
UTILITIES AND SERVICE SYSTEMS AND ENERGY

INTRODUCTION

This chapter describes existing public utilities at and near the Project site. This chapter also evaluates the impact of the proposed Project on the provision of public utilities and possible adverse physical impacts on the environment that could result from constructing expanded facilities.

REGULATORY AND ENVIRONMENTAL SETTING

WATER SUPPLY

California Water Service Company and the Urban Water Management Plan¹

The water system in Portola Valley is owned and operated by the California Water Service Company (Cal Water). The Cal Water Bear Gulch District is located in southern San Mateo County. The Bear Gulch District serves the communities of Atherton, Portola Valley, Woodside, parts of Menlo Park, parts of unincorporated Redwood City, and adjacent unincorporated portions of San Mateo County, including West Menlo Park, Ladera, North Fair Oaks, and Menlo Oaks.

Cal Water is required by State law to prepare an Urban Water Management Plan (UWMP) to identify existing and projected water supply sources, develop demand projections for each of its districts, and identify strategies for ensuring that long-term water supplies are sufficient to meet demand under all future demand conditions, including during single- and multiple-year droughts. The UWMP must be updated every five years. The normal UWMP submittal cycle requires that the plans be prepared and submitted in December of years ending in five and zero.

The Bear Gulch District delivers a combination of local surface water and water purchased from the City and County of San Francisco's Regional Water System, operated by the San Francisco Public Utilities Commission (SFPUC). The local surface water comprises about nine percent of total supply. It is collected and treated at the Bear Gulch District's reservoir and treatment plant in Atherton. The remaining 91 percent of the Bear Gulch District supply is purchased from the SFPUC. Purchased SFPUC potable supply is predominantly from the Hetch Hetchy Reservoir. This regional supply is delivered through a network of pipelines, tunnels, and treatment plants and is treated by SFPUC prior to delivery to Cal Water. A recycled water system for beneficial use within the Bear Gulch District is not planned at this time due to low demand and high unit cost, though Cal Water will continue to evaluate the potential over time.

The District delivers roughly 12 million gallons of water per day to more than 18,000 service connections and a service area population of 60,814 in 2020. Total system demand in 2020 was

¹ Information in this section is from the following document unless otherwise noted: California Water Service. 2020 Urban Water Management Plan, Bear Gulch District. June 2020. Available at: https://www.calwater.com/docs/uwmp2020/BG_2020_UWMP_FINAL.pdf

12,972 acre-feet,² 84 percentage of which went to residential customers. Total gallons per capita per day in the District for 2020 was 190.

Water use has been decreasing in the District since the mid-2000s due to several factors, including:

- In 2009, California Water Service Company (Cal Water) began implementing conservation pricing to supply stronger financial incentives to use water efficiently.
- Starting around 2012, Cal Water tripled the level of expenditure on conservation programs aimed at helping customers use water more efficiently.
- Appliance efficiency standards and plumbing codes (including CalGreen) have contributed to significant improvement over time in the average water use efficiency of the installed base of appliances and plumbing fixtures. For example, a new toilet uses roughly one-third the amount of water as a toilet manufactured in the 1980s while a new clothes washer uses about half the amount of water as an older washer. Per capita water use in 2020 was 24 percent below its peak in the early 2000s.

The UWMP projects that water use will decrease slightly over time, from 12,796 in 2020 to 12,730 in 2035, to 12,694 in 2045. This reflects increasing water efficiency and conservation paired with development and population growth in the District and is within both the existing water rights and reasonable available volume through the planning horizon of 2045. During drought periods, however, shortfalls up to 20% or more are projected. Drought conditions trigger implementation of Cal Water's Water Shortage Contingency Plan. Consistent with system-wide planning, drought periods would require temporary water use reductions depending on the "tier" of drought level, with Tier One requiring incremental reductions up to 20% and Tier Two requiring reductions greater than 20%. Water shortage contingency planning is frequently updated as new information and regulations come into play, including the Bay-Delta Plan Amendment, if fully implemented (it was adopted in 2018 but has been in litigation and does not include implementation procedures).

The Project site would be served by the Cal Water Bear Gulch District. There is no water main in Alpine Road along the project frontage. As a part of the Project, the water main would be extended approximately 1,700 feet within Alpine Road from the intersection of Westridge Drive to provide water connection to the Project site. The Project would connect to both an existing 12-inch water main and an existing 6-inch water main located near the intersection of Westridge Drive and Alpine Road. Since these two water mains are fed from two separate sources of water, this would create a dual connection, providing a redundant source of water to the Project site and surrounding area for both potable water supply and water for fire fighting.

WASTEWATER COLLECTION AND TREATMENT

West Bay Sanitary District (WBSD) provides wastewater collection and treatment services in portions of Portola Valley, while other portions of Portola Valley are served by private septic systems. All of Portola Valley is within the WBSD sphere of influence.³ WBSD also serves City of Menlo Park and portions of Atherton, East Palo Alto, Woodside, south county unincorporated areas

² An acre-foot is the amount of water necessary to cover 1 acre of land to a depth of 1 foot, and is equivalent to 325,851.43 gallons, or 43,560 cubic feet.

³ A sphere of influence (SOI) is a plan that designates an agency's probable future boundary and service area. SOIs are intended to encourage efficient provision of organized community services and prevent duplication of service delivery. Annexation of a territory to a city or district cannot occur unless the territory is within that agency's SOI.

and several parcels in Santa Clara County near Los Trancos Creek. The WBSD service area encompasses nearly 13 square miles, and includes approximately 20,000 service connections to serve a population of 52,900.⁴

All wastewater collected within WBSD is transported via main line trunk sewers to the WBSD Menlo Park Pumping Station located at Bayfront Park and from there to the South Bayside System Authority Regional Treatment Plant in Redwood City. In the Town of Portola Valley area, services include grinder pump and other types of on-site wastewater disposal system maintenance where topography does not allow gravity connections to the sewer main.

WBSD has planned for the eventual end of the useful lives of the existing septic systems, and the eventual required connections to the public sewage collection system. Annexations to the WBSD are typically triggered by the need to abandon existing septic systems or to serve new development, and the WBSD has an adopted ordinance requiring connection to the sewer after annexation.

The dry weather or base wastewater flow for the WBSD, as measured during the 2009/2010 flow monitoring program was 4.6 million gallons per day (mgd), which translates to approximately 87 gallons per capita per day (gpcpd). This base wastewater flow is within industry standard and closely matches the WBSD design criteria of 85 gpcpd.⁵ The peak wet weather flow was estimated at 22 mgd reflecting reductions in inflow and infiltration.

Sewer lines are available for connection to the Project site from the adjacent Alpine Road. The Project site is not currently a part of WBSD, and would therefore require annexation prior to connecting to sewer service.

SOLID WASTE

Solid waste collection and disposal services are provided in Portola Valley by GreenWaste Recovery. GreenWaste Recovery provides the weekly collection of mixed compostables, recyclable materials, and yard trimmings for the Town of Portola Valley. GreenWaste owns and operates Zanker Materials Recovery and Landfill in San Jose, where all of Portola Valley's material is processed. The processing facility is permitted for a maximum throughput of 1,800 tons/day, and the landfill is permitted for a maximum throughput of 350 tons/day. The maximum permitted capacity for the landfill is 640,000 cubic yards.⁶

The Project would be required to comply with the Town's Construction & Demolition (C&D) Debris Ordinance which requires at least 75% of construction and demolition debris be diverted from landfill by using recycling, salvage for reuse, and diversion programs. A Waste Management Plan is also required under this ordinance.

STORM DRAINAGE

The Project site is mostly undeveloped and is covered with grasses, shrubs, and trees. Elevations within the site range from approximately 323 feet to 678 feet above sea level, with steep hillsides to the sides and rear of the property. Stormwater runoff from the Project site drains downslope across

⁴ West Bay Sanitary District, Wastewater Collection System Master Plan and Update, July 2011 and February 2013. Available at: <https://westbaysanitary.org/about-us/documents/>

⁵ Ibid.

⁶ CalRecycle, Solid Waste Information System Facility/Site Database. Website accessed August 2021 at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1359?siteID=3386>.

the site and toward Alpine Road, which contains a storm drain line that conveys storm flows to Los Trancos Creek to the north.

Stormwater collection and management would be accommodated on-site with proposed stormwater detention and bioretention treatment facilities meeting required capacity and stormwater treatment quality standards before connecting to the line in Alpine Road.

GAS AND ELECTRIC SERVICE

Natural gas and electricity are currently provided within Portola Valley by the Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE). PG&E electric lines are available for connection to the Project site from the adjacent Alpine Road. The overhead electrical line on Alpine Road would be brought underground within the new private road and the Project would also underground the electrical line along the entire Project site Alpine Road frontage. The Project does not propose use of natural gas or new natural gas connections.

Since 2017, PCE has been Portola Valley's official electricity provider, utilizing PG&E electrical lines for distribution. Households in Portola Valley are automatically enrolled in PCE's ECO100 program, with 100% of electricity from renewable, carbon-free sources like wind, solar, geothermal and hydropower. Households can opt down to ECOplus, a program that delivers at least 50% renewable electricity to customers or opt out and return to PG&E electricity service.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Under the CEQA Guidelines, Appendix G – Environmental Checklist Form, development of the Project site as proposed would have a significant environmental impact if it were to result in the following:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
4. Generate solid waste in excess of State or local standards, or in excess of capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
5. Conflict with federal, state, and local management and reduction statutes and regulations related to solid waste?
6. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
7. Conflict with or obstruct state or local plan for renewable energy or energy efficiency.

UTILITY AND SERVICE SYSTEM FACILITIES

1. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Impact Util-1: Increased Utility Demand. The proposed Project represents development of a site that does not currently utilize public utilities, but on which the General Plan anticipated such development and therefore would be expected to generate related utility demand. While the proposed Project would lead to an increase in utility demand at the site, the Project would utilize existing service systems with connections to the Project site as applicable and included in this analysis and no other new or expanded off-site utility facilities are proposed. As a standard condition of any project, the proposed Project will pay appropriate development impact and utility connection fees toward ongoing improvement and maintenance and comply with all applicable regulations and would be required to present “Will Serve” letters from the applicable utility providers demonstrating availability of services prior to construction. Therefore, the impacts related to increased utility demand are *less than significant*.

Development of the Project would add residences where there currently are none, and utility services would need to be extended to serve the new residential community. Utilities would be connected to existing infrastructure, installed underneath the new private road and extended to individual residences. Other than as needed for connection to nearby utility lines, no off-site improvements are proposed as a part of this Project. As a standard condition of any project, the Project would be required to present “Will Serve” letters from the applicable utility providers demonstrating availability of services prior to construction. Additional detail is provided below.

As shown on the Project’s utility plans (see Figures 3-10a and 3-10b in Chapter 3: Project Description), electric and sewer lines are available for connection from the adjacent Alpine Road. All new connections would occur underground within the proposed Project roadway. The electricity line along the entire Project site frontage along Alpine Road would be undergrounded as a part of the Project. This proposed electricity line undergrounding has been included in the analysis in this EIR and would not result in significant and unavoidable impacts.

The Project site is not currently a part of the West Bay Sanitary District, and would require annexation into the sewer district prior to connecting sewer service within Alpine Road for the new residences.

Stormwater collection and management would be accommodated on-site with proposed stormwater detention and bioretention treatment facilities meeting required capacity and stormwater treatment quality standards before connecting to the line in Alpine Road. More detail regarding the proposed stormwater system is included in Chapter 12: Hydrology.

There is no water main in Alpine Road along the Project frontage. As a part of the Project, the water main would be extended approximately 1,700 feet within Alpine Road from the intersection of Westridge Drive to provide water connection to the Project site. This proposed water line extension has been included in the analysis in this EIR and would not result in significant and unavoidable impacts. The Project would connect to both an existing 12-inch water main and an existing 6-inch water main located near the intersection of Westridge Drive and Alpine Road. Since these two water mains are fed from two separate sources of water, this would create a dual connection, providing a

redundant source of water to the Project site and surrounding area for both potable water supply and water for fire fighting. Cal Water provided a Will Serve letter on September 2020 indicating they would provide water to the Project.

The Project would require extension of utility lines onto the Project site and extension of the water line to the Project site, and proposes undergrounding of the electricity line along Alpine Road, all of which has been assessed as part of this Project. The Project would utilize existing service systems and does not otherwise propose new or expanded off-site utility facilities. The impact of the Project related to the relocation or construction of new or expanded utility and service system facilities would be *less than significant*.

WATER SUPPLY

2. *Would the project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

Development of the Project site as proposed would result in an increase in demand for water relative to that associated with the existing uses at the site. Construction and occupancy of 39 residential units would require water supplied by Cal Water. At an average use rate of 190 gallons per capita per day (see setting), the estimated 101 Project residents (See Chapter 15: Population, Public Services, and Recreation) could be expected to use a total of 19,190 gallons of water a day based on averages. (Note that new construction like the Project would actually be expected to result in less than average water usage due to compliance with current water-efficient appliances and fixture requirements.) Project demand for water would represent a fraction of a percent of the average daily water consumption within the Cal Water service area (12 million gallons per day).

Cal Water's Urban Water Management Plan (UWMP), which plans for provision of water, anticipates future growth in the region that includes the project, as allowed under existing land use and zoning designation. The Project is not required to prepare a separate Water Supply Assessment under Senate Bill 610 because the Project proposes less than 500 new residential units and can instead rely upon the planning within the current UWMP, which indicates available supply for area development. Based on Cal Water's adopted Urban Water Management Plan (UWMP), there would be sufficient water supplies to continue serving the needs of Portola Valley, though temporary system-wide usage reductions would continue to be required during drought periods. Cal Water takes into account existing and projected future land uses in the Bear Gulch District when making water demand projections for purposes of planning future water supply. The proposed Project is consistent with the land use designation and density for the site. Cal Water provided a Will Serve letter on September 2020 indicating they would provide water to the Project.

The temporary consumption of water during Project construction (e.g., for dust suppression, soil conditioning, equipment washing) would be short-term and would be a minute fraction of the daily water consumption in the area. This short-term water demand would be less than the Project's long-term annual operational demand and would not adversely affect the water supply or require new entitlements.

Based on the adopted UWMP for the Cal Water Bear Gulch District, there would be sufficient water supplies to continue serving the needs of the Project, and impacts on water supply would be *less than significant* (see Impact Util-1).

WASTEWATER COLLECTION AND TREATMENT

3. *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

As the site is currently undeveloped and not contributing to the wastewater system, development of the Project as proposed would result in the generation of additional wastewater volume to the WBSD system. WBSD will be able to provide sanitary sewer service to the proposed 39 residential units through connection to the existing 16-inch sanitary sewer line in Alpine Road. The Project site would be annexed into the WBSD prior to connecting to sewer service. Development of the Project would result in an incremental increase in wastewater treatment demand; however, that increase would not exceed existing treatment capacity or require the construction of new or expanded treatment facilities. WBSD has confirmed, based on existing flows, that there is sufficient capacity within the existing main to support the Project. Impacts of the Project on wastewater collection and treatment would be considered *less than significant* (see Impact Util-1).

SOLID WASTE

4. *Would the project generate solid waste in excess of State or local standards, or in excess of capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*
5. *Would the project conflict with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Development of the Project would add 39 residential units to the Project area, resulting in an increased demand for solid waste disposal at the site. The Project is estimated to generate approximately 38.38 tons of solid waste per year,⁷ which would amount to approximately 0.006 percent of the permitted daily throughput. The Project would not exceed the capacity of solid waste landfill, and would be required to comply with statutes and regulations related to solid waste (*less than significant*, see Impact Util-1).

ENERGY

6. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*
7. *Would the project conflict with or obstruct state or local plan for renewable energy or energy efficiency?*

Impact Util-2: Increased Energy Consumption. The Project would have an incremental increase in the demand for energy at the Project site. However, the Project is expected to be served with existing capacity and would not require or result in construction of new energy facilities or expansion of existing off-site facilities and would not violate applicable federal, state and local statutes and regulations

⁷ Based on a statewide average of 0.38 ton per resident per year as reported by CalRecycle: <https://www2.calrecycle.ca.gov/WasteCharacterization/Study>

relating to energy standards. Additionally, development at the Project site is required to meet or exceed applicable energy efficiency standards. The Project would have a *less than significant* impact relating to energy.

The Project would include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). Energy would also be used for conveyance of water used in dust control, transportation and disposal of construction waste, and energy used in production and transport of construction materials.

The Project would implement construction management practices per mitigation measure Air-1 (See Chapter 6: Air Quality). While focused on emissions and dust reduction, the construction management practices would also reduce energy consumption through anti-idling measures and proper maintenance of equipment.

Based on modeling standards, operation of the Project would be estimated to increase energy consumption by approximately 280 megawatt hours/year of electricity and 1,415 million British Thermal Units (MMBTU) of natural gas.⁸ However, consistent with Green Building guidelines and to reduce Greenhouse Gas emissions, the Project has proposed all-electric construction with no gas connections. With no natural gas usage, that would equate to approximately 694 megawatt hours/year of electricity use.

Electricity infrastructure would be extended onto the Project site as a part of the Project. This Project is anticipated to have similar energy requirements as other similar developments in the vicinity and as a relatively small project, would not have a substantial effect on energy supplies or resources. The following elements of the Project would increase efficiency of energy use during operation:

- Compliance with all standards of Title 24 of the California Code of Regulations and CalGreen standards, as applicable, aimed at the incorporation of energy-conserving design and construction
- Compliance with Town's Green Building Ordinance (Municipal Code Chapter 15.10), which requires completion of a Build It Green checklist to estimate a GreenPoint Rating. (The Project has calculated a GreenPoint Rating of 173, which is better than the Town's required minimum of 75. The Project received points for roof-top solar panels, electric vehicle charging stations, energy efficient appliances and lighting, water efficient appliances and fixtures, construction-period waste diversion, environmentally-friendly building materials and finishes, and resource-efficient landscaping. Many of these measures would reduce energy usage.)

The Project site is located on a site intended for residential development per the Town's General Plan, within the service area of existing utility providers and the residential development component is proposed on the flat portion of the site where required construction activities and length of utility connections would be lessened compared to development of the larger, steeply sloped portion of the site area. As discussed above, the Project's construction or operational activities would comply with all energy standards and regulations that reduce energy consumption and include other measures to reduce energy use.

As discussed above, all households in Portola Valley are automatically enrolled in PCE's ECO100 program, with 100% of electricity from renewable, carbon-free sources like wind, solar, geothermal

⁸ Electricity and natural gas usage reported by the CalEEMod emissions model utilized for the emissions modeling and included in Appendix C.

and hydropower. Households can opt down to ECOplus, a program that delivers at least 50% renewable electricity to customers or opt out and return to PG&E electricity service though PG&E service is generally more costly than PCE options.

Development and operation of residential units per local planning efforts would not be considered an unnecessary use of energy. With compliance with applicable regulations and standards, energy usage would not be considered wasteful or inefficient. Therefore, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy or conflict with or obstruct energy-related plans and the impact related to energy would be *less than significant*.

This page intentionally left blank.