaro River Watershed Sediment TMDL	EPA approved May 3, 2007	Pajaro River Watershed land disturbance prohibition or other NPS <sup>1</sup> compliance
Pajaro River Watershed Nitrate TMDL <sup>2</sup>	EPA approved October 13, 2006	Load allocations to point and NPS; reduction of croplands under Irrigated Lands Conditional Waivers of WDRs
Pajaro River Fecal Coliform TMDL	EPA approved August 3, 2010	Pending: Domestic Animal Waste and Human Fecal Material Discharge Prohibitions
Pajaro River Fecal Coliform Chlorpyrifos and Diazinon	EPA approved November 12, 2013	Aquatic habitat impairment controls, improvement in water quality
Clear Creek and Hernandez Reservoir Mercury TMDL	EPA approved June 21, 2004	Remedial erosion control measures by the US Bureau of Land Management (complete)

*Source:* CCRWQCB 2014.

*Note:* <sup>1</sup>NPS = non-point source.

<sup>2</sup>The only section within San Benito County is along the main stem of Pajaro River on the County border.

Past mining activities for asbestos, chromium, mercury, and other metals in the watershed of Clear Creek, in the headwaters of the San Benito River including Hernandez Reservoir, have contributed to the need for the mercury TMDL. The land use legacy effects and modern erosion factors require management, and the TMDL requires the U.S. Bureau of Land Management (BLM) to continue to control mercury-rich sediment runoff to achieve the load allocation limits for Clear Creek and restore beneficial uses of the reservoir. Remedial actions have been implemented by the BLM.

In addition to the water bodies that already have adopted TMDLs in place, others within San Benito County have recently been identified as 303(d) listed and needing TMDLs, including: Pacheco Creek, San Juan Creek, Tequisquita Slough, and Tres Pinos Creek. Once approved, the TMDLs may impose modifications to stormwater management, erosion control, or other measures to meet the requirements.

- **Small Community Wastewater Grant Program.** The small community wastewater grant program, funded by Propositions 40 and 50, provides grant assistance for the construction of publicly-owned wastewater treatment and collection facilities. Grants are available for small communities with financial hardships. Communities must comply with population

restrictions (maximum population of 20,000 people) and annual median household income provisions (maximum of \$37,994) to qualify for funding under this program.

- **California Code of Regulations (CCR).** In accordance with CCR Title 27, Division 2, Subdivision 1, Chapter 4, §§ 21440 through 22103, solid and hazardous waste transfer and disposal facilities in the County are regulated jointly by the CCRWQCB and CalRecycle. Compost facilities are regulated under CCR Title 14, Division 7, Chapter 3.1 §§ 17850 to 17895, by CalRecycle. Permit requests, reports of waste discharge, and reports and disposal site information are submitted to the RWQCB and CalRecycle, and are used by the two agencies to review, permit, and monitor these facilities. Both the RWQCB and CalRecycle regulate facilities individually and through local enforcement agencies staffed by County employees. In the County, the local enforcement agency (LEA) for CalRecycle was the Environmental Health Division. In 2012, San Benito County requested that CalRecycle resume responsibility, which it did (Anyeneh 2014).
- **SWRCB's Recycled Water Policy.** The policy encourages water recycling and the development of a salt and nutrient management plan by 2014.
- **SWPPP.** As noted above, construction activity on projects that disturb one or more acres of soil, or less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, must comply with the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a SWPPP. The SWPPP should identify stormwater collection and discharge points, drainage patterns across the project, and best management practices that the discharger will use to protect stormwater runoff and the placement of those best management practices.
- **Streambed Alteration Agreement.** Fish and Game Code Section 1602 requires parties seeking modifications to “the bed, channel, or bank of, any river, stream or lake” obtain a Streambed Alteration Agreement from the California Department of Fish and Wildlife.

## Regional

- **Basin Plan of the CCRWQCB.** The Plan includes designation of beneficial uses of waters, water quality objectives to meet those uses, and descriptions of programs and actions that need to be implemented to achieve the objectives. The 2009 Basin Plan review determined that groundwater recharge area protection is a high priority.

- **The Pajaro River Watershed Collaborative (Collaborative).** The Collaborative was established in October 2004 via a memorandum of understanding between the Pajaro Valley Water Management Agency, SBCWD, and SCVWD to coordinate water resources planning and implementation watershed wide. The Collaborative partners have led the development of the IRWMP, with goals and objectives focused on water supply, water quality, flood protection, environmental protection and enhancement. As a partner in the Collaborative, San Benito County is responsible for assisting in priority IRWMP projects and participating in review of all development applications for consistency with the adopted IRWMP.

## County

- **Pajaro River Watershed Flood Prevention Authority.** The County is a member of the Authority, established in 2000, with the mission to identify, fund, and implement flood prevention and control strategies in the Pajaro River Watershed.
- **Floodplain zoning designation.** In conjunction with the 1992 General Plan, the County enacted a Floodplain zoning designation, which precluded development within areas subject to flooding as identified on FEMA maps.
- **Subdivision Drainage Design Standards: SBC Code Chapter 23.31, Article III Section 23.31.040–23.31.045.** The standards are part of Appendix D (Improvement Standards) to the Subdivision Ordinance. The storm water drainage system for any proposed development within the County must be designed in accordance with the standards, which establish guidelines for the design of storm for various locations and systems (ranging from the 10-year to 100-year storm) and hydraulic methods for calculations; identifies construction requirements to address alignment, easements, use and design of closed conduits and open channels; and specifies the drainage reports necessary for subdivisions larger than two acres. The County’s ordinance is more strict than typical state requirements, requiring that the post-development 100-year storm peak flow discharged off-site be limited to the pre-development 10-year storm peak flow or channel capacity, whichever is the lesser (SBC Code §23.31.041 (F)). This requirement is intended to help prevent adverse changes in localized or downstream flooding, and to accommodate the existing conveyance system in undeveloped areas, which is primarily unlined earthen ditches.
- **Water System Design Standards: SBC Code Chapter 23.31, Article IV, Section 23.31.060 – 23.31.062, in Appendix D of the Subdivision Ordinance.** These sections include design standards for any water facility or system in the County, except individual residential parcel systems and small water systems.

- **Sewer System Design Standards: SBC Code Chapter 23.31, Article V, Section 23.31.08 – 23.31.083), in Appendix D to the Subdivision Ordinance.** These sections include provisions on the design and construction of sanitary sewers, sewer pump stations, sewer treatment plants and sewer systems in the unincorporated area of the County.
- **San Benito County Grading Ordinance: SBC Code Chapter 19.17.** The grading, drainage, and erosion control ordinance is contained in this chapter. The ordinance regulates grading, drainage, and erosion control on private and public property, and requires grading, erosion, and drainage control plans to prevent water pollution and sedimentation of the County's water resources. Grading permits from the Building Inspection and Planning Department are required for grading activities, aside from exemptions listed in SBC Code §19.17.004. Permits are required primarily for activities not otherwise regulated or having reasonable extent (>50 cubic yards) and risk (e.g., crossing or affecting natural drainages). Grading is not permitted within 50 feet of the top of bank of a stream, creek, river or other water body; in areas of active landslides; or areas over 30 percent slope. The grading permit applications require an erosion and drainage control plan that specifies measures to minimize construction phase water quality risks.
- **Hollister Urban Area Water and Wastewater Master Plan.** The 2008 WWMP is a cooperative effort of the City of Hollister, San Benito County, and the SBCWD, to determine a long-term vision to guide water resource improvements in the Hollister urban area. The goals are to improve water quality, increase the reliability of the water supply, and integrate the goals from long-range wastewater and groundwater management programs.
- **Sewers and Sewage Disposal: SBC Code Chapter 15.07.** SBC Code sections related to sewage disposal systems and septic tanks are set forth in Chapter 15.07, Sewers and Sewage Disposal of Title 15 (Public Works) of the San Benito County Code.
- **San Benito County 1992 General Plan.** The 1992 General Plan includes objectives and policy statements with regard to wastewater collection, conveyance, treatment, and disposal. They are included in the Open Space and Conservation Element (Policy 31) and the Land Use Element (Policies 10 and 11, and supporting actions). These policies require that wastewater systems be designed and operated to ensure the long-term protection of groundwater by establishing standards for the siting and development of individual and small community wastewater treatment systems.

## 13.2 ENVIRONMENTAL EFFECTS

The water resource analysis evaluates whether implementation of the 2035 General Plan could result in adverse effects to groundwater recharge, supply, quality, and surface water quality. It

also evaluates the potential for increases in flood hazards with continued or new development in an existing floodplain or dam inundation area under the 2035 General Plan. Relevant features of the 2035 General Plan include, among other things, a potential increase in vineyards (associated with winery and hospitality land uses), and an increased population and associated construction from current conditions to 2035. These changes could affect groundwater recharge areas, increase salt loading to groundwater, increase construction-related pollutants (mainly sediment) to surface water sources, and potentially place people or property within areas of known flood risk.

### **13.2.1 Significance Criteria**

As set forth in Appendix G to the State CEQA Guidelines, Section IX, Hydrology and Water Quality, the following criteria have been established to quantify the level of significance of an adverse effect being evaluated pursuant to CEQA. The numeration of each criterion below corresponds to the questions in the checklist in Appendix G of the CEQA Guidelines (e.g., IX.a, IX.b). Implementation of the 2035 General Plan would result in a significant hydrology, water quality or flooding impact if it would:

- Violate any water quality standards or waste discharge requirements. (IX.a)
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). (IX.b)
- Substantially alter existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in flooding, substantial erosion, or siltation on- or off-site. (IX.c)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. (IX.d)
- 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. (IX.e)
- Otherwise substantially degrade groundwater quality. (IX.f)
- Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (IX.g)

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows. (IX.h)
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (IX.i)
- Expose people or structures to a significant risk of loss, injury or death due to inundation by seiche, tsunami, or mudflow. (IX.j)

### **13.2.2 Analysis Methodology**

The evaluation of potential hydrology, water quality, and flooding impacts associated with implementation of the proposed 2035 General Plan is based on, among other things, a review of the General Plan Background Report; applicable federal, state, and regional laws, regulations, codes, and guidelines; and flood hazard and awareness maps by FEMA and DWR. The evaluation also assesses whether the goals and policies set forth in the 2035 General Plan promote adequate planning and oversight when authorizing the location, construction, and operation of any new development within the County jurisdiction, in order to help prevent potential impacts to hydrology, water quality and flooding.

As discussed in Section 4.5.7, Potential Growth Scenarios, the RDEIR analysis takes into account the two growth scenarios: Scenario 1 and Scenario 2. For this programmatic level of analysis, there is no difference in the potential impacts to hydrology and water resources that would result from the two growth scenarios because the County would apply the 2035 General Plan policies, including additional policies from mitigation measures contained in the certified EIR, equally in approving development, regardless of location. In addition to the programmatic review contained in this RDEIR, site specific analysis, including a project-level environmental review would be required for particular development proposals under the 2035 General Plan that may be considered in the future.

Potential impacts related to water supply are evaluated in Chapter 20, Utilities and Service Systems, of this RDEIR.

### **13.2.3 Environmental Impacts**

The following discussion examines the potential impacts of the proposed project based on the impact significance criteria described above. [Table 13-1](#) summarizes 2035 General Plan policies that would mitigate environmental impacts associated with hydrology and water resources, including an explanation of how the policy would avoid or reduce impacts.

**Table 13-2 2035 General Plan Goals and Policies that Mitigate Hydrology and Water Resources Impacts**

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<b>Land Use Element</b>		
<p><b>Goal LU-1: Countywide Growth and Development</b></p> <p>To maintain San Benito County's rural character and natural beauty while providing areas for needed future growth.</p>	<p>Sets a broad goal to maintain the County's rural character and provide areas for needed growth, which would ensure that growth is directed to appropriate locations that would have minimal risks associated with inundation due to a seiche, tsunami, or mudflows and would also help maintain open space areas and the natural waterways within them, thereby maintaining flood plains.</p>	1,6,8
<p><b>Policy LU-1.2: Sustainable Development Patterns</b></p> <p>The County shall promote compact, clustered development patterns that use land efficiently; reduce pollution and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use; and encourage employment centers and shopping areas to be proximate to residential areas to reduce vehicle trips. Such patterns would apply to infill development, unincorporated communities and the New Community Study Areas. The County recognizes that the New Community Study Areas comprises locations that can promote such sustainable development.</p>	<p>More focused compact development reduces the construction footprint, thereby reducing the potential for short-term pollutant loads. By concentrating development and encouraging modes of transportation other than automobiles, the policy reduces the extent of impervious pavement and resultant stormwater runoff volume and hydrocarbon pollutants generated over the long term.</p>	1

Goals and Policies	How the Goal/Policy Avoids or Reduces Impact	Impact HYD-#
<p><b>Policy LU-1.5: Infill Development</b> The County shall encourage infill development on vacant and underutilized parcels in order to maximize the use of land within existing urban areas, minimize the conversion of productive agricultural land and open spaces, and minimize environmental impacts associated with new development as one way to accommodate growth.</p>	<p>More focused compact development reduces the construction footprint, thereby reducing the potential for short-term pollutant loads. By concentrating development and encouraging modes of transportation other than automobiles, the policy reduces the extent of impervious pavement and resultant stormwater runoff volume and hydrocarbon pollutants generated over the long term.</p>	<p>1</p>
<p><b>Policy LU-1.6: Hillside Development Restrictions</b> The County shall prohibit residential and urban development on hillsides with 30 percent or greater slopes.</p>	<p>Prevents development on steep slopes with higher potential for landslides or mudflows. Helps protect water quality by prohibiting development on very steep slopes that have a greater potential for aggravated erosion and sediment loss once disturbed.</p>	<p>1,8</p>
<p><b>Policy LU-1.8: Site Plan Environmental Content Requirements</b> The County shall require all submitted site plans, tentative maps, and parcel maps to depict all environmentally sensitive and hazardous areas, including: 100-year floodplains, fault zones, 30 percent or greater slopes, severe erosion hazards, fire hazards, wetlands, and riparian habitats.</p>	<p>By requiring site plans to identify 30 percent or greater slopes and severe erosion hazards prior to project approval, the policy advocates for proper avoidance or design of developments that will reduce the risk of damage from landslides or mudflows. By requiring site plans to identify 100-year floodplains prior to project approval, the policy advocates avoidance of structures in those areas, or adequate mitigation for any structures deemed necessary.</p>	<p>1,6,8</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy LU-1.10: Development Site Suitability</b></p> <p>The County shall encourage specific development sites avoid natural and manmade hazards, including, but not limited to, active seismic faults, landslides, slopes greater than 30 percent, and floodplains. Development sites shall also be on soil suitable for building and maintaining well and septic systems (i.e., avoid impervious soils, high percolation or high groundwater areas, and provide setbacks from creeks). The County shall require adequate mitigation for any development located on environmentally sensitive lands (e.g., wetlands, erodible soil, archaeological resources, important plant and animal communities).</p>	<p>Requires developments to be located outside of landslide areas to the extent feasible, thereby reducing the potential for damage to new development from landslides or mudflows. Helps protect water quality by prohibiting development on steep slopes, unsuitable soils, or environmentally sensitive lands without adequate mitigation by helping ensure site functionality without increased potential for aggravated soil loss, or groundwater contamination.</p>	1,8
<p><b>Goal LU-3: Agriculture and Rangeland</b></p> <p>To ensure the long-term preservation of the agricultural industry, agricultural support services, and rangeland resources by protecting these areas from incompatible urban uses and allowing farmers to manage their land and operations in an efficient, economically viable manner.</p>	<p>Minimizes impacts to groundwater quality by supporting and promoting proper management of agricultural land uses, thereby reducing water quality impacts related to agricultural runoff.</p>	1,5
<p><b>Policy LU-3.4: Lower-Impact Agricultural Practices</b></p> <p>The County shall encourage and support farms, vineyards, and ranches that use lower-impact agricultural and/or organic practices and shall recognize the benefits that a flourishing organic sector industry can provide.</p>	<p>Helps encourage producers of agricultural products to reduce use of pesticides and inorganic fertilizers that could otherwise impact groundwater quality.</p>	1,5

Goals and Policies	How the Goal/Policy Avoids or Reduces Impact	Impact HYD-#
<p><b>Goal LU-4: Residential Development</b></p> <p>To encourage variety in new unincorporated residential development while also providing incentives for clustered residential as a means to protect valuable agricultural and natural resources.</p>	<p>Clustering residential development would preserve more open space lands, which provide areas for natural groundwater recharge and improved water quality protection.</p>	<p>1</p>
<p><b>Policy LU-4.3: Residential Density Reductions</b></p> <p>The County shall consider reducing the base density of a proposed residential development project if the combination of environmental hazards (e.g., fire, seismic, flooding, greater than 30 percent slope) and/or natural resources (e.g., sensitive habitat, wetlands) existing on the site, after consideration of the mitigations to be implemented to address those hazards, make higher densities less appropriate.</p>	<p>Reducing the density of new residential development would preserve additional open space lands that provide protections for natural resources, thereby also maintaining water quality.</p>	<p>1</p>
<p><b>Policy LU-4.5: Innovative Site Planning and Residential Design</b></p> <p>The County shall encourage new residential developments to use innovative site planning techniques and to incorporate design features that increase design quality, and energy efficiency, and water conservation of structures and landscapes while protecting the surrounding environment.</p>	<p>The application of innovative site planning techniques and designs are known to conserve water, enhance water quality and better protect the environment.</p>	<p>1</p>
<p><b>Policy LU-4.6: Clustered Residential Program</b></p> <p>The County shall continue to encourage the clustering of residential uses and the use of creative site planning techniques to maximize preservation of agricultural land and maintain contiguous areas of open space.</p>	<p>The clustering of residential development preserves open space, which would provide better water quality protection by preserving more impervious land for natural percolation.</p>	<p>1</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy LU-4.7: Clustered Residential Site Layout</b></p> <p>The County shall encourage clustered residential development be designed to respect existing natural features (e.g., rivers and streams, hills and ridge lines, and substantial tree stands) as appropriate to the density and character of the development, and if applicable to use such features to separate clustered parcels from farming areas.</p>	<p>Clustering residential development and subdivisions in the County in order to protect natural features would also provide improved water quality protection during storm events by preserving more pervious land for natural percolation.</p>	<p>1</p>
<b>Public Facilities and Services Element</b>		
<p><b>Goal PFS-6: Stormwater Drainage</b></p> <p>To manage stormwater from existing and future development using methods that reduce potential flooding, maintain natural water quality, enhance percolation for groundwater recharge, and provide opportunities for reuse.</p>	<p>Sets the County's intention to manage stormwater from existing and future development using methods that reduce flooding, provide reuse opportunities and enhance percolation, which would minimize post development runoff from future projects and better preserve natural drainages and waterways.</p>	<p>1,2,3,4</p>
<p><b>Policy PFS-6.1: Adequate Stormwater Facilities</b></p> <p>The County shall require that stormwater drainage facilities are properly designed, sited, constructed, and maintained to efficiently capture and dispose of runoff and minimize impacts to water quality.</p>	<p>Provides the County with oversight to ensure that drainage facilities are designed with sufficient capacity to collect and convey anticipated runoff volumes and peak flows that will not result in flooding or erosion problems downstream.</p>	<p>4</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy PFS-6.2: Best Management Practices</b> The County shall require best management practices (e.g., Low Impact Development) in the development, upgrading, and maintenance of stormwater facilities and services to reduce pollutants from entering natural water bodies while allowing stormwater reuse and groundwater recharge.</p>	<p>Requiring best management practices during development construction would minimize an increase in post development runoff and reduce impacts related to groundwater recharge by encouraging low impact development and proper maintenance of stormwater facilities.</p>	<p>1,2,4</p>
<p><b>Policy PFS-6.3: Natural Drainage Systems</b> The County shall encourage the use of natural stormwater drainage systems (e.g., swales, streams) to preserve and enhance the environment and facilitate groundwater recharge.</p>	<p>By encouraging the use and incorporation of natural drainage systems, the County would help preserve such systems, facilitate groundwater recharge, enhance the natural character of the environment, and steer development away from the more outdated practice of engineered drainage channels, canals, and conveyances.</p>	<p>2,3</p>
<p><b>Policy PFS-6.4: Development Requirements</b> The County shall require project designs that minimize stormwater drainage concentrations and impervious surfaces, complement groundwater recharge, avoid floodplain areas, and use natural watercourses in ways that maintain natural watershed functions and provide wildlife habitat.</p>	<p>Requires new site designs to focus on spreading and infiltrating stormwater and incorporating natural watercourses when possible, thereby reducing the volume of runoff that leaves the site, minimizing any potential for erosion or flooding downstream of the site, and minimizing storm water drainage concentrations and impervious surfaces.</p>	<p>1,2,3,4</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy PFS-6.5: Stormwater Detention Facilities</b></p> <p>Where necessary, the County shall require on-site detention/retention facilities and/or velocity reducers to maintain pre-development runoff flows and velocities in natural drainage systems.</p>	<p>Gives the County flexibility to require specific site detention and retention facilities in order to maintain pre-development runoff flows and velocities, which in turn reduces the potential for erosion and flooding downstream.</p>	<p>4</p>
<p><b>Policy PFS-6.7: Runoff Water Quality</b></p> <p>The County shall require all drainage systems in new development and redevelopment to comply with applicable State and Federal non-point source pollutant discharge requirements.</p>	<p>Requires all proposed drainage systems to comply with applicable state and federal discharge requirements.</p>	<p>1</p>
<p><b>Policy PFS-6.8: Reduce Erosion and Sedimentation</b></p> <p>The County shall ensure that drainage systems are designed and maintained to minimize soil erosion and sedimentation and maintain natural watershed functions.</p>	<p>County review under this policy will include making sure that proposed drainage designs will minimize soil erosion and sedimentation rather than aggravate it, thereby protecting water quality.</p>	<p>1</p>
<b>Natural and Cultural Resources Element</b>		
<p><b>Goal NCR-1: Open Space</b></p> <p>To preserve and enhance valuable open space lands that provide wildlife habitat and conserve natural and visual resources of San Benito County.</p>	<p>Protects natural drainages by setting an overall goal to preserve open space and wildlife habitat and other natural resources in the County.</p>	<p>3</p>
<p><b>Policy NCR-1.1: Integrated Network of Open Space</b></p> <p>The County shall maintain an integrated network of open space lands that support natural resources, recreation, tribal resources, wildlife habitat, water management, scenic quality, and other beneficial uses.</p>	<p>The preservation of a network of open space lands would also support the preservation of natural drainages and waterways within open space.</p>	<p>3</p>

Goals and Policies	How the Goal/Policy Avoids or Reduces Impact	Impact HYD-#
<p><b>Goal NCR-4: Water Resources</b></p> <p>To protect water quantity and quality in natural water bodies and groundwater basins and avoid overdraft of groundwater resources</p>	<p>Provides protection for groundwater quality, quantity and water bodies by preventing and avoiding groundwater overdraft, impacts to natural drainages by aiming to maintain sufficient groundwater recharge, and limiting increases in post development runoff which would reduce the potential development projects in the County would violate water quality standards.</p>	<p>1,2,3,4,5</p>
<p><b>Policy NCR-4.1: Mitigation for Wetland Disturbance or Removal</b></p> <p>The County shall consider implementing the Regional Water Quality Control Board Basin Plan policies to improve areas of low water quality, maintain water quality on all drainage, and protect and enhance habitat for fish and other wildlife on major tributaries to the Pajaro River (San Benito River, Pacheco Creek) and the Silver Creek watershed.</p>	<p>Encourages cooperation with CCRWQCB water improvement efforts which would include compliance with the NPDES stormwater programs.</p>	<p>1</p>
<p><b>Policy NCR-4.4: Open Space Conservation</b></p> <p>The County shall encourage conservation and, where feasible, creation or restoration of open space areas that serve to protect water quality such as riparian corridors, buffer zones, wetlands, undeveloped open space areas, and drainage canals.</p>	<p>Conservation and preservation of riparian corridors, open space areas, and drainage canals would help preserve existing drainage patterns, prevent new or increased sources of erosion or flooding, and reduce the likelihood the County violates water quality standards.</p>	<p>1,3</p>
<p><b>Policy NCR-4.5: Groundwater Recharge</b></p> <p>The County shall encourage new development to preserve, where feasible, areas that provide important groundwater recharge and stormwater management benefits such as</p>	<p>Preserves groundwater recharge areas and helps reduce the impact on groundwater recharge of building and paving by promoting recharge of stormwater.</p>	<p>2</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
undeveloped open spaces, natural habitat, riparian corridors, wetlands, and natural drainage areas.		
<p><b>Policy NCR-4.7: Best Management Practices</b></p> <p>The County shall encourage new development to avoid significant impacts and protect the quality of water resources and natural drainage systems through site design, source controls, runoff reduction measures, and best management practices (BMPs).</p>	Requires new development under the 2035 General Plan to protect water quality during construction and long term operation of a site by implementing source controls, incorporating runoff reduction measures and water quality BMPs that will help protect natural drainage systems, reduce potential adverse impacts to groundwater quality, promote groundwater recharge, and prevent erosion and flooding by reducing rather than increasing stormwater flows off the site.	1,2,3,4,5
<p><b>Policy NCR-4.4: Open Space Conservation</b></p> <p>The County shall encourage conservation and, where feasible, creation or restoration of open space areas that serve to protect water quality such as riparian corridors, buffer zones, wetlands, undeveloped open space areas, and drainage canals.</p>	Protects natural open space, riparian, and wetland areas that attenuate contaminants that could adversely impact groundwater quality.	5
<b>Health and Safety Element</b>		
<p><b>Goal HS-1: Emergency Preparedness</b></p> <p>To maintain the necessary level of fire, EMS, law enforcement, and disaster preparedness for the protection of the health, safety, and welfare of people living, working, and residing in San Benito County.</p>	Reduces risks associated with inundation by a dam failure, seiche, tsunami, or mudflow by maintaining the necessary level of disaster preparedness in the event that such a risk may occur, thereby reducing the risks to the County residents, visitors, and property.	6,7,8

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy HS-1.7: Multi-Hazard Mitigation Plan</b></p> <p>The County shall develop, maintain, and implement a Multi-Hazard Mitigation Plan to address disasters such as earthquakes, flooding, dam or levee failure, hazardous material spills, epidemics, fires, extreme weather, major transportation accidents, and terrorism.</p>	<p>Under the Multi-Hazard Mitigation Plan, the County has the opportunity to address landslide hazard areas and limit development within those areas; and examine flooding hazards and determine if further restrictions for flood zones are needed in order to further eliminate flooding hazard.</p>	<p>6,7,8</p>
<p><b>Policy HS-1.10: Location of Critical Facilities</b></p> <p>The County shall not approve critical and emergency facilities (e.g., hospitals, health care facilities, emergency shelters, Sheriff substations, fire stations) and their access routes in hazardous areas unless it is unavoidable or designed and constructed in a manner that minimizes or eliminates potential impacts.</p>	<p>Critical and emergency facilities will not be allowed in flood zones (i.e., FEMA 100-year floodplains), which are included in the County’s definition of hazardous areas.</p>	<p>6</p>
<p><b>Goal HS-2: Flood Hazards</b></p> <p>To minimize the loss of life, injury, or damage to property as a result of floods in the County.</p>	<p>Providing areas for flood control would minimize impacts related to flood hazards to County residents and property, which would preserve natural drainages and streams and reduce risks related to dam inundation.</p>	<p>1,3,7</p>
<p><b>Policy HS-2.1: Minimum Flood Protection</b></p> <p>The County shall require a minimum 100-year flood protection for all new development in accordance with local, State, and Federal requirements to avoid or minimize the risk of flood damage.</p>	<p>Requires all new development to be protected from 100-year floods to prevent flood damage.</p>	<p>6</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Policy HS-2.2: Development in Dam Inundation Areas</b></p> <p>The County shall encourage, to the extent feasible, new development located in dam inundation areas to consider and mitigate the risks from dam failure to the extent feasible.</p>	<p>Requires feasible mitigation for new development proposed in dam inundation areas.</p>	<p>7</p>
<p><b>Policy HS-2.4: Climate Change Impacts to Flood Control Facilities</b></p> <p>The County shall coordinate with local, regional, State, and Federal agencies to define existing and potential flood problem areas associated with expected impacts from climate change and develop and implement strategies to improve and maintain flood control facilities accordingly.</p>	<p>Provides for the County to be aware of the potential for FEMA floodplains to expand or change based on climate change impacts.</p>	<p>6</p>
<p><b>Policy HS-2.5: Minimize Facility Impacts</b></p> <p>The County shall ensure that the upgrade, expansion, or construction of any flood control facilities will not adversely divert flood water or increase flooding.</p>	<p>Ensures that modifications to existing flood control facilities will not result in flood flows being redirected or impeded in a way that increases flooding.</p>	<p>6</p>
<p><b>Policy HS-2.8: Natural Designs</b></p> <p>The County shall encourage flood control facility designs that retain natural contours and vegetation of waterways, while retaining dynamic flow and functional integrity.</p>	<p>Encourages the retention of natural contours and vegetation in order to maintain hydraulic function while providing for flood control.</p>	<p>3</p>
<p><b>Policy HS-2.9: Reduce Erosion and Sedimentation</b></p> <p>The County shall ensure that flood control facilities are designed and maintained to minimize soil erosion and sedimentation and maintain natural watershed functions.</p>	<p>Requires flood control facilities to be designed and maintained to minimize soil erosion and sedimentation and incorporate natural watershed functions.</p>	<p>1</p>

<b>Goals and Policies</b>	<b>How the Goal/Policy Avoids or Reduces Impact</b>	<b>Impact HYD-#</b>
<p><b>Goal HS-3: Seismic and Geologic</b> To protect lives and property from seismic and geologic hazards.</p>	<p>Sets the County’s intention to minimize the damages related to geologic hazards to the extent feasible, which would reduce risks related to dam inundation that could occur during a seismic event. The protection of County residents and property during a seismic event would minimize substantial risk associated with inundation related to a seiche, tsunami, or mudflows.</p>	<p>7,8</p>
<p><b>Policy HS-3.1: Earthquake Resistant Design</b> The County shall require earthquake resistant designs for all proposed critical structures such as hospitals, Sheriff substations, fire stations, emergency communication centers, private schools, high occupancy buildings, bridges, and dams.</p>	<p>Ensures any new dams and other critical structures will be designed and constructed to be earthquake resistant, reducing the potential for dam failure and inundation as well as other catastrophic failures.</p>	<p>7</p>
<p><b>Policy HS-3.7: Setback from Fault Traces</b> The County shall require setback distances from fault traces to be determined by individual site specific surface rupture investigations.</p>	<p>Provides for individual assessment of a proposed development in order to determine adequate setback distance from a fault trace prior to project authorization.</p>	<p>8</p>
<p><b>Policy HS-3.9: Seismic Safety Evaluations</b> The County shall require buildings three stories or higher, and locations zoned for multifamily housing, to include in development proposals measures to determine ground shaking characteristics, evaluate potential for ground failure, identify any other geologic hazards that might exist on the site, and mitigate for these hazards.</p>	<p>Requires identification of other geologic hazards, which should include the potential for landslides or mudflows for any buildings three stories or higher.</p>	<p>8</p>

*Source:* San Benito County 2011, 2014; EMC Planning Group 2014; Planning Partners 2012.

***Impact HYD-1: Violate any water quality standards or waste discharge requirements (IX.a).***

**Level of Significance:** Less than significant, no mitigation required.

Implementation of the 2035 General Plan would result in increased development that could result in discharges of contaminated water to surface water bodies or groundwater. Due to extensive state and local regulation of stormwater discharges, and the goals and policies set forth in the 2035 General Plan that would minimize the potential for pollutants to be released, this impact would be less than significant.

There is the potential for construction-related stormwater pollutants to degrade water quality in the short term while new uses are being built. Construction-related activities such as vegetation removal, trenching, grading, excavation, and material stockpiling create the potential for short-term accelerated soil erosion, and/or the release of pollutants to nearby water bodies. There is also the potential to release hydrocarbons and other anthropogenic pollutants to groundwater and surface water bodies over the long term, as additional areas of development become fully operational. Urban stormwater runoff can contain a variety of pollutants, including household chemicals, landscape chemicals, heavy metals, and other substances that infiltrate into the groundwater or are carried by a stormwater conveyance system to a nearby surface water body.

2035 General Plan Goal ED-4 encourages the County's wine and hospitality industries and identifies areas appropriate for additional wineries and winery-related tourist facilities (refer back to [Figure 3-7](#)). These areas include the Cienega and Paicines valleys, historical centers of viticulture in the County. For this analysis based on the Water Supply Evaluation, it is assumed around 1,000 acres of additional vineyards would be planted and irrigated by 2035, which could lead to increased pollutant loads as runoff from vineyards treated with fertilizers or pesticides enters the groundwater or receiving surface water bodies.

2035 General Plan Goal LU-3 promotes the long-term preservation of the agricultural industry. Accordingly, considerable agricultural farming and ranching also would continue in the County. Agricultural farming and ranching are highly desirable to the County and its residents for economic, aesthetic, and nutritional reasons. However, these activities may also pose water quality risks from sediment, pesticides, fertilizers, and animal waste that may enter surface water flows, and infiltrate into groundwater as precipitation falls and collects off tilled and planted fields and concentrated animal operations.

Water quality protection measures are enforced by the CCRWQCB under the Clean Water Act and National Pollutant Discharge Elimination System (NPDES) programs for municipal separate storm sewer systems, construction sites greater than one acre, and industrial operations. These programs are either in the process of being, or have been, upgraded to include more rigorous standards and methods for meeting water quality objectives based on current data and understanding. County adherence with the NPDES program requirements would ensure that

pollutants are not released to nearby water bodies during short-term construction efforts, or long-term operation of industrial or agricultural facilities (see Chapter 20 for more on the NPDES).

During public outreach for the 2035 General Plan, the community identified the importance of protecting water resources. Table 13-1 includes policies from the 2035 General Plan that will ensure adherence to regulatory water quality standards and improve upon surface and groundwater quality protection measures. Under the 2035 General Plan goals and policies, the County would provide for water quality protection by actively reviewing proposed developments for proper site and runoff control measures, and by requiring drainage systems associated with new development to comply with all state and federal discharge requirements and be designed and implemented to minimize soil erosion and sedimentation.

The protections provided by the 2035 General Plan would be in addition to existing laws and regulations already in place under federal and state law and through implementation of the NPDES program, including the rigorous site monitoring, and storm water sampling and reporting required for construction sites under California General Permit SWRCB Order No. 2009-0009-DWQ (NPDES No. CAS000002), as amended by 2010-0014-DWQ and 2012-0006-DWQ (SWRCB 2009). In addition, when modifications to, or the filling of, a river or creek are proposed as part of a development, several stages of review and approval would be required to ensure no impacts to water quality, including review by: the CCRWQCB under 401 certification, the U.S. Army Corps of Engineers through issuance of a 404 permit, and in some cases the California Department of Fish and Wildlife for a Streambed Alteration Agreement under Fish and Game Code Section 1602. Any new development or continued agricultural and industrial practices under the 2035 General Plan would be required to comply with the NPDES and other state- and locally-enforced water quality laws and regulations.

Implementation of the 2035 General Plan policies that protect water quality and laws and regulations would reduce to less than significant the potential for new urban development and other activities under the 2035 General Plan to adversely affect water quality. Therefore implementation of the 2035 General Plan would result in a less-than-significant impact.

***Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted) (IX.b).***

**Level of Significance:** Less than significant, no mitigation required.

Implementation of the proposed 2035 General Plan would lead to urban and other development, including construction of buildings and paving that would lead to increased impervious surfaces,

thereby interfering with aquifer recharge in areas where direct percolation of rainfall is a significant source of groundwater recharge to the underlying groundwater basin. This could result in a long-term decrease in stored groundwater volumes or a lowering of groundwater levels. In turn, this could cause the production rate of pre-existing wells to drop to a level that would not support existing land uses or planned uses for which permits have been granted. However, because of existing and proposed County policies (see [Table 13-1](#)), and the existing programs of water purveyors within the County, impacts from development would be a less-than-significant impact.

Impact USS-1 in Chapter 20, Utilities and Service Systems, examines potential depletion of surface and groundwater supplies via increased user demand and whether sufficient water supplies are available from existing entitlements and resources to serve additional development. Chapter 20 also discusses 2035 General Plan goals and policies proposed to improve upon or, at a minimum, maintain an adequate water supply. Therefore, Impact HYD-2 strictly examines potential impacts to groundwater volume or recharge due to groundwater deprivation as opposed to water demand, and summarizes 2035 General Plan policies proposed to encourage infiltration and groundwater recharge.

Implementation of the proposed 2035 General Plan also would lead to urban and other development, including construction of buildings and paving that interfere with groundwater recharge. The potential loss of recharge associated with this urbanization and other additional growth has two components: loss of rainfall recharge and loss of applied water percolation.

The portion of rainfall that becomes recharge is a factor of weather, topography, soil conditions, and land use characteristics, with significant areal and temporal variation. For the purposes of this discussion, it is assumed that 10 percent of rainfall becomes recharge. This assumption is consistent with values used by SBCWD in its calculation of deep percolation of precipitation and applied irrigation water as part of water balances for each subbasin (SBCWD 2008, 2011). With an average annual rainfall of 13 inches in Hollister, a representative rainfall recharge rate is 1.3 inches per year (0.11 feet per year). A conservative assumption is that changes in land use resulting from either growth Scenario 1 or 2 will entail building and paving over approximately 25 percent of the total developed land area. This proportion of impervious area is representative of medium to high residential density in the San Francisco Bay Area (USGS 1971). Because the exact number of acres that would be developed under either growth scenario is not known, nor the exact type of land that may be developed (i.e., its conduciveness to infiltration prior to development), it is not possible to predict the exact amount of potential recharge that could be forgone under developed conditions on a County-wide basis. However, assuming conservatively that all of the rainfall over impervious areas becomes local runoff and does not locally infiltrate, with no opportunity for percolation in landscaped areas and stream channels, then the potential lost recharge would be approximately 0.028 acre feet per year (afy) per acre (i.e., 0.11 afy per

acre times 25 percent impervious surface under developed conditions), or approximately 28 afy for every 1,000 acres of development. However, runoff from urban areas in the County is conveyed to streams, which may be permeable and capable of percolation, and some urban runoff around Hollister is conveyed to percolation basins. Therefore, even under developed conditions, a portion of the runoff generated from impervious areas may still end up recharging groundwater. As discussed below, the loss of recharge from increased impervious surfaces is more than outweighed by increases in recharge from percolation of urban indoor wastewater and water used on urban landscaped areas.

Regarding applied water percolation, conversion of agricultural to urban uses can increase percolation because most wastewater from indoor urban uses in the County is discharged to percolation ponds or septic tanks, which recharge the groundwater. For this analysis, it is assumed that two afy per acre of CVP water is applied and that 10 percent of applied water becomes deep percolation (City of Hollister 2011, Appendix C), or 0.2 afy per acre. In earlier annual groundwater reports, SBCWD used irrigation efficiencies ranging from 80 to 90 percent, corresponding to percolation of 10 to 20 percent of applied irrigation water (SBCWD 2002). Using the City of Hollister as an example, the 2035 estimated total water demand and acreage of the City are 7,235 afy and 4,644 acres, respectively, so the water demand is approximately 1.56 acre-feet per acre, which is less than typical agricultural demands of 2.0 afy per acre. Assuming that half of the City's water demand is used indoors and half outdoors, then about 0.78 acre-feet per acre is used indoors. This indoor water would mostly be percolated, recharging the groundwater.

In addition, of water used outdoors for urban uses, it is assumed that 10 percent becomes percolation, similar to water applied to agriculture. Accordingly, of the 1.56 afy per acre urban water use, approximately 0.86 afy per acre is percolated, which is the sum of percolated treated wastewater generated by indoor urban water use, and the 10 percent of outdoor urban water use that would percolate. With agriculture-to-urban conversion, the net increase in applied water percolation is 0.66 afy per acre (i.e.,  $0.86 - 0.2$ ). The total net increase in recharge due to land use conversion is therefore approximately 0.63 afy per acre (i.e.,  $0.66 - 0.028$ ), or approximately 630 afy per 1,000 acres of development. For development affecting areas that were not previously irrigated, the net increase in recharge would be even greater as there is no loss of applied water (i.e., the 0.2 afy per acre described above). This indicates that under either growth Scenario 1 or 2, conversion of land to urban use would not negatively impact the quantity of recharge to groundwater. It is recognized that water recycling programs will reduce the amount of wastewater that is percolated from indoor urban uses and therefore reduce such percolation rates. However, recycled water is used for irrigation, thereby providing a supply for that use in lieu of groundwater.

In terms of quantity, the potential loss of rainfall and applied water recharge is more than compensated by the municipal percolation of wastewater. Groundwater salt loading issues are discussed in the next section.

During public outreach for the 2035 General Plan, the community affirmed the importance of protecting groundwater recharge. The goals and policies listed in [Table 13-1](#) help to protect groundwater recharge as part of integrated and cooperative land and water resource planning and management between the County, SBCWD, and other water agencies.

As documented in the Water Supply Evaluation and presented in Chapter 20, Utilities and Service Systems, over the last 40 years, groundwater levels generally have recovered and been stable in the San Benito portion of the Gilroy-Hollister groundwater basin which underlies the northern, most populated portion of the County. While the current drought that began in 2012 has caused declines in groundwater levels, similar declines have occurred during prior droughts and the basin has recovered. This pattern is similar to many areas of California. In addition, as discussed in Chapter 20, future water supplies are sufficient to meet future water demands, recognizing that groundwater supply is available to supplement reduced imported surface water supplies during droughts and other shortages. Nonetheless, protection of recharge is fundamental to groundwater supply sustainability. As indicated in the above analysis, urbanization can affect recharge by building and paving over permeable areas; these impacts are reduced by 2035 General Plan policies that protect recharge directly and indirectly. In addition, the quantity of recharge would be increased by additional urban use of CVP water with subsequent wastewater percolation.

***Impact HYD-3: Substantially alter existing drainage patterns within the County, including through the alteration of the course of a stream or river, in a manner which would result in flooding, substantial erosion, or siltation on- or off-site, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site (IX.c, IX.d).***

**Level of Significance:** Less than significant, no mitigation required.

With a mostly agricultural setting dependent upon controlled rivers and reservoirs for flood protection, irrigation, and groundwater recharge, the majority of prominent drainage features and streams in the County have already undergone modifications. The 2035 General Plan encourages the preservation of natural drainages and provides goals and policies as listed in [Table 13-1](#) to protect natural watercourses such as creeks and drainages directly and indirectly through water and watershed protections in site design and planning. For example, under Policy NCR-4.7, the County must encourage new development to avoid significant impacts as feasible and protect the quality of water resources and natural drainage systems through site design, source controls, runoff reduction measures, and best management practices. Accordingly,

implementation of the above referenced 2035 General Plan policies as well as compliance with the various regulatory requirements under federal, state and local law, would ensure that development that may occur under the 2035 General Plan would not substantially alter the course of a natural stream or river in a manner that would result in flooding, substantial erosion, or siltation.

Future development may alter existing drainage patterns through site grading and other activities, but the goals and policies listed in Table 13-1 would reduce substantial alteration in a manner that would result in flooding, substantial erosion, siltation, and reduce the risk of a substantial increase in the rate and amount of surface runoff in a manner that would result in flooding. Examples of such goals and policies include Goal PFS-6, to manage stormwater from existing and future development using methods that reduce potential flooding, maintain natural water quality, enhance percolation for groundwater recharge, and provide opportunities for reuse; Policy PFS-6.3, to encourage the use of natural stormwater drainage systems (e.g., swales, streams) to preserve and enhance the environment and facilitate groundwater recharge, and Policy PFS-6.4, requiring project designs to minimize stormwater drainage concentrations and impervious surfaces, complement groundwater recharge, avoid floodplain areas, and use natural watercourses in ways that maintain natural watershed functions. These stormwater management methods reduce flooding, as well as substantial erosion and siltation.

In addition to the goals and policies listed in Table 13-1, requirements to reduce post-construction runoff volumes and incentives to provide on-site storm water retention facilities under the NPDES program will also help to prevent sharp increases in flows released to, or conveyed through, existing natural drainage channels or streams, thereby minimizing the potential for increased erosion or sedimentation as a result of development. Also, the County grading ordinance regulates grading, drainage, and erosion control on public and private property, and requires drainage control plans to prevent water pollution and sedimentation of the County's water resources. Section 19.17.005 of the ordinance prohibits grading within 50 feet of the top of bank of a stream, creek, or river.

Implementation of the 2035 General Plan would lead to continued urban and other development that could alter existing drainage patterns, resulting in localized flooding or accelerated erosion and increased sediment loading downstream from increased, concentrated, or redirected runoff. However, adherence with the 2035 General Plan policies, County Grading Ordinance, and other state and federal water quality regulations would limit new development from substantially modifying existing creeks or streams and from substantially altering existing drainage patterns in a manner that could result in destabilizing banks, flooding, substantial erosion, or siltation, or in a manner that substantially increases the rate or amount of surface runoff in a manner that would result in flooding. Therefore, the impact would be less than significant.

***Impact HYD-4: 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. (IX.e)***

**Level of Significance:** Less than significant, no mitigation required.

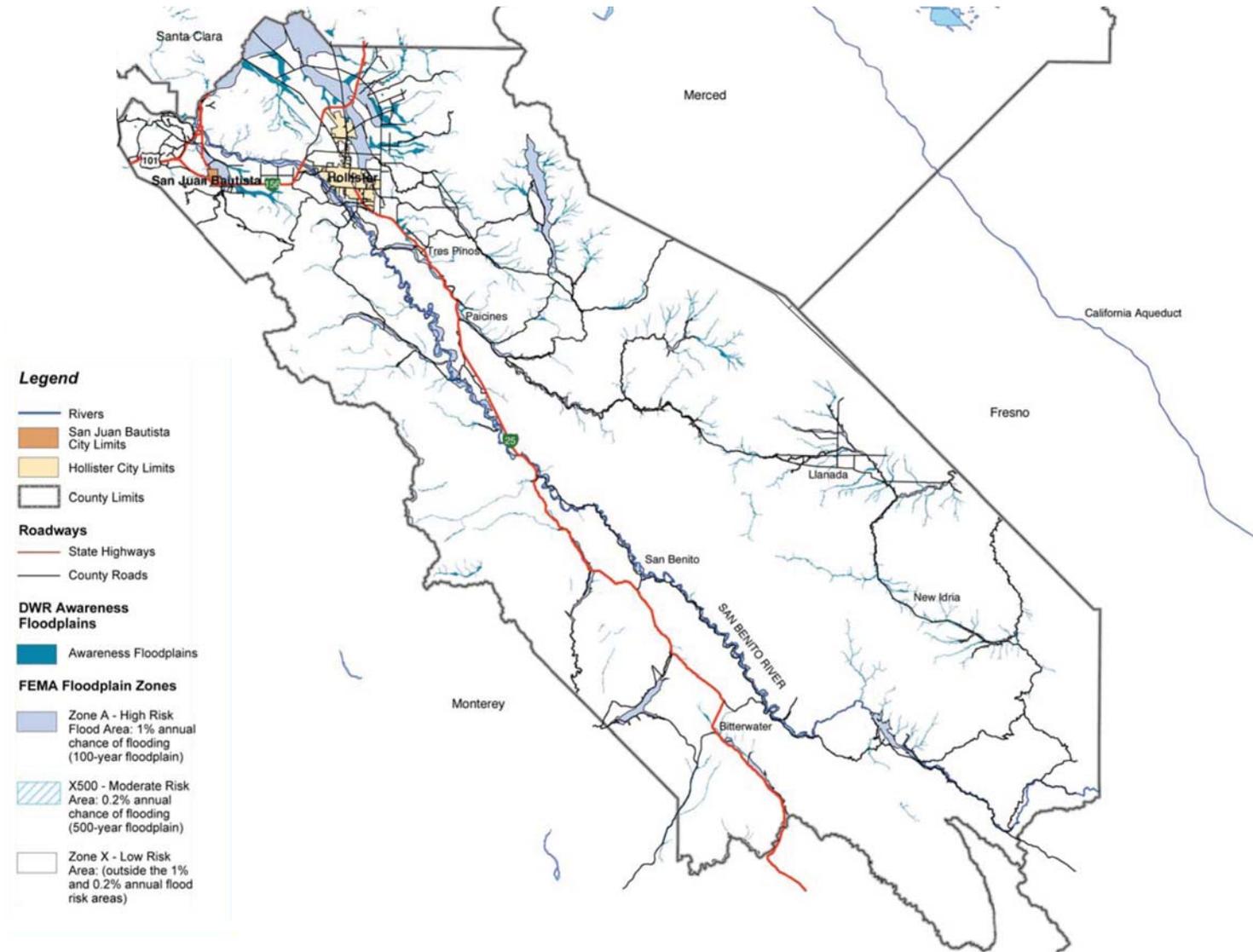
Development consistent with the 2035 General Plan could result in increases in the rate or amount of stormwater runoff. The continued operations of existing federal, state and local laws and regulations regarding stormwater management, coupled with implementation of the policies of the 2035 General Plan, would result in a less-than-significant impact.

Most flooding in the County is concentrated in narrow bands along the Pajaro River and its tributaries north and northeast of Hollister, and along the extensive San Benito River corridor (see [Figure 13-2](#)).

Some of these areas that are vulnerable to the major floods also experience damaging flood flows under smaller events due to blocked or obstructed drainage, low topography, or reduced channel capacity. Implementation of the 2035 General Plan would expand urban and other development, including, among other things, new commercial centers. This would result in increased impervious surface areas that potentially generate larger runoff volumes and peak flows that could overwhelm stormwater facilities and trigger erosion or localized flooding. New development under the 2035 General Plan could also result in additional sources of pollutant runoff from commercial, industrial, and new agricultural uses.

Stormwater management for developed uses is subject to design, implementation, and operational requirements under the new state flood legislation, NPDES stormwater permits, and existing County standards requiring infiltration and a reduction of post-construction runoff volumes that would prevent detrimental increases in the volume or timing of stormwater runoff. The bulleted items below highlight some of these standards:

- Under existing San Benito County (SBC) Code §23.31.041 (F), post-development 100-year storm peak flow discharged off site must be limited to the pre-development 10-year storm peak flow or channel capacity, whichever is the lesser, in order to avoid overwhelming existing conveyance systems and prevent adverse changes in localized or downstream flooding.
- Under State Assembly Bill 2140, all California counties must adopt a local Hazard Mitigation Plan that includes elements to avoid or minimize the risks of flooding to new development.
- Under the NPDES CA General Permit all new development must design for post-construction runoff reductions.



not to scale

Source: FEMA Flood Insurance Rate Maps 2009; DWR Floodplain Awareness Maps 2008; San Benito County Planning and Building Department 2010



# San Benito County Regulatory and Non-Regulatory Flood Hazard Areas

Figure 13-2

2035 San Benito County General Plan Revised DEIR

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Table 13-1 includes the goals and policies from the 2035 General Plan that would help prevent detrimental increases in stormwater volume or peak flows from new development, making implementation of the 2035 General Plan a less-than-significant impact. For example, policy direction to provide runoff reduction measures and on-site storm water retention facilities under 2035 General Plan Policies NCR-4.7, PFS-6.4, and PFS-6.5 help support compliance with NPDES requirements to reduce post-construction runoff volumes. Adherence to these policies and regulations would help to prevent sharp increases in flows released to, or conveyed through, existing natural drainage channels or streams, thereby minimizing the potential creation or contribution of runoff, so as not to exceed the capacity of existing or planned stormwater drainage systems. Adherence to these policies would also minimize the potential for increased erosion, sedimentation or flooding as a result of development, and would avoid providing substantial additional sources of polluted runoff. (See also Public Facilities & Services Element, Goal PF-6 and related policies.)

By continuing to enforce existing requirements, and implementing policies that promote reductions in storm water volumes and flows via incorporation of low impact development, runoff reduction measures, and detention and retention facilities, implementation of the 2035 General Plan would result in a less than-significant impact.

***Impact HYD-5: Otherwise substantially degrade groundwater quality (IX.f).***

**Level of Significance:** Less than significant, no mitigation required.

As discussed above, the 2035 General Plan includes a number of goals and policies that would protect the groundwater quality from substantial degradation. Nevertheless, implementation of the proposed 2035 General Plan would lead to changes in irrigated agriculture that could increase salt loading to the groundwater basin and thereby degrade groundwater quality. Because adherence with the proposed 2035 General Plan goals and policies, and the existing programs of water purveyors within the County as well as compliance with applicable federal, state and local laws and regulations would minimize groundwater degradation, this would be a less-than-significant impact.

The long-term salt balance has been a concern in the San Benito portion of the Gilroy-Hollister groundwater basin (SBCWD 2002). The salinity levels already are high in groundwater, and crop evapotranspiration concentrates salts, and rural, residential, municipal, and industrial water uses increase salinity (SBCWRA 2003). SBCWD and local agencies are actively addressing salt loading issues through their collaborative water/wastewater management planning activities, such as rebates for water softener abandonment or replacement, and the salt/nutrient management planning that is underway pursuant to the SWRCB's Recycled Water Policy which requires salt and nutrient management plans to be prepared for all groundwater basins in

California. Nonetheless, implementation of the proposed 2035 General Plan would likely increase salt loading through changes in agriculture and increased urban water demand.

As discussed in the Water Supply Evaluation presented in Chapter 20, Utilities and Service Systems, implementation of the 2035 General Plan would result in changes to agricultural land uses, including the potential irrigation of up to 1,000 acres of new vineyard uses. With regard to salt loading, the impacts of adding 1,000 acres of vineyard uses are potentially offset by the loss of irrigated acreage due to urbanization. Urbanization would involve conversion of irrigated agricultural lands to irrigated landscaping in addition to non-irrigated areas and buildings/paved areas. Cessation of irrigation on a portion of those acres now irrigated would help offset the addition of vineyard irrigation.

Moreover, vineyard irrigation rates are lower than the rates for truck crops, which represent a major portion of the current irrigated acreage. This is particularly true for new vineyards, which are typically operated with micro-irrigation drip systems and highly-regulated irrigation techniques to maximize grape quality. In addition, new urban landscaping is likely to be water-conserving, reflecting the water conservation programs of the Water Resources Association of San Benito County (SBCWRA) and maintaining consistency with existing and new 2035 General Plan policies (e.g., new policy NCR-4.10, Water Efficient Landscape Ordinance) and applicable state law requiring such conservation. Lastly, the area of new wineries and vineyards is generally located outside of SBCWD Zone 6, where CVP water is not available. Accordingly, new vineyards are assumed to use groundwater. Use of local groundwater mostly involves recycling of dissolved salts that already are present in groundwater basin and therefore would not add significantly to salt loading in the basin.

Implementation of the 2035 General Plan would increase the County's population, water demand, and wastewater production. Potential impacts of increased wastewater production and disposal are addressed in Chapter 20, Utilities and Service Systems. Implementation of the 2035 General Plan would result in changes to irrigated agriculture with implications for salt loading impacts on groundwater. However, the addition of up to around 1,000 acres of new irrigated vineyard could be offset by conversion of existing areas of irrigated agriculture to residential development, the lower water use rate of vineyards, and the use of groundwater by potential vineyards instead of CVP water, which reduces the potential for salt importation and loading. This fact, along with the goals and policies in Table 13-1 that help to protect groundwater quality, and existing state and federal laws and regulations, such as the Porter-Cologne Water Quality Control Act and Federal Clean Water Act, will help to prevent the 2035 General Plan from substantially degrading groundwater quality and results in a less-than-significant impact.

***Impact HYD-6: Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map without adequate protection measures or which might impede or redirect flood flows (IX.g, IX.h).***

**Level of Significance:** Less than significant, no mitigation required.

Implementation of the 2035 General Plan may lead to development within regulatory floodplains. The County would continue to enforce FEMA standards and only allow specific, more compatible land uses for areas that fall within the County Flood Zone (i.e., in the FEMA 100-year floodplain). Additionally, implementation of proposed 2035 General Plan policies would complement relatively recent state legislation requiring stricter land use controls in flood zones and planning improvements to flood control facilities to prevent exposing future development to the risk of flooding. For these reasons, this would be a less-than-significant impact.

Although flooding in the County is not widespread, flooding does present a potential risk to new development or structures proposed in areas associated with river corridors, including the Pajaro and San Benito Rivers, or in the larger 100-year FEMA floodplain areas to the north and northeast of the community of Hollister (see [Figure 13-2](#) above). Under the 1992 General Plan policies, construction or development within a flood prone area is discouraged, and protection and preservation of the 100-year floodplain as water and wetland resource areas is encouraged. More specifically, the County defined a Flood Plain Area designation (SBC Code, Chapter 25.14, Article III) that requires plans for buildings requiring a permit in lands identified as FEMA 100-year floodplain to establish living, manufacturing, or storage areas at a minimum of one foot above the 100-year flood elevation. Alternatively, the site may be raised to the required elevation or the site protected by a levee or berm constructed to the required elevation. The 2035 General Plan would continue the above-referenced policies of the 1992 General Plan to reduce potential flooding impacts.

Additionally, State Assembly Bill 2140 requires every County to adopt the hazard mitigation plan as part of their safety element, to include avoiding or minimizing the risks of flooding to new development, evaluating whether new development should be located in flood hazard zones, identifying construction methods or other methods to minimize damage if new development is located in flood hazard zones, and locating (when feasible) new essential public facilities outside flood hazard zones, including hospitals, health care facilities, emergency shelters, fire stations, and emergency command centers. The County is also a participating member of the PRWFPA, established to improve flood prevention in the Pajaro River Watershed, which is where much of the County's 100-year floodplain is located.

Table 13-1 highlights the goals and policies directly related to protection within the 100-year regulatory floodplain as provided in the Health and Safety Element of the 2035 General Plan. Adoption of a multi-hazard mitigation plan as required by Policy HS-1.7 would provide the County with an opportunity to re-evaluate flood risk Countywide by taking into consideration existing FEMA data and new DWR data and information in order to avoid the risks of flooding to new development. Implementation of Goal HS-2 and its policies would provide for greater awareness of how flood zones may change in the future; enact restrictions on housing, critical facilities, and other structures in the flood zone; and require that structures, including flood control facility improvements, not impede or redirect flood flows or increase flooding. More importantly, continued enforcement of FEMA requirements and the County Flood Zone land use requirement that prevent development within areas subject to 100-year flooding would ensure that new development would not be allowed that could impede or redirect flood flows, resulting in elevated flood risk. For these reasons, implementation of the 2035 General Plan would result in a less-than-significant impact.

***Impact HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam (IX.i).***

**Level of Significance:** Significant and unavoidable.

Future development under the 2035 General Plan would result in an increase in the number of persons and property potentially at risk from flooding, including flooding that is due to a rare catastrophic failure of a levee or dam or other causes. Despite the relatively low probability of such an event, and extensive state and County requirements that reduce flood risks and inform residents of such risks in potentially inundated areas to facilitate preparation and early and efficient emergency response and preparation, this impact would be potentially significant.

There are no levees in the County. However, several dams and reservoirs operated to provide water storage for irrigation and domestic uses, as well as flood control during seasonal periods of runoff, could fail and inundate portions of the County under a rare catastrophic event such as a large earthquake (see Table 13-2). Several active faults traverse the County, including the San Andreas and the Calaveras faults, which possess the highest earthquake probability capable of causing significant seismic shaking and resultant structural damage within the County. The dams and reservoirs that could potentially inundate and flood areas within the County include several small facilities in relatively isolated remote valleys, and two larger dams closer to populated areas: the San Justo Dam and Reservoir which is part of the CVP and is located about three miles southwest of Hollister; and the Leroy Anderson Dam, located in Santa Clara County, with an inundation zone that extends into San Benito County. Water from the San Justo Dam, in the event of a complete failure, could inundate the unincorporated lands throughout the San Juan Valley.

**Table 13-3 Dams and Reservoirs Located in, or Potentially Affecting, San Benito County**

Dam	Owner	Stream	Drainage Area (square miles)	Height (feet)	Capacity (acre-feet)
Bear Gulch	National Park Service	Bear Gulch Creek	0	43	27
Hawkins	Hawkins & Ausaymas Cattle Co.	Arroyo De Las Viboras	4.17	72	575
Hernandez	San Benito County FCWCD	San Benito River	85	124	18,000 30,000 <sup>1</sup>
J V De Laveaga	Las Aguilas Corporation	Quien Sabe Creek	0.15	28	514
Leroy Anderson	Santa Clara Valley Water District	Coyote River	194.3	235	91,280
Paicines	San Benito County FCWCD	Tres Pinos Creek	0.8	29	4,500 3,335 <sup>3</sup>
Percolation Area	Las Aguilas Corporation	Los Muertos Creek	1	12	430
San Justo	US Bureau of Reclamation	Off Stream	0	133	10,300
Vessey	C Schroder	Tequisquita Slough	1.38	20	258

*Source:* San Benito County 2010b.

*Notes:* <sup>1</sup>Alternate capacity as reported by SBCWD.

To protect against any such catastrophic failure, dams are regularly evaluated, including inspections and maintenance, in terms of their structural integrity, and the SBOES includes potential dam inundation areas in their emergency response planning. It actively engages with the appropriate agencies in receiving and updating emergency action plans associated with each dam. Little damage is expected from complete failure of the Hernandez Reservoir or other more remote reservoirs in the County because of their location in largely undeveloped areas, but future development could occur in those areas thus bringing more people and property to the area subject to this risk, and therefore policies regarding the risk of inundation and new development in at-risk areas are included in 2035 General Plan policies as shown in [Table 13-1](#), as are goals and policies related to flood protection from other sources.

Although implementation the goals and policies listed in [Table 13-1](#) would reduce potential impacts related to flooding as a result of dam failure, they would not eliminate the risks to people and property from flooding. Dams within and around the County that pose risks to

people and property resulting from dam inundation are owned and/or operated by other agencies, and seismic activity in the region could cause dam failure, even for dams that have been inspected and maintained. It is therefore not feasible for the 2035 General Plan to completely address improvements to all dams to the extent necessary to eliminate risks from dam failure, resulting in a significant and unavoidable impact.

*Impact HYD-8: Expose people or structures to a significant risk of loss, injury or death due to inundation by seiche, tsunami, or mudflow. (IX.j)*

**Level of Significance:** Less than significant, no mitigation required.

The County is located a significant distance from the coast or any sizeable lakes, thereby eliminating the potential for a tsunami or seiche. The County does contain steep topographically sloped areas at risk for landslides, and under the 2035 General Plan, development may be proposed in such areas. Because of existing County requirements and proposed 2035 General Plan policies, this would be a less-than-significant impact. Areas at risk for landslides or mudflows within the County are concentrated along the steep terrain and active fault zones, near the Hollister area, and in the Tres Pinos and Paicines areas. 2035 General Plan policies that provide planning and restrictions regarding development in or adjacent to landslide and mudflow hazards are listed in [Table 13-1](#). The 2035 General Plan policies encourage development and building protections from seismic hazards, including Policy HS-3.7 that requires setbacks from known seismic faults. Policies LU-1.8 and LU-1.10 directly require that developments not be located on slopes greater than 30 percent, or in areas of landslides. For these reasons, the 2035 General Plan would not expose people or structures to a significant risk of loss, injury, or death from inundation by seiche, tsunami, or mudflow, resulting in a less-than-significant impact.