3.11 Hydrology and Water Quality

This section describes the regulatory and environmental setting for hydrology and water quality. It also describes potential impacts on hydrology and water quality that would result from implementation of the Willow Village Master Plan Project (Proposed Project) as well as mitigation measures to reduce the impacts. Additional information on the Proposed Project's potential impacts related to stormwater is provided in the hydrology and hydraulic report prepared by Sherwood Design Engineers[1] and in the stormwater management compliance memorandum.[2] The Proposed Project's potential impacts on the water supply are discussed in Section 3.15, *Utilities and Service Systems*.

Issues identified in response to the Notice of Preparation (Appendix 1) were considered in preparing this analysis. The applicable issues that were identified pertain to the impacts of sea-level rise (SLR), sustainability, and flood resilience.

Existing Conditions

Environmental Setting

Surface Water

Regional

The Project Site is within the San Mateo Creek-Frontal San Francisco Bay Estuaries watershed, which is within the larger San Francisco Bay (Bay) watershed. The San Mateo Creek-Frontal San Francisco Bay Estuaries watershed encompasses approximately 73 square miles. Tidal mudflats and marshes in the Bay, the Don Edwards Bay National Wildlife Refuge (Refuge), Ravenswood Slough, and the former salt ponds (some of which are within the Refuge) are across Bayfront Expressway/State Route 84 (Bayfront Expressway) and to the north. The Project Site is less than 1 mile inland from the Refuge, approximately 1.5 miles south of Lower San Francisco Bay, and approximately 1 mile west of South San Francisco Bay.

Major surface waters in the vicinity of the Proposed Project include Atherton Channel (also known as Atherton Creek) to the west, Flood Slough to the northwest, Ravenswood Slough to the north, San Francisquito Creek to the southeast, Lower San Francisco Bay to the north, and South San Francisco Bay to the east. Atherton Channel, approximately 2 miles west of the Project Site, is an alternating earth- and concrete-lined channel that carries flows from the upper reaches of Atherton Creek to Flood Slough. Flood Slough is one of several sloughs that run through the salt ponds and salt marshes north of Bayfront Expressway; the slough drains into Lower San Francisco Bay. Levees are located throughout the salt ponds. San Francisquito Creek, approximately 1.3 miles south of the Project Site, is a natural channel that flows into the Bay and serves as a boundary between San Mateo and Santa Clara Counties. Ravenswood Slough, a wetland feature located less than 1 mile north of the Project Site, flows into the Bay (Figure 3.11-1, Hydrologic Features in the Project Area). The main Project Site is bound to the south by the Hetch Hetchy right-of-way. Bay fill and historic saltwater or brackish water marshes underlie the area surrounding the Project Site, which was filled in the 1960s to create more land for development.

[1] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

[2] Sherwood Design Engineers. 2021. *Willow Village Project Stormwater Management Compliance Memorandum*. March 9.

Project Boundary
Caltrans Pump Station
Stream/Slough

N

0 0.25 0.5 Miles

1:32,000

ICF

Figure 3.11-1
Hydrologic Features in the Project Area

Local Drainage

The main Project Site, which is made up of 18 parcels, has been subject to prior development and agricultural use. Currently, the main Project Site is developed; 87.1 percent of the land is covered with impervious surfaces. The remaining 12.9 percent consists of scattered landscaped areas. The main Project Site is generally level, with elevations ranging from approximately 6 to 11 feet North American Vertical Datum of 1988 (NAVD 88).[3] Generally, the main Project Site slopes gently from southeast to north. There are no onsite stormwater management facilities. Stormwater from the main Project Site drains to the west and discharges to an existing 66-inch storm drain at the Hamilton Avenue and Willow Road intersection. The 66-inch storm drain continues northward, increases to 78 inches, and ultimately outfalls to Ravenswood Slough via a pump station that is owned and operated by the California Department of Transportation (Caltrans). The Project Site ultimately drains to the Bay.[4,5] In addition, an existing open channel is located along the southern boundary of the main Project Site. This channel flows from west to east; it is then piped to flow from south to north along the eastern property boundary.

Hamilton Avenue Parcels North and South, combined, cover approximately 3.62 acres. The parcels are nearly flat, with grades ranging from about 6 to 12 feet NAVD 88.[6,7,8] In total, the two sites, which are developed, consist of approximately 73 percent impervious surfaces with buildings and hardscapes such as parking lots, paved paths, and drive aisles. The two parcels also consist of approximately 27 percent pervious surfaces, including decorative landscaping and flow-through planters.[9] The majority of the existing site slopes toward Hamilton Avenue. The Willow Road storm drain system is part of a regional drainage system that conveys flows from portions of Menlo Park and Atherton to the Caltrans pump station adjacent to Bayfront Expressway. Runoff from the Project Site is conveyed predominantly to a 54-inch storm drain at Hamilton Avenue and then conveyed to the 66-inch storm drain at the Hamilton Avenue and Willow Road intersection. A portion of the runoff from the south parcel is conveyed directly to the 66-inch storm drain at an upstream location at Willow Road.

In total, the current Project Site, including the main Project Site and Hamilton Avenue Parcels North and South, is made up of 86 percent impervious surfaces and 14 percent pervious surfaces. The Willow Road Tunnel site includes the Willow Road right-of-way, the Dumbarton Corridor, and the eastern edge of the West Campus site.

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3 Cornerstone Earth Group. 2020. *Preliminary Geotechnical Investigation Update, Willow Village, Willow Road, Hamilton Avenue, and Hamilton Court, Menlo Park, California.* (Project Number 254-11-7.) May 27. Prepared for Peninsula Innovation Partners, LLC, Menlo Park, CA. Sunnyvale, CA.

4 Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

5 Sherwood Design Engineers. 2021. *Stormwater Management Compliance Memorandum Willow Village Project*. March 9.

6 Cornerstone Earth Group. 2019. *Phase I Environmental Site Assessment, Belle Haven Retail Center, 871-899 Hamilton Avenue, Menlo Park, California*. (Project Number 254-11-21.) June 10. Prepared for Facebook, Inc., Menlo Park, CA. Sunnyvale, CA.

7 Cornerstone Earth Group. 2018. *Phase I Environmental Site Assessment, 1401 Willow Road, Menlo Park, California*. (Project Number 254-11-15.) April 23. Prepared for Peninsula Innovation Partners, LLC, Menlo Park, CA. Sunnyvale, CA.

8 Cornerstone Earth Group. 2020. *Phase I Environmental Site Assessment, 1399 Willow Road, Menlo Park, California*. (Project Number 254-45-1.) October 13. Prepared for Facebook, Inc., Menlo Park, CA. Sunnyvale, CA.

9 BKF Engineers. 2021. *Hydrology Report Hamilton Avenue Realignment Menlo Park California*. April 30.

Water Quality

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) requires the State Water Resources Control Board (State Water Board) or a Regional Water Quality Control Board (Regional Water Board) to adopt basin plans for the protection of water quality. The San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) specifies region-wide and water body–specific beneficial uses and sets numeric and narrative water quality objectives for surface waters. The Basin Plan specifies beneficial uses that are applicable to Lower San Francisco Bay and could be affected by the Proposed Project, as shown in Table 3.11-1.[10] Table 3.11-2 shows the 303(d)-listed impairments for Lower San Francisco Bay, based on the 2014/2016 California Integrated Report.[11]

Water quality in a typical surface water body is influenced by processes and activities that take place within the watershed. The quality of stormwater runoff from the Project Site and surrounding development is typical of urban watersheds, areas where water quality is affected primarily by discharges from both point and nonpoint sources. These include winter storms, overland flows, exposed soil, roofs, parking lots, and streets. Water quality in the vicinity of the Project Site is directly affected by stormwater runoff from adjacent streets and properties that deliver fertilizers, pesticides, automotive and traffic-related pollutants (e.g., oil, grease, metals), sediment with attached pollutants from soil erosion, trash, and other pollutants.

In accordance with Clean Water Act (CWA) Section 303(d), the State Water Board is required to establish total maximum daily loads (TMDLs) for pollutants to gradually eliminate listed impairments and attain water quality standards. Therefore, pollutant control actions and further pollutant impact assessments are warranted and required pursuant to the Municipal Regional Permit (MRP). Although chlordane, dichlorodiphenyltrichloroethane (DDT), and dieldrin were banned in the U.S. in 1988, 1972, and 1974, respectively, levels continue to persist in the Bay. In 1994, the California Office of Environmental Health Hazard Assessment issued a fish consumption advisory for the Bay after pollutants, including dioxins, were discovered in fish. As a result, the Bay was listed as a water body that fails to meet water quality standards for dioxins. This listing requires the U.S. Environmental Protection Agency (EPA) and California's Regional Water Boards to establish and implement measures to achieve a TMDL and maintain water quality. At the time of listing, EPA committed to undertaking several multimedia studies to determine the extent of the dioxin problem in the Bay.

Lower San Francisco Bay is designated as impaired for mercury. Fish tissue collected from the Bay often contains relatively high mercury concentrations. Sources of mercury include runoff from historic mines, urban runoff, wastewater discharges, atmospheric deposition, and resuspension of historic deposits of mercury-laden sediment already in the Bay. Most of the historic mercury deposits date back to the Gold Rush of the 1800s, a time when mercury was mined throughout the Coastal Range and used in the Sierra Nevada to extract gold. The largest source of mercury is the Central Valley—specifically, rivers that carry mercury from remote regions to the Bay. The San Francisco Bay Regional Water Board amended the Basin Plan to incorporate a TMDL for mercury in the Bay and implement a plan for achieving the TMDL. The amendment became effective on November 7, 2007.

[10] San Francisco Bay Regional Water Quality Control Board. 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* Originally published January 18, 2007. Last updated May 4, 2017.

[11] State Water Resources Control Board. 2018. *2014/2016 California Integrated Report* (Clean Water Act Section 303(d) List/305(b) Report). Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. Accessed: March 9, 2021.

Table 3.11-1. Beneficial Uses for Surface Waters with Potential to Be Affected by the Proposed Project

Water Body	Designated Beneficial Uses
Lower San Francisco Bay	COMM, IND, NAV, SHELL, WILD, EST, MIGR, RARE, SPWN, REC1, REC2

Source: San Francisco Bay Regional Water Quality Control Board. 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Originally published January 18, 2007. Last updated May 4, 2017.

Key:
COMM: Commercial and Sport Fishing
IND: Industrial Service Supply
NAV: Navigation
SHELL: Shellfish Harvesting
WILD: Wildlife Habitat
EST: Estuarine Habitat
MIGR: Fish Migration
RARE: Preservation of Rare and Endangered Species
SPWN: Fish Spawning
REC1: Water Contact Recreation
REC2: Noncontact Water Recreation

Table 3.11-2. Overview of Water Quality Impairments for the Lower San Francisco Bay

Listed Impairments per 2014/2016 303(d) List	Potential Sources	EPA TMDL Completion
Chlordane	Non-point source	2013[a]
DDT	Non-point source	2013[a]
Dieldrin	Non-point source	2013[a]
Dioxin compounds (including 2,3,7,8-TCDD)	Atmospheric deposition	2019[a]
Furan compounds	Atmospheric deposition	2019[a]
Invasive species	Ballast water	2019[a]
Mercury	Industrial and municipal point sources, resource extraction, atmospheric deposition, natural sources, non-point sources	02/12/2008
PCBs and dioxin-like PCBs	Unknown nonpoint sources	03/29/2010
Trash	Illegal dumping, urban runoff/storm sewers	2021[a]

[a] A TMDL was expected to be completed; however, no TMDL has been approved by EPA.
Source: State Water Resources Control Board, 2018.
EPA = U.S. Environmental Protection Agency
TMDL = total maximum daily load
DDT = dichlorodiphenyltrichloroethane
TCDD = tetrachlorodibenxodioxin
PCBs = polychlorinated biphenyls

High levels of polychlorinated biphenyls (PCBs) in fish from the Bay prompted a public advisory in the mid-1990s to limit their consumption. PCBs in the Bay are more often found in bottom sediment than in water. PCB pollution in the Bay happened decades ago; however, small amounts of PCBs continue to enter the Bay from sources that include drainage from the Central Valley, municipal and industrial wastewater, storm drains and urban stormwater runoff, and the disturbance of buried Bay sediments through dredging or erosion. The San Francisco Bay Regional Water Board adopted a clean water action plan in 2008 that established a TMDL for PCBs in the Bay. In 2010, EPA approved the TMDL for PCBs in the Bay.

According to the 2014/2016 California Integrated Report, Lower San Francisco Bay is 303(d) listed as impaired for trash, which is considered a threat to aquatic life. This threat can result in impairments for beneficial uses, including Noncontact Water Recreation (REC2), as designated for Lower San Francisco Bay. Provision C.10 of the San Francisco Bay MRP contains requirements for reductions in the trash load. Such reduction control actions must be implemented to meet the goal that calls for a 100 percent trash load reduction or no adverse impact on receiving waters from trash by July 1, 2022.[12]

Groundwater

Hydrogeology

The Project Site is within the San Mateo subbasin of the larger Santa Clara Valley groundwater basin (Department of Water Resources [DWR] Basin Number 2-9.03). The San Mateo subbasin, which encompasses approximately 75 square miles, is bounded by the Santa Cruz Mountains to the west, the Westside groundwater basin to the north, the Bay to the northeast, and San Francisquito Creek to the south. The subbasin's underlying water-bearing formations include Quaternary and Plio-Pleistocene alluvial deposits, which are composed of gravel, sand, silt, and clay. A relatively shallow aquifer overlies the confined and semi-confined aquifers near the margins of the Bay; most wells draw from deeper deposits. The direction of groundwater flow is generally toward the east and the north. The basin is composed of alluvial fan deposits formed by tributaries to the Bay that drain the basin.[13]

Recharge of the subbasin occurs through infiltration, including infiltration of precipitation on the valley floor. Little is known about the storage capacity of the subbasin; however, groundwater levels have remained relatively stable over the past 40 years because of limited groundwater pumping in the subbasin. Because of its relatively small size, the subbasin has historically responded to changes in groundwater pumping. This includes the previous overuse and lack of management prior to the 1960s that resulted in seawater intrusion and subsidence. Recent studies indicate that the subbasin is full.[14]

Groundwater at the main Project Site was observed at depths ranging from approximately 8 to 16 feet below current grades, corresponding to elevations of 2 to 6 feet (NAVD 88) at the main Project Site.[15] Historic high groundwater depths in the vicinity of the main Project Site are 5 feet below current site grades. Historic maps were used to estimate the high groundwater depth at Hamilton Avenue Parcels North and South, which is estimated to be approximately 10 feet below the ground surface (bgs).[16] Groundwater collected during geotechnical investigation of the Willow Road Tunnel site indicated

[12] San Francisco Bay Regional Water Quality Control Board. 2015. *California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit Order No. R2-2015-0049, NPDES Permit No. CAS612008*. November 19.

[13] California Department of Water Resources. 2004. *Santa Clara Valley Groundwater Basin, San Mateo Subbasin*. California's Groundwater Bulletin 118. February 27. Available: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/2_009_03_SanMateoSubbasin.pdf. Accessed: March 9, 2021.

[14] Stanford Water in the West. 2017. *San Mateo Plain Groundwater Subbasin: A Local Case Study*. April 26. Available: https://waterinthewest.stanford.edu/news-events/news-insights/san-mateo-plain-groundwater-subbasin-local-case-study. Accessed: March 10, 2021.

[15] Cornerstone Earth Group. 2020. *Preliminary Geotechnical Investigation Update, Willow Village, Willow Road, Hamilton Avenue, and Hamilton Court, Menlo Park, California*. (Project Number 254-11-7.) May 27. Prepared for Peninsula Innovation Partners, LLC, Menlo Park, CA. Sunnyvale, CA.

[16] Cornerstone Earth Group. 2020. *Geotechnical Consultation, Willow Village Expansion Feasibility Study, Hamilton Avenue and Willow Road, Menlo Park, California*. (Project Number 254-45-2.) October 15. Prepared for Facebook, Inc., Menlo Park, CA. Sunnyvale, CA.

elevations of 7.5 to 13.5 feet below current grades, corresponding to elevations of 2.5 to -3.5 feet (NAVD 88).[17, 18] Fluctuations in groundwater levels may occur because of seasonal fluctuations, variations in rainfall, underground drainage patterns, or other factors.[19, 20]

Groundwater Quality

In general, groundwater quality in the Santa Clara Valley groundwater basin is good. Throughout most of the basin, groundwater is suitable for most urban and agricultural uses, with the exception of a few local impairments. The primary constituents of concern are total dissolved solids (TDS), nitrates, boron, and organic compounds. Near the Bay margin, including the San Mateo subbasin, historic groundwater overdraft has created areas of saltwater intrusion where groundwater salinity is elevated because of contact with seawater that infiltrates subsurface aquifers. Groundwater tends to be hard (i.e., high mineral content), with high concentrations of iron and manganese.[21,22] Nitrates/nitrogen groundwater concentrations in the San Mateo subbasin were also in excess of maximum contaminant levels established by the California Department of Health Services and EPA.[23] Although many wells in the subbasin, particularly shallow wells that are prone to contamination, have concentrations of TDS, iron, and manganese that are above the secondary maximum contaminant levels, or drinking water standards, these concentrations have generally been stable over time, indicating that water quality is not degrading further.[24]

Designated beneficial uses identified for the Santa Clara Valley groundwater basin are as follows:[25]

- Municipal and Domestic Supply (MUN)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Agricultural Supply (AGR

Although the municipal and domestic supply is a beneficial use for the Santa Clara Valley groundwater basin, groundwater beneath the Project Site itself is not considered to be a source of drinking water, according to the San Francisco Bay Regional Water Board, because of elevated salinity.[26]

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17 Groundwater measurements collected at the time of exploration may not represent stabilized conditions.

18 ENGEO, Inc. 2021. *Willow Tunnel Menlo Park, California Geotechnical Data Report*. (Project Number 17215.000.000). September 30.

19 Cornerstone Earth Group. 2020. *Preliminary Geotechnical Investigation Update Willow Village.* June 20.

20 ENGEO, Inc. 2021. *Willow Tunnel Menlo Park, California Geotechnical Data Report*. (Project Number 17215.000.000). September 30.

21 California Department of Water Resources. 2015. *California's Groundwater Update 2013. A Compilation of Enhanced Content for California Water Plan Update 2013 San Francisco Bay Hydrologic Region*. April. Available: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/Statewide-Reports/GWU2013_Ch4_SanFranciscoBay_Final.pdf. Accessed: March 10, 2021.

22 U.S. Geological Survey and the California State Water Resources Control Board. 2013. *Groundwater Quality in the San Francisco Bay Groundwater Basins, California Fact Sheet 2012–3111*. March. Available: https://pubs.usgs.gov/fs/2012/3111/pdf/fs20123111.pdf. Accessed: March 10, 2021.

23 Groundwater Exchange. 2018. *Santa Clara Valley – San Mateo Plain*. Available: https://groundwaterexchange.org/basin/san-mateo/. Accessed: March 10, 2021.

24 Stanford Water in the West. 2017. *San Mateo Plain Groundwater Subbasin: A Local Case Study*. April 26. Available: https://waterinthewest.stanford.edu/news-events/news-insights/san-mateo-plain-groundwater-subbasin-local-case-study. Accessed: March 10, 2021.

25 San Francisco Bay Regional Water Quality Control Board. 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* Originally published January 18, 2007. Last updated May 4, 2017.

26 City of Menlo Park. 2012. *Menlo Park Facebook Campus Project Draft Environmental Impact Report*. Prepared by Atkins. April.

Groundwater objectives consist primarily of narrative objectives, combined with a limited number of numerical objectives. The primary groundwater objective is the maintenance of existing high-quality groundwater. At a minimum, groundwater should not contain concentrations of bacteria, chemical constituents, radioactivity, or substances that produce taste and odor in excess of objectives unless naturally occurring background concentrations are greater.

Groundwater contamination can be the result of historical industrial activities or soil contamination. It can also originate from underground storage tank releases of hazardous materials. The main Project Site was developed as a helicopter testing and manufacturing facility in 1948. In 1992, a concrete sump, a source of contamination at the former plating shop, was removed. Soils surrounding the sump were excavated, and a dual-phase soil vapor extraction (SVE) was put into operation, along with a groundwater extraction system. The SVE system successfully reduced elevated volatile organic compound (VOC) concentrations in vadose zone soils near the concrete sump.[27] VOC concentrations in groundwater were also reduced. Between 1990 and 1999, periodic groundwater monitoring was performed at the main Project Site.

The San Francisco Bay Regional Water Board has been developing policy, through the basin planning process, to address various situations when groundwater clean-up levels cannot be attained. Residual contaminants remain in soil and groundwater at the main Project Site. In addition, VOCs were detected in soil and groundwater at concentrations that prohibit groundwater pumping.[28] Deed restrictions prohibit the pumping of groundwater, except for remediation purposes. Other hazards and contaminants of concern are also present on the main Project Site, as discussed in detail in Section 3.12, *Hazards and Hazardous Materials*. Groundwater contamination and risks can be managed through deed restrictions, monitoring, and a contingency plan for remediation.

At the Belle Haven Retail Center on Hamilton Avenue Parcel North, groundwater levels range from 8 to 10 feet bgs. The Phase I Environmental Site Assessment found no issues related to groundwater.[29] At the Jack in the Box on Hamilton Avenue Parcel North, groundwater was tested and monitored for contaminants after the 1986 removal of an underground storage tank for gasoline. Once contaminants were no longer detected, the case was closed. The Department of Environmental Health issued a "No Further Action" letter, and the monitoring wells were destroyed in 1994.[30] At the Chevron gas station on Hamilton Avenue Parcel South, groundwater samples were taken beneath the dispenser and analyzed. The level of contamination in the groundwater was low and did not exceed screening criteria.[31] The Willow Road Tunnel site is on the eastern portion of a former 82-acre property that was owned and operated by Raychem. Known contaminants of concern in soil, soil vapor, and groundwater include polychlorinated byphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and total petroleum hydrocarbons.[32] Between 2000 and 2007, several interim remedial measures were completed. The work included decommissioning and demolishing former

[27] Ibid.

[28] Cornerstone Earth Group. 2019. *Phase I Environmental Site Assessment Menlo Science and Technology Park Project Number 254-11-22*. August 16.

[29] Cornerstone Earth Group. 2019. *Phase I Environmental Site Assessment, Belle Haven Retail Center 871-899 Hamilton Avenue, Menlo Park, California*. June 16.

[30] Cornerstone Earth Group. 2018. *Phase I Environmental Site Assessment, 1401 Willow Road, Menlo Park, California*. April 23.

[31] Cornerstone Earth Group. 2020. *Phase I Environmental Site Assessment, 1399 Willow Road, Menlo Park, California*. October 13.

[32] Cornerstone Earth Group. 2021. *Environmental Summary, Willow Tunnel Construction Zone, Menlo Park, California.* (Proposal No. 245-11-20.) June 28.

buildings, removing aboveground chemical storage tanks and waste storage tanks, excavating and disposing of contaminated soil, and capping PCB-affected soil that remained in place. A Site Management Plan (SMP) was prepared in March 2015 that describes required protocols for management of residual contaminants that remain in soil, soil vapor, and groundwater at the site. More information is provided in Section 3.12, *Hazards and Hazardous Materials,* of this EIR.

Flooding

As shown in Figure 3.11-2, FEMA Flood Zones within the Project Area, the majority of the Project Site (90 percent) is within the Federal Emergency Management Agency (FEMA) 100-year floodplain and subject to tidal flooding from the Bay (Zone AE). The base flood elevation (BFE) in the floodplain is 11 feet.[33] Some areas of the Project Site are mapped as being within Flood Zone X, which is an area with a moderate flood risk and between the limits of the 100-year and 500-year floodplain. Areas within the 100-year flood-hazard area are subject to a 100-year flood, which means that, in any given year, the risk of flooding in the designated area is 1 percent. Areas within the 500-year flood-hazard area are subject to a 500-year flood, which means that, in any given year, the risk of flooding is 0.2 percent.

A tsunami is a series of ocean waves caused by displacement of a large volume of water, typically as a result of an undersea earthquake or landslide. At the shoreline, tsunami waves may range from a few inches to more than 30 feet. As depicted on the Tsunami Inundation Map for Emergency Planning prepared by the California Governor's Office of Emergency Services (Cal OES) and California Geological Survey, some areas in the city adjacent to the Bay are within a tsunami inundation area. However, the Project Site is not within such an area.[34]

Seiches occur in an enclosed or partially enclosed body of water, such as a lake or reservoir. The Bay is a large, open body of water with no immediate risk of seiche. No other larger bodies of water are near the Project Site. There would be minimal to no risk of inundation from a seiche event in the vicinity of the Project Site.

Sea-Level Rise

Projected SLR, an effect of climate change, is expected to increase the number of areas that experience coastal flooding along the Bay in the future. Coastal and low-lying areas, such as the Project Site, are particularly vulnerable to future SLR. More specifically, SLR is a concern for the future, particularly in combination with storm events and coastal flooding. A scenario with 100-year high tides, taking into account SLR over a 50- or 100-year horizon, would substantially increase the risk of flooding in the vicinity for the Project Site.[35]

Projections regarding the extent of SLR go from low-risk scenarios up to high-risk scenarios. According to the mid-century (2050) high-risk scenario, 24 inches of SLR would inundate areas in the northeast portion of the main Project Site. Portions of Hamilton Avenue Parcels North and South are in low-lying areas but

[33] Federal Emergency Management Agency. 2019. *National Flood Hazard Layer Viewer.* Panel 307 of 510. FIRM 06081C0306F. April 5. Available: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed: March 10, 2021.

[34] State of California. 2021. *Tsunami Hazard Area Map, San Mateo County*. Produced by the California Geological Survey, the California Governor's Office of Emergency Services, and AECOM. Mapped at multiple scales.

[35] California Natural Resource Agency. 2018. *State of California Sea-Level Rise Guidance 2018 Update*. Available: https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf. Accessed: March 10, 2021.

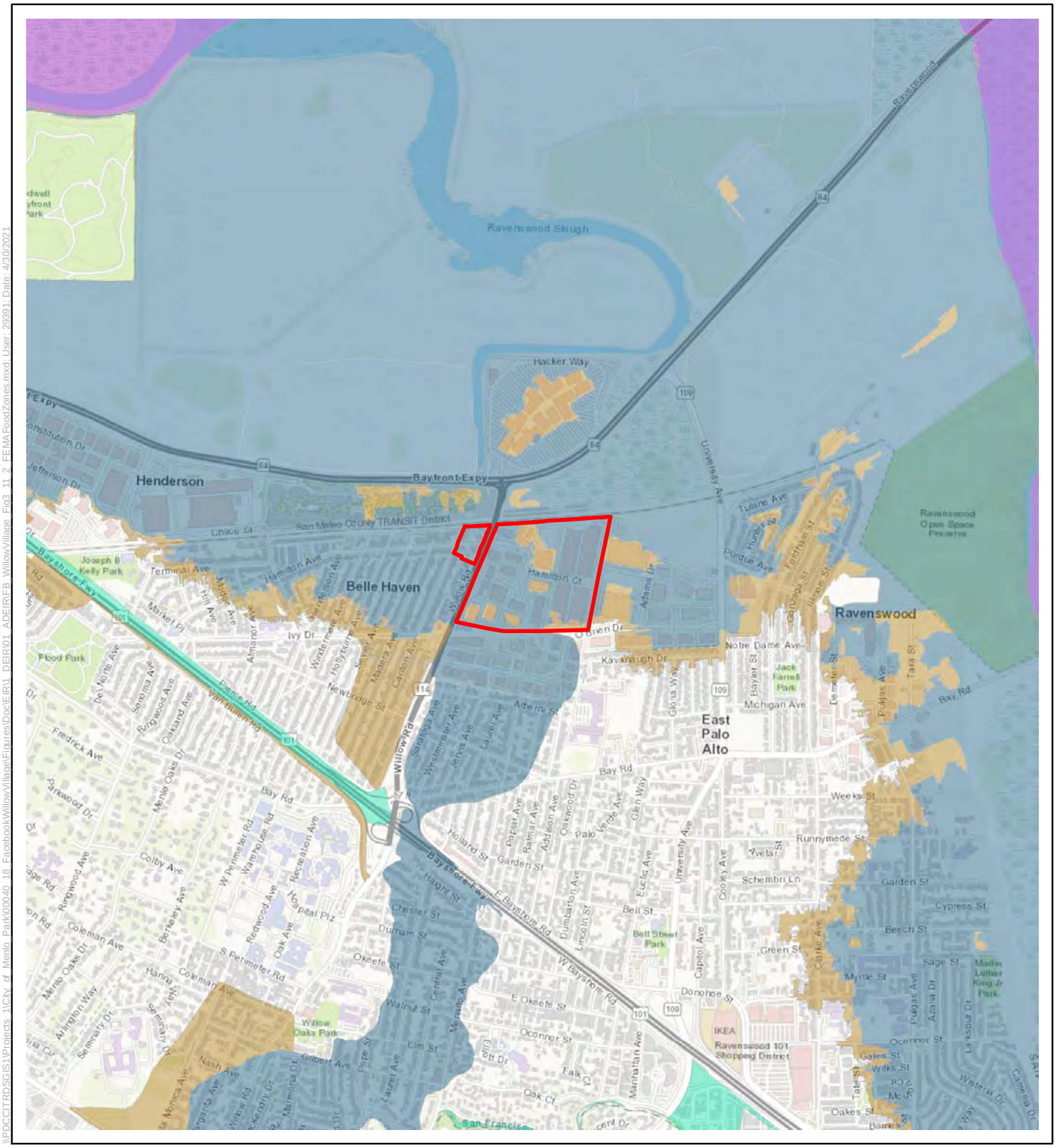

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Figure 3.11-2
FEMA Flood Zones within the Project Area

would not be flooded under the mid-century high-risk scenario. With the end-of-century (2100) high-risk scenario (i.e., 36 inches of SLR), the flooding would expand westward and inundate Hamilton Avenue Parcels North and South. The 48-inch SLR scenario would expand the inundated areas, although the expansion would not be expected to result in more flooding than that from the 36-inch SLR scenario. The scenarios used to evaluate flood inundation levels, including maximum inundation levels, at the Project Site are shown in Table 3.11-3.

Table 3.11-3. Sea-Level Rise Scenarios and Inundation Depths for the Project Site

SLR Projection	Year (scenario)	Main Project Site Inundated	Hamilton Avenue Parcels Inundated[a]	Maximum Inundation
24 inches	2050 (high scenario)	Partially	No	1 foot
36 inches	2100 (most likely SLR scenario)	Partially	Partially	2 feet
48 inches	2100 (upper 85% confidence scenario)	Partially	Yes	3 feet

Source: Sherwood Design Engineers. 2021. Sea-Level Rise Memorandum for Willow Village.
[a.] Includes the Willow Road Tunnel site

Regulatory Setting

Federal

Clean Water Act

The federal CWA was enacted with the primary purpose of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters. The CWA directs states to establish water quality standards for all waters of the United States and review and update such standards on a triennial basis.

EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) program (discussed below), to the State Water Board and the Regional Water Boards. The State Water Board establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. The Regional Water Boards develop and implement water quality control plans (i.e., basin plans) that identify the beneficial uses of surface water and groundwater, water quality characteristics, and water quality problems.

Section 303(d) and Total Maximum Daily Loads. The CWA contains two strategies for managing water quality. One is a technology-based approach that includes requirements for maintaining a minimum level of pollutant management, using the best available technology (BAT). The other is a water quality–based approach that relies on evaluating the condition of surface waters and setting limitations on the amount of pollution that surface waters can be exposed to without adversely affecting the beneficial uses of those waters. Section 303(d) of the CWA bridges the two strategies. Section 303(d) requires states to make a list of waters that fail to attain the water quality standards after BAT limits are implemented. For the waters on this list, and where the EPA administrator deems appropriate, the states are required to develop TMDLs. TMDLs are established at the level necessary to implement the applicable water quality standards.

The CWA does not expressly require implementation of TMDLs. However, federal regulations require an implementation plan to be developed along with TMDLs. Furthermore, Sections 303(d) and 303(e) of the CWA, along with their implementing regulations, require approved TMDLs to be incorporated into basin plans. EPA has established regulations (40 Code of Federal Regulations 122) that require NPDES permits to be revised and consistent with any approved TMDL. A mercury TMDL has been established for the Bay and approved by the State Water Board (Resolution 2007-0045). TMDLs for the other constituents that contribute to impairment were scheduled to be established between 2013 and 2021 but have not been approved by the EPA.

Section 404 Dredge/Fill Permitting. The discharge of dredged or fill material into waters of the United States is subject to permitting specified under Section 404 (Discharges of Dredged or Fill Material) of the CWA, which regulates the placement of fill materials in waters of the United States. Section 404 permits are administered by the U.S. Army Corps of Engineers (USACE).

Section 401 Water Quality Certification. Section 401 of the CWA requires an applicant for a federal permit to conduct an activity that may result in a discharge of a pollutant to obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or the placement of fill materials into waters of the United States. Water Quality Certifications are issued by one of the nine geographically separated Regional Water Boards in California. Under the CWA, a Regional Water Board must issue or waive a Section 401 Water Quality Certification for a project to be permitted under CWA Section 404.

Section 402—National Pollutant Discharge Elimination System. The 1972 amendments to the federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA, devoted to stormwater permitting (Section 402[p]). EPA has granted the State of California (i.e., the State Water Board and Regional Water Boards) primacy in administering and enforcing the provisions of the CWA and NPDES. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

NPDES General Permit for Construction Activities. Most construction activities that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (Construction General Permit). The State Water Board has issued a statewide Construction General Permit (Order No. 2009-0009-DWQ, NPDES No. CAR000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ), adopted September 2, 2009. Activities subject to the Construction General Permit include clearing, grading, or ground disturbance, such as stockpiling or excavation that affects at least 1 acre of the total land area. The Construction General Permit requires the applicant to file a Notice of Intent to discharge stormwater and prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes a site map and a description of proposed construction activities, along with a demonstration of compliance with relevant local ordinances and regulations and an overview of the best management practices (BMPs) that would be implemented to prevent soil erosion and discharges of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants.

NPDES General Municipal Stormwater Permit. CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4s). MS4 permits require cities and counties to develop and implement programs and measures to reduce the discharge of pollutants in stormwater to the maximum extent possible, including BMPs, control techniques, system design and engineering methods, and other

measures, as appropriate. As part of permit compliance, permit holders create stormwater management plans for their respective locations. These plans outline requirements for municipal operations, industrial and commercial businesses, construction sites, and planning and land development. The requirements may include multiple measures to control pollutants in stormwater discharges. During implementation of specific projects, applicants are required to follow the guidance contained in the stormwater management plans, as defined by the permit holder. The discharge of stormwater runoff from the MS4 in San Mateo County is permitted under the San Francisco Bay MRP (Order No. R2-2015-0049; NPDES Permit No. CAS612008), which is discussed below.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries. Such determinations are based on USACE studies. FEMA is also responsible for distributing Flood Insurance Rate Maps (FIRMs), which are used as part of the National Flood Insurance Program. The maps identify the locations of Special Flood Hazard Areas (SFHAs), including the 100-year floodplain. FEMA allows non-residential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending on the potential for flooding within each area.

Historically, Menlo Park was not considered flood prone; however, studies completed in the 1980s revised this assessment. FEMA conducted a flood insurance study that designated areas north of State Route (SR) 82 as SFHAs, making flood insurance mandatory for properties within the SFHAs and optional for those in other areas. The City of Menlo Park (City) performs floodplain management activities, above and beyond the minimum requirements for the National Flood Insurance Program. Participating in this program allows the City to earn discounted flood insurance rates for all community members. By following the guidelines set forth by FEMA, the community earns a community rating system (CRS) credit. As the community earns a higher CRS credit, the community is eligible for greater flood insurance discounts. Menlo Park's current CRS is 8, effective October 1, 2020. Future planned levee projects, which would change the BFE or remove portions of Menlo Park from the flood zone, would also reduce residents' insurance premiums. FEMA requires communities to address tidal flooding (from San Francisco Bay) and residual flooding (from interior sources like creeks) issues to remove the flood-prone designation from the FIRM. In response, the City adopted a flood ordinance that meets federal standards for regulating development and improving properties in SFHAs.

The Project Site, including the main Project Site, Hamilton Avenue Parcels North and South, and the Willow Road Tunnel site, are adjacent to the Bay, near Willow Road, and in FIRM Panel 307 of 510 of map number 06081C0307F, dated April 5, 2019. A Conditional Letter of Map Revision (CLOMR) and/or Letters of Map Revision (LOMR) will be processed with FEMA to remove the flood hazard designation for each parcel. CLOMRs will document that parcels, as designed, will be built above the BFE. LOMRs will document that the parcel has been constructed above the BFE, as certified by a post-construction site survey.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is established and implemented by the State Water Board and nine Regional Water Boards. Waters of the state are defined as "[a]ny surface water or groundwater, including saline waters within state boundaries." The definition includes natural and certain artificial or constructed facilities. In addition, waters of the state include both waters of the United States and non-federal waters of the state. The act requires a project that discharges or proposes to discharge wastes that could affect the quality of the state's water to file a waste discharge report with the appropriate Regional Water Board. The Porter-Cologne Act also requires the State Water Board or Regional Water Board to adopt a basin

plan for the protection of water quality that specifies region-wide and water body–specific beneficial uses. It also sets numeric and narrative water quality objectives for several substances and parameters in numerous surface waters in its region. The Proposed Project lies within the jurisdiction of the San Francisco Bay Regional Water Board.[36] Beneficial uses, water quality objectives, and Section 303(d)-listed impairments are described above in the *Water Quality* section.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA) is a comprehensive three-bill package that Governor Jerry Brown signed into law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention only if necessary to protect the resource. The plan is intended to ensure a reliable groundwater water supply for California for years to come. The SGMA requires the formation of local Groundwater Sustainability Agencies, which are required to adopt groundwater sustainability plans (GSPs) to manage the sustainability of groundwater basins. Groundwater Sustainability Agencies for all high- and medium-priority basins, as identified by the Department of Water Resources (DWR), must adopt a GSP or submit an alternative. The SGMA also requires governments and water agencies for high- and medium-priority basins to halt operations that result in overdraft conditions and bring the basins into balance respect to pumping and recharge. GSPs for high- and medium-priority basins are to be submitted to DWR by January 31, 2022; however, GSPs for high- and medium-priority basins with critical overdraft conditions were to be submitted to DWR by January 31, 2020. The Project Site overlies the San Mateo subbasin, which is designated as a very low-priority basin and not required to comply with the SGMA. More information regarding groundwater in relation to water supply is provided in Section 4.17, *Utilities and Service Systems*, of this environmental impact report (EIR).

Local

San Francisco Bay Municipal Regional Stormwater NPDES Permit

The San Francisco Bay Regional Water Board issued the most recent MS4 Phase I San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Permit No. CAS029718 (Order No. R2-2015-0049, NPDES Permit No. CAS612008, as amended by Order No. R2-2019-0004), on November 19, 2015. The City is a permittee under the San Francisco Bay MRP for the discharge of stormwater runoff from MS4s. The following requirements apply to all projects, regardless of size, as appropriate:

- Construction-phase BMPs
- Post-construction site design measures to maximize infiltration in pervious areas
- Post-construction source control measures to keep pollutants out of stormwater

The following requirements apply to certain projects, based on size and/or location:

- Post-construction stormwater treatment measures are required for most projects with 10,000 square feet or more of impervious surface area
- Post-construction stormwater quantity (i.e., flow peak, volume, and duration) controls are required for projects in certain locations with 1 acre or more of impervious surface area, in accordance with local hydromodification management plans[37]

[36] San Francisco Bay Regional Water Quality Control Board. 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* Originally published January 18, 2007. Last updated in 2017.

[37] More information on hydromodification is provided below in the San Mateo Countywide Water Pollution Prevention Program section.

Provision C.3 of the San Francisco Bay MRP requires new development, as well as redevelopment, source control; site design; and stormwater treatment measures to address pollutant discharges in stormwater runoff. This goal is accomplished by low-impact development (LID) techniques, including infiltration and biotreatment. The current MRP regulates stormwater treatment for new development but recognizes that certain urban infill and high-density transit-oriented developments have some inherent environmental benefits and challenges. These types of projects, known as "Special Projects," are allowed to use specific types of non-LID treatment measures to treat a certain percentage of a site's runoff.

The Proposed Project is a new development and, therefore, considered a "regulated project" under the San Francisco Bay MRP. More specifically, the Proposed Project falls within the "other redevelopment projects" category of Provision C.3 (i.e., "any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred"). These projects include those that create or replace 10,000 square feet or more of impervious surface area, which applies to the Proposed Project. To meet the Provision C.3 requirements, projects must include appropriate site design measures, pollutant source controls and treatment control measures.

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership among the City/County Association of Governments, each incorporated city and town in the county, and the County of San Mateo, all of which share a common NPDES permit. Each municipality in San Mateo County is responsible for implementing a stormwater program in compliance with NPDES permit requirements to prevent discharges of polluted stormwater runoff from its streets to the local storm drain system and nearby surface waters. The Proposed Project would be required to comply with the San Francisco Bay MRP Provision C.3 Stormwater Technical Guidance.

Municipalities apply the "maximum extent practicable" standard, including standard stormwater conditions of approval, to projects that receive development permits. The Provision C.3 Stormwater Technical Guidance was prepared under the SMCWPPP to help projects design appropriate post-construction stormwater controls and meet local jurisdictional requirements as well as the requirements of the San Francisco Bay MRP. The Provision C.3 and Provision C.6 Development Review Checklist is required for projects that would result in any new impervious surface area. SMCWPPP Provision C.3.g, Hydromodification Control Requirements, requires certain new development projects to manage increases in stormwater runoff flows and volumes. Permit permittees, including the City, have developed maps to show where hydromodification controls would be required. The Proposed Project is exempt from SMCWPPP Provision C.3.g because the Project Site is outside the limits of the hydromodification areas.

San Mateo County Flood Control and Sea-Level Rise Resiliency District

The San Mateo County Flood Control and Sea-Level Rise Resiliency District coordinates cross-jurisdictional collaborations to manage impending threats of flooding. The district initiates new countywide efforts to address SLR, flooding, coastal erosion, and large-scale stormwater infrastructure improvements through integrated regional planning, project implementation, and long-term maintenance. Made up of 20 incorporated cities, the City/County Association of Governments, and the County of San Mateo, the district's purpose is to create a unified agency that cost effectively implements resilient infrastructure to face flood challenges. The San Mateo County Flood Control and Sea-Level Rise Resiliency District was created by modifying the existing flood control district through state legislation (i.e., Assembly Bill 825 [2019–2020]).

Menlo Park Municipal Code

Menlo Park Municipal Code contains the following requirements related to the protection of water resources:

Title 7: Health and Sanitation, Chapter 7.35. This chapter discusses general water conservation principals and adopts water conservation as a citywide goal. Furthermore, it notes that the City should conserve the water supply for uses with the greatest public benefit, particularly domestic uses, sanitation, and fire protection. The chapter includes regulations and restrictions regarding water use and mandates the elimination of any wasteful use of water.

Title 7: Health and Sanitation, Chapter 7.42. This chapter officially adopts the San Mateo Countywide Pollution Prevention Program Stormwater Management Plan and its provisions as City policy. The purpose and intent of the chapter is to ensure the future health, safety, and general welfare of Menlo Park citizens by eliminating non-stormwater discharges to the municipal separate storm sewer; controlling discharges to municipal separate storm sewers from spills, dumping, or the disposal of materials other than stormwater; and reducing pollutants in stormwater discharges to the maximum extent practicable. The intent of the chapter is also to protect and enhance the quality of the watercourses, water bodies, and wetlands in a manner consistent with the CWA.

To meet the requirements of Stormwater Ordinance 859 (Chapter 7.42), the City requires a Grading and Drainage (G&D) Plan whenever more than 500 square feet of the surface of a lot would be affected by a building project. The goal of the G&D Plan is to manage possible sources of water pollution (source control), make sure site drainage does not affect neighboring properties (site design), and remove contaminants from the stormwater before it drains into the City street or storm drain system (treatment measures).

Title 12: Buildings and Construction, Chapter 12.42.[38] This chapter contains methods and provisions for preventing flood damage. Under the provisions of this chapter, a development permit is required before construction or development activities in a flood hazard area can begin. The standards for construction in this chapter involve anchoring, flood-resistant construction materials and methods, and elevation and flood-proofing standards.

Title 12: Buildings and Construction, Chapter 12.44. This chapter is known as the City Water Efficient Landscaping Ordinance. Landscapes must be designed for water efficiency and comply with the criteria described in the ordinance. All new construction, of applicable sizes, would complete a landscape project application and documentation package and comply with the landscape and irrigation maintenance schedule. To demonstrate that the landscape meets the ordinance's water efficiency goals, two options are provided: the planting restrictions option (e.g., no turf or high-water-use plants, at least 80 percent native plants in landscaped areas, low-water-use plants, or no-water-use plants) and the water budget calculation option.

City of Menlo Park General Plan

The City General Plan consists of the Open Space/Conservation, Noise, and Safety Elements, adopted May 21, 2013; the 2014-2023 Housing Element, adopted by the City on April 1, 2014; and the Circulation and Land Use Elements, adopted November 29, 2016. The City General Plan includes goals and policies associated with hydrology and water quality.[39] The following goal within the Open Space/Conservation Element adopted to avoid or minimize environmental impacts is relevant to the Proposed Project:

[38] City of Menlo Park. n.d. *City of Menlo Park Municipal Code*. Title 12: Buildings and Construction. Chapter 12.42: Flood Damage Prevention. Passed: August 23, 2011. Available: http://www.codepublishing.com/CA/menlopark/. Accessed: August 31, 2015.

[39] City of Menlo Park. 2013. *City of Menlo Park General Plan – Open Space and Conservation, Noise, and Safety Elements.* Adopted: May 21, 2013. Available: https://www.menlopark.org/DocumentCenter/View/234/Open-Space-and-Conservation-Noise-and-Safety-Elements?bidId=. Accessed: March 10, 2021.

Goal OSC5: Ensure Healthy Air Quality and Water Quality. Enhance and preserve air quality in accord with state and regional standards and encourage coordination regarding water quality management, including management of both the water supply and wastewater treatment.

The following goal and policies from the Safety Element adopted to avoid or minimize environmental impacts are related to flood control, tsunamis, and dam safety and pertain to the Proposed Project:

Goal S1: Ensure a Safe Community. Minimize risks to life and damage to the environment and property from natural and human-caused hazards and ensure community emergency preparedness, along with a high level of public safety services and facilities.

> **Policy S1.21: Flood and Tsunami Hazard Planning and Mapping**. Consider the threat of flooding and tsunamis in planning and management practices to minimize risks to life, the environment, and property and maintain up-to-date tsunami hazard zone maps and flood maps as new information is provided by FEMA and other regional agencies. Modify land use plans in areas where tsunamis and flooding are hazards and permit only uses that will sustain acceptable levels of damage and not endanger human lives in the event of inundation.
>
> **Policy S1.22: Flood Damage Prevention**. Continue to apply standards to construction projects (i.e., both new structures and existing structures proposed for substantial improvement) in areas of special flood hazard in accordance with FEMA and the Flood Damage Prevention Ordinance. This includes the use of flood-resistant construction materials and construction methods that minimize flood damage. Locate new essential public facilities, such as City operations facilities, police and fire stations, and hospitals, outside flood zones to the extent feasible.
>
> **Policy S1.26: Erosion and Sediment Control**. Continue to require the use of BMPs for erosion and sediment control measures associated with proposed development in compliance with applicable regional regulations.
>
> **Policy S1.27: RWQCB Requirements**. Enforce stormwater pollution prevention practices and appropriate watershed management plans in the RWQCB general NPDES requirements, the San Mateo County Water Pollution Prevention Program, and the City's Stormwater Management Program. Revise, as necessary, City plans so they integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies.
>
> **Policy S1.28: Sea-Level Rise**. Consider SLR when siting new facilities or residences in potentially affected areas.

The following goal, policy, and programs associated with hydrology and water quality from the Land Use Element adopted to avoid or minimize environmental impacts pertain to the Proposed Project:

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

> **Policy LU-7.7: Hazards**. Avoid development in areas with seismic, flood, fire, and other hazards to life or property when potential impacts cannot be mitigated.
>
> **Program LU-7.B: Groundwater Wells.** Monitor pumping from existing and new wells to identify and prevent potential ground subsidence, salinity intrusion into shallow aquifers (particularly in the Bayfront Area), and contamination of deeper aquifers.

Program LU-7.F: Adaptation Plan. Work with emergency service providers to develop an adaptation plan, including funding mechanisms, to help prepare the community for potential adverse impacts related to climate change, such as SLR, extreme weather events, wildfire, and threats to ecosystem and species' health.

Program LU-7.G: SAFER Bay Process. Coordinate with the SAFER Bay process so that the Menlo Park community's objectives for SLR/flood protection, ecosystem protection, and recreation are adequately taken into consideration.

Program LU-7.H: Sea-Level Rise. Establish requirements, based on state SLR policy guidance for development projects of a certain minimum scale potentially affected by SLR, to ensure protection of occupants and property from flood and other potential effects.

Program LU-7.I: Green Infrastructure Plan. Develop a Green Infrastructure Plan that focuses on implementing City-wide projects to mitigate flooding and improve the quality of stormwater.

Environmental Impacts

This section describes the impact analysis related to hydrology and water quality for the Proposed Project. It describes the methods used to determine the impacts of the Proposed Project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as needed.

Thresholds of Significance

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would have a significant effect if it would result in any of the conditions listed below.

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or the addition of impervious surfaces, in a manner that would:
    - Result in substantial erosion or siltation onsite or offsite,
    - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite,
    - Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or
    - Impede or redirect floodflows.
- In flood hazard, tsunami, or seiche zones, risk a release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Methods for Analysis

All elements of the Proposed Project were analyzed by comparing baseline conditions to conditions anticipated during construction and/or operation of the Proposed Project. The analysis focused on issues related to surface hydrology, groundwater supply, flood hazards, and surface water and groundwater quality. Identification and evaluation of the key construction and operational impacts considered the physical characteristics of the Project Site as well as the magnitude, intensity, location, and duration of activities.

- **Surface Water Hydrology.** The surface water hydrology impact analysis considered changes in impervious surfaces and drainage patterns. Information regarding changes in impervious surfaces, runoff quantities, and drainage patterns was provided by the hydrology and hydraulic report prepared for the Proposed Project.[40]
- **Groundwater Supply.** Potential impacts on groundwater supply were analyzed by using information from publicly available publications as well as site-specific technical reports, including the preliminary geotechnical investigation.[41] The potential impacts associated with construction dewatering and recharge capabilities were also evaluated.
- **Flood Hazards.** The impact analysis regarding flood risk relied on FEMA mapping to determine the existing flood zone as well as information from the hydrology and hydraulic report regarding changes to the drainage system and layout that may affect flood risks.
- **Surface Water and Groundwater Quality.** Impacts on surface water and groundwater quality were analyzed by using information regarding potential sources of pollution—specifically, activities such as vehicle use, building maintenance, pesticide use, trash disposal, and hazardous material storage—as well as site-specific technical reports, including the Phase I Environmental Site Assessment. The analysis considered potential Project-related sources of pollution during construction, such as sediments and building materials, and during operation, such as vehicle use, building maintenance, pesticide use, trash disposal, and the storage of hazardous materials.

Summary of Analysis in the ConnectMenlo EIR

The ConnectMenlo EIR analyzed the following impacts that would result from implementing the updates to the Land Use and Circulation Elements:[42]

- Impacts related to water quality were analyzed in the ConnectMenlo EIR as Impact HYDRO-1 (pages 4.8-27 to 4.8-29). It was determined that they would be less than significant through compliance with existing federal, state, and local regulations, including City General Plan goals, policies, and design standards. No mitigation measures were recommended. In addition, this topic was also analyzed in the ConnectMenlo EIR as Impact HYDRO-6 (page 4.8-35). It was determined that the impact on water quality would be less than significant through compliance with existing federal, state, and local regulations as well as City General Plan policies to minimize impacts related to water supply. No mitigation measures were recommended.

[40] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

[41] Cornerstone Earth Group. 2020. *Preliminary Geotechnical Investigation Update Willow Village.* June 20.

[42] City of Menlo Park. 2016. *ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Zoning Update for the City of Menlo Park*. June 1. Prepared by Placeworks, Berkeley, CA. Menlo Park, CA. Available: https://www.menlopark.org/1013/Environmental-Impact-Report. Accessed: March 29, 2021

- Impacts related to groundwater supply and recharge were analyzed in the ConnectMenlo EIR as Impact HYDRO-2 (pages 4.8-30 to 4.8-32). It was determined that they would be less than significant through compliance with existing federal, state, and local regulations, including City General Plan policies. No mitigation measures were recommended.
- Impacts on erosion and siltation were analyzed in the ConnectMenlo EIR as Impact HYDRO-3 (pages 4.8-32 and 4.8-33). It was determined that they would be less than significant because of regulatory requirements (e.g., BMPs, erosion control plans, SWPPPs) and compliance with Menlo Park Municipal Code and City General Plan policies. No mitigation measures were recommended. Impacts on onsite or offsite flooding were analyzed in the ConnectMenlo EIR as Impact HYDRO-4 (pages 4.8-33 and 4.8-34). It was determined that they would be less than significant through compliance with City stormwater measures from the Menlo Park Municipal Code, compliance with Provision C.3 of the MRP, and adherence to City General Plan policies. No mitigation measures were recommended.
- Impacts on stormwater drainage systems were analyzed in the ConnectMenlo EIR as Impact HYDRO-5 (page 4.8-34). It was determined that they would be less than significant because future development would be required to provide onsite infiltration for stormwater runoff, consistent with the City General Plan and Menlo Park Municipal Code. No mitigation measures were recommended. Flood hazards were analyzed in the ConnectMenlo EIR as Impact HYDRO-8 (page 4.8-38). It was determined that impacts related to flood hazards would be less than significant through compliance with federal and Menlo Park Municipal Code requirements as well as City General Plan policies. No mitigation measures were recommended. The topic of inundation by tsunami or seiche was analyzed in the ConnectMenlo EIR as Impact HYDRO-10 (pages 4.8-43 and 4.8-44). It was determined that impacts on future developments related to flooding from tsunami or seiche would be less than significant through compliance with existing regulations, including City General Plan policies. No mitigation measures were recommended.
- The ConnectMenlo EIR did not analyze whether a project would conflict with or obstruct implementation of a water quality control plan because this topic was added to CEQA Guidelines Appendix G after completion of the ConnectMenlo EIR. However, the ConnectMenlo EIR concluded that, through compliance with existing federal, state, and local regulations and implementation of the site design, source control, and treatment control measures, impacts on water quality would be less than significant.
- The ConnectMenlo EIR also did not analyze whether a project would conflict with or obstruct implementation of a sustainable groundwater management plan because this topic was added to CEQA Guidelines Appendix G after completion of the ConnectMenlo EIR. However, the ConnectMenlo EIR concluded that development under the City General Plan would result in less-than-significant impacts with respect to depleting groundwater supplies or interfering with groundwater recharge (ConnectMenlo EIR, Impact HYDRO-2).

Impacts and Mitigation Measures

Impact HY-1: Water Quality. The Proposed Project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality. (LTS/M)

Construction

Surface Water Quality

Project construction activities, including grading, soil and material stockpiling, and other earth-disturbing activities, could result in short-term water quality impacts from erosion and subsequent sediment transport to adjacent properties, roadways, or watercourses from storm drains. Excavation and grading activities at the main Project Site and the Willow Road Tunnel are anticipated to generate up to 407,000 cubic yards of excavated soil. Similar construction activities at Hamilton Avenue Parcels North and South are not anticipated to generate excess soil. This would require offsite disposal. Sediment transport to local drainage facilities, such as drainage inlets, culverts, and storm drains, could result in reduced stormflow capacity, resulting in localized ponding or flooding during storm events. An existing open channel is located along the southern property line of the main Project Site. To accommodate Project Site improvements, drainage flows within this offsite channel would be sent underground and the channel would be filled.

Project construction would also involve the use of motorized heavy equipment, including trucks and dozers that would require fuel, lubricating grease, and other fluids. Construction would also involve the delivery, handling, and storage of construction materials and waste (e.g., concrete debris). An accidental chemical release or spill from a vehicle or equipment could affect the quality of surface water or groundwater. Construction activities could also generate dust, litter, oil, and other pollutants that could temporarily contaminate runoff from the Project Site. All construction equipment and material would be staged onsite. Staging areas or building sites can be sources of pollution because of the use of paints, solvents, cleaning agents, and metals during construction.

The Proposed Project would generate approximately 125,000 cubic yards of debris from structure demolition (e.g., wood, metal roofing, steel) that would need to be disposed of at an offsite landfill. Approximately 101,000 cubic yards would be generated during Phase 1 and 24,000 cubic yards during Phase 2. Approximately 26,902 cubic yards of demolition debris would be generated during construction of Hamilton Avenue Parcels North and South.

All Project construction activities would be subject to existing regulatory requirements, as described above in the *Regulatory Setting*. Because land disturbance associated with the Proposed Project would affect more than 1 acre, coverage under the NPDES Construction General Permit would be required. Standards contained in the Construction General Permit, as described above, would ensure that water quality would not be degraded. As part of compliance with the Construction General Permit, standard erosion control measures and other BMPs would be identified in the SWPPP. These measures would be implemented during construction to reduce contamination and sedimentation in waterways. Because soils at the Project Site are not native topsoil, removing them for construction would not result in a loss of topsoil, as discussed in detail in Section 3.10, *Geology and Soils.* As a performance standard, the BMPs included in the SWPPP would be required to represent the best available technology that is economically achievable and the best conventional pollutant control technology for reducing pollution. Commonly practiced BMPs consist of a wide variety of measures. These are implemented to reduce pollutants in stormwater and other nonpoint-source runoff. Such measures include erosion control devices, such as silt fences, staked straw wattles, and

geofabric to prevent silt runoff to storm drains or waterways. Topsoil and backfill would be stockpiled, protected, and replaced at the conclusion of construction activities. Disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule for turf, plants, and other landscaping vegetation. No disturbed surfaces would be left without erosion control measures in place during the wet season, which generally occurs between October 1 and April 30.

Project construction is expected to occur in two primary phases, which could overlap over a period of approximately 48 months (2022–2026). Therefore, some activities would occur during the wet season. Specific erosion and sediment control BMPs would be implemented for Project construction occurring during the wet season. The Project Sponsor would be required to implement BMPs to minimize the potential for large rain events to mobilize loose sediment during construction.

Construction activities must also comply with the Municipal Regional Permit. This includes filing a Notice of Intent for permit coverage under the Construction General Permit and complying with the Menlo Park Municipal Code to ensure that water quality would not be degraded. In addition to compliance with the Menlo Park Municipal Code (Title 7, Chapter 7.42) and the permit review process, the Project Sponsor would also be required to prepare and implement a G&D Plan. BMPs implemented as part of the G&D Plan would reduce the amount of stormwater runoff and prevent the entry of Project-related sediment and pollutants into the City's storm drain system and surface waters.

Project construction would be in compliance with the Construction General Permit, including development and implementation of the SWPPP, and local stormwater regulations, such as the Menlo Park Municipal Code and other related regulations. Compliance with the requirements would ensure that construction activities would not result in a violation of water quality standards or waste discharges requirements or otherwise result in water quality degradation. Project impacts on surface water quality during construction would be ***less than significant***, consistent with the ConnectMenlo EIR. No mitigation is required.

Groundwater Quality

Construction dewatering could be required in areas with shallow groundwater during excavation and trenching for foundation work and utility improvements. The main Project Site has historical soil and groundwater contamination issues (EnviroStor ID 60002595). In addition, construction of the Willow Road Tunnel would require cut-and-cover work during construction and possibly dewatering. Willow Road Tunnel would extend from the northwest corner of the main Project Site to the southeast corner of Meta's West Campus, running under Willow Road and the Dumbarton Rail Corridor. This property, at 1 Facebook Way, is listed as a voluntary cleanup site with restricted use (EnviroStor ID 60001437).[43] Restricted uses at the Willow Road Tunnel site include residential, hospital, public or private school, and day-care uses. Drilling for groundwater and the extraction of groundwater for purposes other than groundwater monitoring, site remediation, or construction dewatering are also prohibited. Any activity that may disturb an engineered cap requires written approval from the California Department of Toxic Substances Control and EPA.[44]

As discussed in Section 3.12, *Hazards and Hazardous Materials*, impacts related to groundwater contamination are considered potentially significant and require mitigation to protect human health and the environment. Coverage under the Construction General Permit typically includes dewatering activities as authorized non-stormwater discharges, provided that dischargers prove that the quality of the water is adequate and not likely to affect beneficial uses.

[43] California Department of Toxic Substances Control. 2021. *Cortese List*. Available: EnviroStor (ca.gov). Accessed March 18, 2022

[44] Cornerstone Earth Group. 2021. *Environmental Summary: Willow Tunnel Construction Zone, Menlo Park, California*. Memorandum to Mr. Brian Zubradt and Mr. Eric Harrison. June 28, 2021.

Because groundwater at the main Project Site and the Willow Road Tunnel site may be contaminated, the San Francisco Bay Regional Water Board would need to be notified if dewatering should occur. Furthermore, the contractor may be subject to dewatering requirements in addition to those outlined in the Construction General Permit, including discharge sampling, treatment, and reporting to ensure compliance with applicable construction dewatering discharge permitting. If contaminated groundwater is encountered, compliance with discharge sampling, monitoring, and reporting requirements, as well as the VOC and Fuel General Permit (Order No. R2-2018-0050), may also be required. If it is found that groundwater does not meet water quality standards, it would either be treated prior to discharge so that all applicable water quality objectives (as designated in the Basin Plan) are met or hauled offsite for treatment and disposal at an appropriate waste treatment facility that is permitted to receive such water.

Other construction activities could result in short-term groundwater quality impacts associated with the input of sediment loads or chemicals into storm drains or groundwater aquifers and exceed water quality objectives if proper minimization measures are not implemented. However, the Proposed Project would be required to comply with the Municipal Regional Permit, including filing a Notice of Intent for permit coverage under the Construction General Permit, as well as local ordinances regarding stormwater and construction site runoff. These requirements involve development and implementation of a Construction General Permit, SWPPP, and stormwater management measures specific to the Project Site and Project construction activities to minimize water quality impacts related to spills or other actions that could contaminate groundwater. BMPs would be required and incorporated into the SWPPP and other permits prior to approval of grading permits, thereby providing an acceptable level of water quality protection. More information is provided in Section 3.12, *Hazards and Hazardous Materials,* of this EIR. In addition, compliance with waste discharge requirements and dewatering regulations would ensure that dewatering activities would be monitored as required and that no violations of water quality standards or waste discharge requirements would occur. Dewatering of potentially contaminated groundwater may result in a ***potentially significant*** impact on groundwater quality.

Operation and Maintenance

Implementation of the Proposed Project would result in an increase in pervious surface area. As shown in Table 3.11-4, approximately 17.0 percent of the Project Site would be covered in pervious landscaped areas (compared to 13.7 percent under existing conditions); 83.0 percent would be covered in impervious pavement or rooftop materials (compared to 86.3 percent under existing conditions). Implementation of the Proposed Project on Hamilton Avenue Parcels North and South would result in an increase in impervious surface area compared with existing conditions. Such increases are associated with increases in runoff rates and volumes.

To address runoff associated with the increase in impervious cover on Hamilton Avenue Parcels North and South, onsite stormwater BMPs and treatment features would be implemented, as required by Provision C.3 of the MRP, to manage the increase in runoff. In addition to the reduction in impervious area on the overall Project Site, the Proposed Project would be designed in compliance with the City's stormwater requirements, including grading, drainage, and hydrology requirements. Compliance with these requirements would ensure no net increase in storm flows after Project implementation. The overall Proposed Project (i.e., at the main Project Site and Hamilton Avenue Parcels North and South) would reduce flows compared to pre-Project conditions through reductions in hardscape areas. This would decrease peak runoff flows from the main Project Site from 74.26 cubic feet per second (cfs) to 69.43 cfs during a 10-year storm and from 109.95 cfs to 97.33 cfs during a 100-year storm (see Table 3.11-5).[45]

[45] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California.* September 20.

Table 3.11-4. Existing and Proposed Impervious and Pervious Areas

	Existing Conditions		Proposed		
	Existing Area	**Percent**	**Proposed Area**	**Percent**	**Change**
Main Project Site					
Impervious Area	2,253,195 sf	87.1	2,156,817 sf	83.4	-96,378 sf
Pervious Area	332,597 sf	12.9	428,975 sf	16.6	96,378 sf
Total Area	2,585,792 sf	100	2,585,792 sf	100	0 sf
Hamilton Avenue Parcels North and South					
Impervious Area	97,089 sf	71.0	103,047 sf	75.6	5,958 sf
Pervious Area	40,265 sf	29.0	33,214 sf	24.4	-7,051 sf
Total Area	137,354 sf	100	136,261 sf	100	-1,093 sf
Project Site Total					
Impervious Area	2,350,284 sf	86.3	2,259,864 sf	83.0	-90,420 sf
Pervious Area	372,862 sf	13.7	462,189 sf	17.0	89,327 sf
Total Area	2,723,146 sf	100	2,722,053 sf	100	-1,093 sf[a]

[a] To accommodate the Proposed Project's intersection realignment at Hamilton Avenue and Willow Road, a subdivision mapping process for the parcels would include abandonment of a portion of Hamilton Avenue and an irrevocable offer of dedication and public utility easement for the realigned Hamilton Avenue. As a result, there would be a net decrease in Project square footage.

Sources: Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

BKF. 2021. *Chevron Parcel Grading and Drainage Plan*. March 19.

sf = square feet

Table 3.11-5. Existing and Proposed Flow Rates[a]

Storm Event	Existing Flow (cfs)	Proposed Flow (cfs)	Change in Flow (cfs)
10-year event	74.26	69.43	4.83
100-year event	109.95	97.33	12.62

Source: Sherwood Design Engineers. 2021. Hydrology and Hydraulic Report for Willow Village, Menlo Park, California. September 20.

[a] Existing and proposed flow rates are for the main Project Site only. Because the design for Hamilton Avenue Parcels North and South is still in progress, flow rates have not been determined.

cfs = cubic feet per second

Because the design for development on Hamilton Avenue Parcels North and South is still in progress, peak runoff flows during a 10-year or a 100-year storm have not yet been determined. However, the City would require development on those parcels to comply with Provision C.3 of the MRP, manage stormwater flows, and not exceed pre-development flow rates and volumes. Grading and drainage requirements would also be in place.

Because the design is still in progress, detailed stormwater BMP designs have not yet been developed. Treatment strategies may include bioretention areas, flow-through planters, pervious paving, proprietary treatment systems such as Silva Cells, and green roofs. Proposed treatment areas would receive diverted stormwater runoff from impervious surfaces associated with streets, building roofs, and level surfaces on the Project Site prior to discharge to the storm drain system. Publicly owned

streets are designed to treat road runoff by using evenly spaced bioretention basins, bioretention planters, proprietary treatment systems such as Silva Cells or connected tree wells at the back of the curb. Private streets would use the same strategies as public streets for stormwater treatment.[46] Project Site runoff would be managed through a combination of low-impact development strategies, which could include bioretention areas, flow-through planters, permeable paving, rain gardens, and/or vegetated swales. In addition, new landscaping for Hamilton Avenue Parcels North and South along the street frontages would allow stormwater to infiltrate and reduce runoff and associated water quality impairments.

Hamilton Avenue Parcels North and South are subject to the NPDES Construction General Permit, including implementation of construction BMPs and Provision C.3 requirements to manage stormwater. To fulfill the C3 requirement at Hamilton Avenue Parcels North and South, bioretention features would be introduced in the future. The bioretention features would act like a detention basin and attenuate runoff. The stormwater treatment volume was sized per the SMCWPPP C.3 volume-based method, resulting in approximately 93,000 square feet of green infrastructure for stormwater treatment.[47]

The proposed stormwater system would consist of an interconnected network of internal roof leaders, area drains, curb cuts, catch basins, swales, storm drains, and green infrastructure (Silva Cells and bio-planters) for stormwater treatment. All inlets within the main Project Site would be fitted with trash capture devices, which may include, but not be limited to, connector pipe screens and catch basin inlet filters.[48] Stormwater treatment facilities would also be located between roadways and sidewalks to separate pedestrians from vehicle traffic. Because of underlying shallow groundwater contamination, some stormwater treatment BMPs and stormwater treatment areas may need to be lined with impermeable materials.[49]

Landscaping at the Project Site would include a combination of native, drought-tolerant, and adapted species and would comply with the Menlo Park Water-Efficient Landscaping Ordinance. Natural areas would be planted with a wide variety of native species, with a focus on habitat and stormwater treatment functions. Native and adapted plants would have low irrigation demands. Pervious paving, stormwater gardens, bioretention areas, flow-through planters, and other features would be integrated into the design of streets and parks to create functional facilities and visual interest. These treatment areas would receive stormwater runoff that would be diverted from impervious surfaces associated with public and private streets within the Project Site, the roofs, and the Project Site's level surfaces. Landscape features would function as biofiltration areas, treating stormwater runoff and naturally filtering contaminants from the Project Site's stormwater runoff.

The Proposed Project would be designed and maintained in accordance with City of Menlo Park, County of San Mateo, and San Francisco Bay Regional Water Board water quality requirements, such as the San Francisco Bay MRP and SMCWPPP water quality requirements. Furthermore, it would comply with the General Construction Permit, San Francisco Bay MRP, Provision C.3, and SMCWPPP Provision C.3 Stormwater Technical Guidance. The Proposed Project would implement the SWPPP and other erosion control measures and incorporate stormwater treatment elements, such as bioretention areas and flow-

[46] Sherwood Design Engineers. 2021. *Willow Village Project Stormwater Management Compliance Memorandum*. March 9.

[47] BKF Engineers. 2021. *Hydrology Report Hamilton Avenue Realignment Menlo Park California*. April 30.

[48] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

[49] Sherwood Design Engineers. 2021. *Willow Village Project Stormwater Management Compliance Memorandum*. March 9.

through planters. In addition, future development on the parcels would also be subject to Provision C.3 of the MRP and other relevant stormwater requirements. The Proposed Project would not violate any water quality standards or otherwise result in water quality degradation during operation, consistent with the ConnectMenlo EIR. Therefore, impacts on water quality during operation would be ***less than significant***. No mitigation during operation is required.

MITIGATION MEASURE. Implementation of Mitigation Measure HY-1.1 would reduce the potentially significant impact on groundwater quality during construction to a less-than-significant level by requiring groundwater monitoring and treatment during dewatering activities. Therefore, Proposed Project impacts on groundwater quality during construction would be ***less than significant with mitigation.***

HY-1.1: Implement Construction Dewatering Treatment (if necessary).

If dewatering is needed to complete the Proposed Project, and if water from dewatering is discharged to a storm drain or surface water body, dewatering treatment may be necessary if groundwater exceeding water quality standards is encountered during excavation. Because there is potential for groundwater to be contaminated with VOCs or fuel products at the Project Site, the Project Sponsor would be required to comply with the San Francisco Bay Regional Water Board's VOC and Fuel General Permit (Order No. R2-2018-0050) if groundwater exceeding water quality standards is encountered.

If dewatering requires discharges to the storm drain system or other water bodies, the water shall be pumped to a tank and tested using grab samples and sent to a certified laboratory for analysis. If it is found that the water does not meet water quality standards, it shall be treated as necessary prior to discharge so that all applicable water quality objectives (as noted in Table 3.11-2) are met or it shall be hauled offsite instead for treatment and disposed of at an appropriate waste treatment facility that is permitted to receive such water. The water treatment methods selected shall remove contaminants in the groundwater to meet discharge permit requirements while achieving local and state requirements, subject to approval by the San Francisco Bay Regional Water Board. Methods may include retaining dewatering effluent until particulate matter has settled before discharging it or using infiltration areas, filtration techniques, or other means. The contractor shall perform routine inspections of the construction area to verify that water quality control measures are properly implemented and maintained, observe the water (i.e., check for discoloration or an oily sheen), and perform other sampling and reporting activities prior to discharge. The final selection of water quality control measures shall be submitted in a report to the San Francisco Bay Regional Water Board for approval prior to construction. If the results from the groundwater laboratory do not meet water quality standards and the identified water treatment measures cannot ensure that treatment meets all standards for receiving water quality, then the water shall be hauled offsite instead for treatment and disposal at an appropriate waste treatment facility that is permitted to receive such water.

Impact HY-2: Groundwater Supply and Recharge. The Proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded. (LTS)

Construction

The depth to groundwater on the Project Site ranges from approximately 5 to 16 feet below the current grades.[50] Dewatering and shoring within utility trenches may be required during construction at both the main Project Site and Hamilton Avenue Parcels North and South.[51] Construction of the Willow Road Tunnel would require cut-and-cover work during construction and possibly dewatering. Although groundwater extraction is not permitted at the Willow Road Tunnel site, construction dewatering is allowed at this site.[52] Dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would deplete groundwater supplies. Groundwater beneath the Project Site is not used for municipal water supply purposes.

A land use covenant on the main Project Site prohibits the pumping of groundwater for reasons other than treatment (see Section 3.12, *Hazards and Hazardous Materials*). Water supplies for construction activities such as dust control, concrete mixing, or material washing would come from nearby hydrants or existing surface supplies for the site and/or be trucked to the site. Groundwater supplies would not be used during construction activities or operation. Therefore, construction of the Proposed Project would not substantially decrease groundwater supplies or impede sustainable groundwater management of the basin, consistent with the ConnectMenlo EIR. This impact would be ***less than significant***. No mitigation is required.

Operation and Maintenance

As shown in Table 3.11-4, the pervious area within the Project Site would increase upon completion of the Proposed Project. Approximately 83.0 percent of the Project Site would be covered with impervious surfaces and 17.0 percent would be covered with pervious surfaces, resulting in roughly a 3 percent decrease in impervious surface area. The Proposed Project would include new landscaping, including native and adaptive plants; pervious paving; stormwater gardens; bioretention areas; flow-through planters; and other features that would be integrated into the design of streets and parks. These treatment areas would receive stormwater runoff that would be diverted from impervious surfaces. New pervious and landscaped areas would slow surface water runoff, allowing it to percolate into the ground, thereby providing increased benefits related to groundwater infiltration and recharge. Although some of the proposed stormwater treatment areas would be lined with impermeable material because of underlying groundwater contamination, the Proposed Project overall would allow for increased infiltration.[53]

Because the Proposed Project would not increase groundwater demand or decrease the area for groundwater recharge, it would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge, consistent with the ConnectMenlo EIR. Natural groundwater recharge of the San Mateo subbasin would continue to occur, primarily through infiltration from streams. Therefore, the Proposed Project's operations-related impact on groundwater supplies and recharge would be ***less than significant.***

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[50] Cornerstone Earth Group. 2020. *Preliminary Geotechnical Investigation Update Willow Village.* June 20.

[51] Ibid.

[52] Cornerstone Earth Group. 2021. *Environmental Summary: Willow Tunnel Construction Zone, Menlo Park, California*. Memorandum to Mr. Brian Zubradt and Mr. Eric Harrison. June 28, 2021.

[53] Sherwood Design Engineers. 2021. *Willow Village Project Stormwater Management Compliance Memorandum*. March 9.

Impact HY-3: Drainage and Flooding. The Proposed Project would not substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion or flooding, impede or redirect floodflows, contribute runoff that would exceed the capacity of the stormwater system, or provide substantial additional sources of polluted runoff. (LTS)

Construction

During construction, stormwater drainage patterns could be temporarily altered because of site grading, site preparation, and excavation. All trees on the site would be removed for construction of the Proposed Project, including the grading required to raise the Project Site above the floodplain elevation. However, Project construction would implement BMPs, as required in the SWPPP, to minimize the potential for erosion or siltation in nearby storm drains as well as temporary changes in drainage patterns during construction. During construction, implementation of an erosion control plan would also be required to minimize construction-related erosion. Construction BMPs would capture and infiltrate small amounts of sheetflow[54] such that offsite runoff would not increase, thereby ensuring that drainage patterns would not be significantly altered. Construction activities could also generate dust, litter, oil, and other pollutants that could be conveyed into stormwater and provide additional sources of polluted runoff. As part of compliance with the Construction General Permit, stormwater BMPs would be identified in the SWPPP. These measures would be implemented during construction to reduce contamination and additional sources of pollution in runoff and manage stormwater flow rates and volumes.

Measures required by the Construction General Permit would limit site runoff during construction but would not alter stormwater drainage patterns. BMPs would be implemented to control construction site runoff, ensure proper stormwater control and treatment, and reduce the discharge of pollutants to the storm drain system. As discussed in Impact HY-1, compliance with Provision C.3 of the MRP to manage runoff during construction and operation as well as the City stormwater ordinances and policies, including grading, drainage, and hydrology requirements, in combination with the reduction in impervious area on the overall Project Site would ensure that there would be no net increase in runoff compared with pre-Project conditions. Therefore, construction of the Proposed Project would not substantially alter the existing drainage pattern of the area in a manner that would result in substantial erosion or siltation or increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite, consistent with the ConnectMenlo EIR. Project construction would not result in an exceedance of drainage system capacities, consistent with the ConnectMenlo EIR. The associated impact would be ***less than significant***. No mitigation is required.

Operation and Maintenance

The existing storm drain system drains the entire Project Site by gravity to the City main in Willow Road. As part of the Proposed Project, a private onsite storm drain system would be built at the main Project Site to convey runoff by gravity from all buildings and other areas to the existing City main. Stormwater would be collected in a network of catch basins and pipes that would be directed to the 66-inch storm drain in Willow Road at three separate locations on the main Project Site. The Proposed Project would comply with San Mateo County Provision C.3 requirements, as required by the City's NPDES municipal permit.

Project Site runoff and associated erosion would be managed through a combination of low-impact development strategies that could include bioretention areas, flow-through planters, permeable paving, rain gardens, and/or vegetated swales. No surface water features are within the Project Site; therefore,

[54] Sheetflow is an overland flow or downslope movement of water that takes the form of a thin, continuous film over relatively smooth soil or rock surfaces and is not concentrated in channels.

the course of a stream or river would not be altered. Along the southern property line of the main Project Site, an open channel directs stormwater flows to existing storm drain improvements adjacent to the eastern property line. To accommodate Project Site improvements, drainage flows within this channel would be sent underground to new onsite storm drain improvements. Although the channel would be filled both onsite and offsite, a portion of the existing open channel south of the San Francisco Public Utilities Commission Hetch Hetchy right-of-way would remain open and unfilled. In addition, the Willow Road Tunnel and north ramp profiles would be raised to allow the existing 48-inch-diameter storm drain to remain in place. This storm drain runs perpendicular to the north ramp, just north of the north portal.

On Hamilton Avenue Parcels North and South and the Willow Road Tunnel site, the Proposed Project would maintain the majority of the existing building area and ground features. The storm drain affected by grading for the future Hamilton Avenue would be redirected to the realigned roadway. The 54-inch storm drain through the existing Hamilton Avenue and across the main Project site would either be demolished or plugged and abandoned in place. The stormwater main at the future Hamilton Avenue would be upsized to 66 inches and provided as replacement at the future Hamilton Avenue. The new 66-inch storm drain would be reconnected to the storm drain at future Hamilton Avenue at Willow Road. Downstream of the new 66-inch pipe at the future Hamilton Avenue, 175 feet of existing 66-inch storm drain at Willow Road would be upsized to 84 inches because of realignment of the roadway and the existing hydraulic grade line of the storm drain system. Storm drain upgrades would be coordinated with overall site storm drain evaluation.[55]

As required by the City of Menlo Park, post-development stormwater flows would be lower than pre-development flows. As shown in Table 3.11-5, post-development flows for the main Project Site would be reduced by 4.83 cfs (6.5 percent) and 12.62 cfs (11.5 percent) for the 10-year and 100-year storms, respectively. Therefore, the post-development flow rates for both 10-year and 100-year storm events would be lower than their respective pre-development flow rates and would not contribute runoff that would exceed the capacity of the City's stormwater system. In a flood event, appropriate flood control methods would be implemented throughout the entire Project Site to manage floodflows, as needed.

As stated previously, implementation of the Proposed Project at Hamilton Avenue Parcels North and South would increase the amount of impervious surface area and could increase runoff rates and volumes compared with existing conditions. However, peak runoff flows at Hamilton Avenue Parcels North and South during a 10-year or a 100-year storm event have not yet been determined because the design for the development is still in progress. Regardless, architectural control review and compliance with building permits and the City's stormwater, hydrology, and C.3 requirements would be ensured. The City also requires no net increase in stormwater flow rates from overall Project site runoff into the City's storm drain system. Although the impervious area at Hamilton Avenue Parcels North and South would increase, design features would ensure no increase in runoff. When managing stormwater runoff within the onsite parking and circulation areas on Hamilton Avenue Parcels North and South, roads must be graded to maintain all private stormwater flows within the private drainage management areas. New landscaping along the street frontages for Hamilton Avenue Parcels North and South would allow stormwater to infiltrate, which would help manage runoff and associated pollutants. In addition, the total impervious area (Table 3.11-4) of the Project Site as a whole would decrease, resulting in decreased runoff rates and volumes. Furthermore, the impact on the 66-inch storm drain in Willow Road would decrease because the proposed flow would connect at three separate locations as opposed to the single large connection under existing conditions.[56]

[55] BKF Engineers. 2021. *Hydrology Report Hamilton Avenue Realignment Menlo Park California*. April 30.

[56] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

As part of an integrated approach to stormwater management, consistent with both City and County of San Mateo requirements, streetscapes, parks, and open spaces would include BMPs to reduce and treat stormwater runoff and increase the amount of pervious landscaped area compared with existing conditions. The Project improvements on the individual parcels, as well as the design of private streets and public rights-of-way throughout the Project Site, would incorporate green infrastructure, per the requirements of the City's adopted Green Infrastructure Plan. Treatment strategies may include bioretention areas, flow-through planters, pervious paving, proprietary treatment systems such as Silva Cells, and green roofs. Proposed treatment areas would receive diverted stormwater runoff from impervious surfaces on the Project Site prior to discharge to the storm drain system. Publicly owned streets are designed to treat road runoff by using evenly spaced bioretention basins, bioretention planters, proprietary treatment systems such as Silva Cells or connected tree wells at the back of the curb. Stormwater treatment systems would be located at low points within the proposed grading scheme to facilitate surface drainage and minimize the required amount of storm drain piping. To manage stormwater runoff, private roads would be graded to maintain stormwater flows within the private drainage management area. Private streets would use the same strategies as public streets for stormwater treatment.[57]

Because more than 10,000 square feet of impervious surface area would be replaced, the Proposed Project would be a Provision C.3 regulated project and therefore required to comply with MRP Provision C.3. Stormwater treatment methods would also comply with local stormwater requirements. Stormwater treatment volumes were sized per the SMCWPPP Provision C.3 volume-based method, resulting in approximately 93,000 square feet of green infrastructure for stormwater treatment on the entire site, including rights-of-way.[58]

Existing development potential in the city and new development potential as part of ConnectMenlo would involve parcels in the Bayfront Area that have already been developed and covered with impervious surfaces. The City has stringent stormwater requirements that exceed the C.3 provisions of the MRP (i.e., post-development stormwater volumes must not exceed pre-development volumes for projects adding net new impervious surfaces, regardless of whether the projects are regulated). Therefore, the capacity of the existing or planned storm drain system would not be exceeded. In addition, implementation of LID design guidelines and engineering review of drainage calculations and development plans by the Menlo Park Public Works Department would further ensure that there would be no substantial increases in peak flow rates or runoff volumes throughout the entire Project Site.

Development consistent with the Menlo Park General Plan would not require significant expansion of existing stormwater drainage infrastructure because the majority of Proposed Project would be infill related or within existing storm drainage systems. Implementation of landscape features would provide onsite infiltration of stormwater runoff. Furthermore, the City requires no net increase in stormwater flow rates. For these reasons, the Proposed Project would not result in substantial impacts associated with exceeding stormwater drainage system capacity.

Because of past industrial activities on the main Project Site, the underlying groundwater contamination may require certain stormwater treatment areas to be lined with impermeable materials. Preliminary infiltration testing indicated that clayey deposits underlie the Project Site, with

[57] Sherwood Design Engineers. 2021. *Willow Village Project Stormwater Management Compliance Memorandum*. March 9.

[58] Ibid.

infiltration rates ranging from 0.08 to 0.17 inch per hour. Because of this low filtration rate, all stormwater treatment facilities are likely to be under-drained, resulting in poor drainage conditions, increased runoff, or potential loss of topsoil.[59]

Two offsite watersheds would be affected by the Proposed Project. The first is the upstream watershed that includes a 66-inch storm drain on the west side of the main Project Site at the intersection of Willow Road and Park Street. Downstream from the Project Site, the Willow mainline outfalls to Ravenswood Slough through a Caltrans-owned pump station. With respect to a 100-year storm, the existing storm drainage system is surcharged; it experiences ponding along the route of the drainage system. Although the offsite storm drain infrastructure is surcharged under both pre- and post-development conditions, post-development stormwater flows would remain a minimum of 12 inches below the top of the curb elevation during a 10-year storm event, as required by the City.

The second offsite watershed affected by the Proposed Project flows into the main Project Site through an open channel that drains to a 48-inch storm drain on the south and east side of the site. This stormwater ultimately outfalls offsite at the northeast side of the Project Site. The Proposed Project would fill the existing open channel at the south end of the main Project Site and replace it with 42- and 48-inch storm drains. The replaced storm drain line would connect to the 48-inch storm drain at the southeast corner of the main Project Site. Both the 10-year and 100-year storm event would be maintained within the pipes; there would be no impact on the existing 48-inch storm drain.[60]

All Project-related development would comply with the applicable federal, state, and local requirements discussed in the *Regulatory Setting,* including requirements regarding water quality, flood control, and stormwater management. Therefore, the Proposed Project would not result in changes to stormwater runoff rates or volumes that would result in the capacity of existing or planned stormwater drainage systems being exceeded, provide substantial additional sources of polluted runoff, or impede or redirect floodflows, consistent with the ConnectMenlo EIR. The impact related to stormwater runoff and capacity would be ***less than significant***. No mitigation is required.

Impact HY-4: Pollutant Release due to Project Inundation. In a flood hazard, tsunami, or seiche zones, the Proposed Project would not result in the release of pollutants due to inundation. (LTS)

The Project Site is not within a planned tsunami inundation area, as depicted on the Tsunami Inundation Map for Emergency Planning prepared by Cal OES and California Geological Survey.[61] Therefore, the Proposed Project is not subject to inundation by a tsunami. There are no reservoirs adjacent to the Project Site; therefore, the Proposed Project would not be prone to inundation by a seiche. However, the Project Site is located within the 100-year flood hazard zone, as determined by FEMA (Figure 3.11-2).[62] Therefore, the Proposed Project would be subject to inundation by a flood. The Project Site would require either LOMRs and/or CLOMR/LOMRs for all building sites.

[59] Ibid.

[60] Sherwood Design Engineers. 2021. *Hydrology and Hydraulic Report for Willow Village, Menlo Park, California*. September 20.

[61] State of California. 2021. *Tsunami Hazard Area Map, San Mateo County*. Produced by the California Geological Survey, the California Governor's Office of Emergency Services, and AECOM. Mapped at multiple scales.

[62] Federal Emergency Management Agency. 2019. *National Flood Hazard Layer Viewer.* Panel 307 of 510. FIRM 06081C0306F. April 5. Available: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed: March 10, 2021.

During construction, stormwater BMPs would be implemented, as required by federal, county, and local policies, to minimize any degradation of water quality associated with stormwater runoff or construction-related pollutants. In addition, construction and maintenance activities would comply with local stormwater ordinances, stormwater requirements established by the MRP, and regional waste discharge requirements. Measures in the SWPPP would include a range of stormwater control BMPs (e.g., silt fences, staked straw wattles, geofabric to prevent silt runoff to storm drains or waterways).

As part of the design effort, finished floor elevations would meet City code requirements to address future issues related to SLR. Current City ordinances (e.g., Menlo Park Municipal Code Chapter 12.42.51.3b) require new development that would affect more than 2 acres within the floodplain to mitigate anticipated future SLR by ensuring that finished floor elevations are at least 24 inches above the current FEMA BFE (i.e., 11 feet). All occupiable buildings would have a minimum finished floor elevation of 13 feet (NAVD 88), consistent with the City Zoning Ordinance requirement of 2 feet above the BFE to accommodate both the FEMA base flood elevation and future SLR.[63]

Per FEMA National Flood Insurance Program Technical Bulletin 3, dry proofing/floodproofing[64] is permitted for non-residential portions of mixed-use buildings. In the case of Parcel 2 in the Residential/Shopping District, the major structure and any entrance to livable, occupied, or residential space would be raised to an of elevation 13 feet, which is the BFE (11 feet) plus 2 feet. However, because of the proximity to Willow Road, the north garage opening must connect to the existing street grades, which are a few feet below the BFE of 11 feet. Although this garage entrance and exit would not be needed for emergency egress, and the BFE of 11 feet would normally maintain flood levels around the building, with all dry-proofing measures accounted for, the entrance to the garage where floodwater would enter the drive aisle would experience flooding but only up to a high point of 11 feet. The below-grade parking area would be protected by dry floodproofing and essentially create an impermeable barrier or high point and having the garage drive at the flood zone elevation of 11 feet before the garage ramps down to the lower garage level to ensure that rising flood waters would not enter the building. This would be consistent with FEMA National Flood Insurance Program Technical Bulletin 6, which offers various measures to elevate the garage entry and stop floodwaters from entering the garage, especially when a basement is present. Although not currently proposed, dry-proofing/floodproofing measures such as mechanical storm doors could be developed during design to further protect the garage entry. All portions of the garage entry that would be expected to be inundated by the flood elevation of 11 feet would be constructed with flood-resistant materials.

Under the mid-century (2050) 24-inch SLR scenario, areas in the northeast portion of the main Project Site would be inundated. These areas would have the highest finished floor elevation (averaging 15 feet NAVD 88); therefore, no flooding within buildings would occur. Furthermore, Hamilton Avenue Parcels North and South would not be inundated under the mid-century scenario. Under the end-of-century (2100) 36-inch SLR scenario, inundation would expand to the western portion of the main Project Site, including Hamilton Avenue Parcels North and South and the Willow Road Tunnel. Proposed finished floor elevations in the western portion of the main Project Site would be 13 feet and would be flooded. The end-of-century 48-inch SLR scenario would further expand the inundated areas. In these areas, finished floor elevations would be 14 feet or above, just at or above the expected end-of-century flood elevations. These scenarios do not account for extreme SLR conditions with extreme storm surges.[65]

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[63] Sherwood Design Engineers. 2021. *Sea-Level Rise Memorandum for Willow Village Menlo Park, California.* January 18.

[64] Dry floodproofing includes a combination of measures that make a building and attendant utilities watertight and substantially impermeable to flood water, with structural components having the capacity to resist flood loads.

[65] Ibid.

In absence of a flood event, high tides would not affect the proposed finished floor elevations. Because most of the main Project Site is above 11 feet, high tides are not likely to affect the proposed road elevations until approximately 2080 and only under the worst-case SLR scenario. The U.S. Army Corps of Engineers (USACE) has studied SLR affecting the surrounding Project area. USACE projections indicate that proposed finished floor elevations meet or exceed all SLR scenarios (low, intermediate, and high) through 2080 and meet or exceed the anticipated SLR as represented by the USACE low and intermediate SLR rates beyond the year 2100.

The existing BFE is 11 feet NAVD 88; the minimum proposed finished floor elevation would be 13 feet. At that elevation, buildings are predicted to be safe from flooding until 2065. Buildings with a finished floor elevation of 14 feet are predicted to be safe from flooding until 2080 under worst-case projections and safe from flooding through the end of the century under intermediate- and low-risk scenarios. Finished floor elevations would need to be set at 15.5 feet to protect against the 2100 worst-case projections. However, it is anticipated that the City would rely on regional protection, such as higher levees, to prevent flooding within the larger surrounding area.

To manage SLR, the Proposed Project proposes an adaptive management approach. Proposed finished floor elevations would meet or exceed existing City requirements. However, the elevations would not address all possible SLR scenarios. Regional and/or local measures would need to be established to mitigate lower-probability worst-case scenarios. The adaptive management approach for the development footprint, roads, and open space is based on the following:

- Finished floor elevations (i.e., 14.0 feet NAVD 88) would be set so that adaptations would not be necessary for even the highest estimates of SLR until 2080.
- Mean SLR could affect some Project roadways through tidal action beginning in approximately 2080. As described above under *Regulatory Setting*, the San Mateo County Flood Control and Sea-Level Rise Resiliency District initiates new countywide efforts to address SLR, flooding, and large-scale stormwater infrastructure improvements through integrated regional planning, project implementation, and long-term maintenance. It is anticipated that a combination of regional and local measures would be established to protect the surrounding area. These could include flap gates on culverts that cross Bayfront Expressway, levees, and/or flood walls.
- SLR alone is not anticipated to cause tidal influences that would affect public amenities such as parks and multi-use pathways until 2060 under the worst-case SLR scenario.
- The Project storm drain system would connect to the City storm drain in Willow Road. This storm drain flows to the Caltrans-operated Ravenswood Pump Station northeast of the Project Site along Bayfront Expressway. It is not hydraulically connected to the Bay and would not be affected by SLR unless the City and/or Caltrans system would be affected. Further studies of these systems may be required.

All operational activities would comply with the County Stormwater Management and Discharge Control Ordinance, stormwater requirements established by the MRP, and regional waste discharge requirements. Additional discussions and measures to reduce risks associated with pollutants and floodflows are provided under Impact HY-1 and Impact HY-3. Therefore, the impact related to a release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone would be ***less than significant***.

Impact HY-5: Conflict or Obstruct a Water Resource Management Plan. The Proposed Project could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (LTS/M)

Project construction and operation would be subject to existing regulatory requirements. Permittees would comply with appropriate water quality objectives, as defined in the Basin Plan. Commonly practiced BMPs would be implemented to control construction site runoff and reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff. As part of compliance with permit requirements during ground-disturbing or construction activities, the implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including water quality objectives that protect designated beneficial uses of surface water and groundwater, as defined in the Basin Plan.

Construction runoff would be required to occur in compliance with appropriate water quality objectives for the region. The NPDES Construction General Permit requires stormwater discharges to be free of pollutants that cause or contribute to an exceedance of applicable water quality objectives or water quality standards, including designated beneficial uses. As stated in Impact HY-1, pervious paving, stormwater gardens, bioretention areas, flow-through planters, and other features would be integrated into the design of streets and parks. These stormwater treatment areas would reduce and treat stormwater runoff flows and associated pollutants. In addition, implementation of appropriate City General Plan policies would require groundwater recharge areas and groundwater resources to be protected, in accordance with the applicable sustainable groundwater management plan.

Dewatering would be conducted temporarily during the construction phase. Implementation of Mitigation Measure HY-1.1 would reduce the potentially significant impact on groundwater quality during construction to a less-than-significant level by requiring groundwater monitoring and treatment during dewatering activities. Furthermore, groundwater supplies would not be used during operation. The amount of impervious area within the Project Site would decrease upon Project completion. New landscaping, pervious paving, stormwater gardens, bioretention areas, flow-through planters, and other features would be integrated into the design of streets and parks; they would also treat runoff and allow groundwater infiltration. In addition, implementation of the appropriate City General Plan policies would require the protection of groundwater recharge areas and groundwater resources, in accordance with the applicable sustainable groundwater management plan. The Project Site overlies the San Mateo subbasin, which is designated as a very low-priority basin and not subject to the SGMA; therefore, no sustainable groundwater management plan is applicable to the Project Site. Construction and operation of the Proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Construction and operational impacts associated with the Proposed Project would be ***less than significant with mitigation***.

MITIGATION MEASURE. Implementation of Mitigation Measure HY-1.1 would reduce the potentially significant impact on groundwater quality during construction to a less-than-significant level by requiring groundwater monitoring and treatment during dewatering activities. Therefore, Project impacts on groundwater quality during construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The impact would be ***less than significant with mitigation.***

Cumulative Impacts

Impact C-HY-1: Cumulative Hydrology and Water Quality Impacts. Cumulative development would result in a less than significant cumulative impact to hydrology and water quality, and the Proposed Project would not be a cumulatively considerable contributor to any significant cumulative impact to hydrology and water quality. (LTS)

Summary of Analysis in the ConnectMenlo EIR

As stated in Chapter 4.8, *Hydrology and Water Quality*, of the ConnectMenlo EIR, the geographic context for the cumulative assessment of hydrology and water quality impacts encompassed the San Francisquito Creek watershed, which includes the ConnectMenlo study area. The San Francisquito watershed includes portions of both Santa Clara County and San Mateo County.

Development of past, current, and future projects within the San Francisquito watershed have the potential to alter stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding. However, development projects are subject to federal, state, and local standards pertaining to water quality. As a result, there is not a cumulative impact without ConnectMenlo.

The ConnectMenlo EIR determined that, through compliance with existing state and local regulations, as well as general plan design guidelines, zoning ordinances, and other applicable City requirements, development under ConnectMenlo, in combination with other new development within the San Francisquito watershed, would not contribute to a cumulative impact with respect to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding. Furthermore, compliance with City ordinances and general plan policies, as well as numerous water quality regulations that control construction-related and operational discharges of pollutants in stormwater, would ensure that water quality would be protected. In addition, all cumulative projects within the San Francisquito watershed would be subject to similar regulations, including those implemented by the San Francisco Bay RWQCB. The ConnectMenlo EIR also concluded that new projects in the Bayfront Area would be required to elevate structures to account for SLR, and all coastal projects within the watershed would be subject to requirements by FEMA and BCDC to protect against flood levels and SLR. The ConnectMenlo EIR determined that implementation of ConnectMenlo would not contribute to a significant cumulative impact on hydrology and water quality, and the cumulative impact would be ***less than significant***.

Cumulative Impacts with the Proposed Project

Consistent with the ConnectMenlo EIR, the geographic context for cumulative water quality and hydrology impacts with the Proposed Project is the San Francisquito watershed.

As noted in Chapter 3, *Environmental Impact Analysis*, of this EIR, in addition to the buildout projections considered in the ConnectMenlo EIR, the cumulative scenario for this EIR also includes the 123 Independence Drive Project and East Palo Alto projects, which are also located within the San Francisquito watershed. As with the Proposed Project, the 123 Independence Drive project and East Palo Alto projects, as well as other projects within the watershed, would be required to comply with all applicable requirements of local water quality programs, municipal stormwater-related NPDES permits, applicable municipal code regulations, objectives in the Basin Plan, and general plan policies. Therefore, these additional projects would not alter the cumulative impact determination as stated in the ConnectMenlo EIR, and the cumulative impact with respect to water quality and hydrology would remain less than significant.

The Proposed Project would not result in a substantial change in the ConnectMenlo project, and therefore would not be a cumulatively considerable contributor to a significant cumulative hydrology and water quality impacts and would not cause new or substantially more severe significant cumulative hydrology and water quality impacts than analyzed in the ConnectMenlo EIR. The Proposed Project would be required to comply with all applicable requirements of local water quality programs, municipal stormwater-related NPDES permits, applicable municipal code regulations, objectives in the Basin Plan, and general plan policies. The Proposed Project would also be required to implement Mitigation Measure HY-1.1, given the construction dewatering and potentially contaminated groundwater at the Project Site, which would further reduce these impacts beyond compliance with regulatory requirements. Therefore, consistent with the conclusions in the ConnectMenlo EIR, the Proposed Project would result in a ***less-than-significant cumulative impact*** with respect to hydrology and water quality. No further mitigation measures would be required.