

4.13 PUBLIC UTILITIES

Local utility providers have indicated that sufficient capacity exists to serve the project with water, waste water, solid waste, energy, and communications services.

The expansion of new utility lines to serve the project area would likely occur along Deer Valley Road and Empire Mine Road.

An existing sewer main line terminates at Heidorn Ranch Road and extension of this sewer line is planned as part of new residential development (Aviano Adult Community), located north of the project and east of the new Kaiser Permanente Medical Facility. Should this development be implemented, the wastewater line for the project would connect to this new line. If the offsite developments are not implemented prior to the construction of the project, the project would be required to extend the wastewater line from the terminus at Heidorn Ranch Road, pursuant to the mitigation established in the Aviano Adult Community Project EIR (2008).

This section describes the water, wastewater, solid waste, energy, and communication systems serving Antioch and the impact of the project upon these services. The discussion focuses on increased demand, including the need for new facilities.

The discussion is based on correspondence with the utilities and public works departments of Antioch and Contra Costa County, and supplemented by information contained in the Water Supply Assessment (WSA) for the Roddy Ranch Reorganization Project, the City of Antioch General Plan, and the City of Antioch General Plan EIR.

4.13.1 EXISTING SETTING

Existing Conditions

Water Supply

The City's current and potential sources of water supply are described below.

San Joaquin River

The City draws from the San Joaquin River whenever salinity is sufficiently low. Historically, the City has pumped an annual average of approximately 208 days per year from this water source, which is equivalent to about 10,200 acre-feet per year (afy).¹ Salinity increases in the river restrict the period of time in which the City pumps from this source. The City's average daily demand when river pumping occurs is less than 16 million gallons per day (mgd). Once the municipal reservoir is full, the City can only divert what it can use. This water right is a pre-1914 right, with no limitation (other than

¹ 1 million gallons per day (mgd) is roughly equivalent to 1,120 (afy).

quality).² The City's river diversion facilities (intake screen, pump, and pipeline) have a maximum capacity of 16 mgd (10,200 afy).

Contra Costa Water District (CCWD)

The City pumps raw water from the Contra Costa Canal, and also purchases some treated water from the CCWD Multipurpose Pipeline. The CCWD has a contract through the U.S. Bureau of Reclamation Central Valley Project (CVP) for up to 174 mgd (195,000 afy), and has developed long-term plans to purchase additional water rights as the demand from its customers exceeds the current CVP contract amount. The CCWD also stores up to 89 mgd (100,000 afy) in its Los Vaqueros Reservoir. CCWD uses this water for water quality and maintenance and as an emergency supply. According to the CCWD's Future Water Supply Study 2002 Update Final Report, CCWD has planned for water demands of about 26 mgd (29,200 afy) in 2030 and 27.5 mgd (30,850 afy) in 2050. Drought years would reduce the available supply as discussed below.

Municipal Reservoir

This facility serves principally to store water pumped from the San Joaquin River and the Contra Costa Canal. In an average rainfall year, runoff is about 0.6 mgd (750 afy). In drought years, the runoff would decrease substantially.

The following three sources do not currently contribute to Antioch's water supply, but are discussed in the interest of full disclosure of possible future sources.

- *Groundwater*

The City currently uses no well water as part of its overall water supply. The City developed some low-quality wells during the 1976/1977 drought, and has used the water for such things as construction; however, these wells are now off-line. Some opportunities for well water development may exist in southeast Antioch, but current projects of available supply do not include groundwater resources.

- *Recycled Water*

The Delta Diablo Sanitation District (DDSD) Recycled Water Facility was designed and constructed to provide up to 8,600 afy of tertiary treated recycled water for two power plants and approximately 20 acres of parks and landscaped areas. This system, at full operation, is the largest industrial recycled water project in the State of California, and the 12th largest recycled water plant in the State. Treated wastewater received from the cities of Pittsburg and Antioch and the unincorporated area of Bay Point supply the recycled water facility; however, the City of Antioch currently receives no recycled water from the DDSD.

On March 14, 2007, Congressman George Miller introduced Bill HR 1526, together with seven Bay Area cosponsors. The bipartisan bill would provide Title XVI authorization for seven new projects, including the implementation of a recycled

² A "water right" is a legal authorization to use a predefined quantity of public water for a designated purpose.

water project within the City of Antioch. The bill was signed into law by President Bush on May 8, 2008. Consequently, Fiscal Year 2009 appropriations are required for the Antioch Recycled Water Project in order to supplement 75 percent state and local cost commitments and required schedules. The Antioch Recycled Water Project would extend the recycled water pipeline from the DDS facility to establish recycled water service for use as landscape irrigation at the Lone Tree Golf Course and at parks, playing fields, medians, and other green spaces within the City. The initial environmental impact reports have been completed for the proposed expansion of the recycled water pipelines, and the expansion engineering is currently in the design phase.

- *Desalted River Water*

Another potential water source during water shortages (droughts) is desalted river water. The City currently has no projects planned to desalt river water, but has studied the opportunity on two occasions over the past 30 years. The City has not implemented river water desalting due to capital cost and permitting concerns related to byproduct disposal. CCWD, along with other agencies (East Bay Municipal Utility District, Santa Clara Valley Water District, and San Francisco Public Utilities Commission), is participating in a Bay Area-wide study on desalting. This study is examining potential desalting using river water, bay (estuarine) water, or seawater as the source water. This study is in its preliminary stage, and would require significant further investigation before the lead agencies would commit to a project. Therefore, this is not considered an additional supply source.

Wastewater

The City is responsible for the wastewater collection systems from the project area to the closest DDS regional conveyance improvement, the Bridgehead Pump Station (Bridgehead). The DDS anticipates the construction of the Bridgehead Phase 2 improvements to be completed in 2008, at which time the capacity of the pump station will increase from approximately 5.5 mgd to 11.75 mgd. Regional conveyance facilities/sewer lines transport the wastewater from the pump station to the DDS Wastewater Treatment Plant, which is located at 250 Pittsburg-Antioch Highway, in the City of Antioch. Sewage flow to the plant does not fluctuate seasonally, as sewer and storm water systems are separate.

The DDS Wastewater Treatment Plant NPDES Permit currently allows for an average dry weather flow of 16.5 mgd. In 2006, the DDS treated an average of 14.2 million gallons per day (mgd), running at approximately 86 percent capacity. During the most recent reporting period (2007), the average dry weather flow influent to the treatment plant decreased to 14.0 mgd. An EIR for the expansion of the plant to allow for a maximum capacity of 22.7 mgd was completed in April, 1988, as part of the DDS's *Discharger's Wastewater Treatment Plant Master Plan*. This Plan includes the proposed expansion of the Wastewater Treatment Plant by 2015. Funds for future plant expansions are collected by the City on behalf of DDS from sewer connection fees. According to DDS, any future expansions must be approved by the cities of Pittsburg and Bay Point.

Solid Waste

Allied Waste (formerly Pleasant Hill Bayshore Disposal) provides solid waste collection, disposal, recycling, and yard waste services to the City of Antioch. Solid waste and recyclables from the City are taken to the Contra Costa Transfer and Recovery Station (CCTRS) in Martinez. At the CCTRS, recyclables are separated out and shipped to recycling markets. Solid waste is transferred from the Transfer and Recovery Station to the Keller Canyon Landfill in Pittsburg, which serves all of Contra Costa County.

The Contra Costa Transfer Station is permitted to handle 19,000 tons of solid waste a day, and is currently operating at approximately 68 percent capacity. The Keller Canyon Landfill is permitted to accept 3,500 tons of waste per day, and is currently operating at approximately 74 percent capacity. The operators of the Keller Canyon landfill estimate its life span at 68 additional years. This projection accounts for growth in Contra Costa County based in part on General Plans prepared by cities and the County in addition to other proprietary sources.

When projecting solid waste generation rates, the City uses a standard multiplier of 8.2 pounds of solid waste per day for each resident, and uses the State standard multiplier for business disposal rates of 20 pounds per employee per day. The largest business generators of solid waste in the City by business type are construction, restaurants, medical and health services, and retail facilities for building material and garden supplies. In 1998, the City generated approximately 80,765 tons of solid waste, with residential households generating over 32,000 tons (40 percent) of the solid waste, while business accounted for over 48,000 tons (60 percent) of the solid waste.

Communications and Energy

Telecommunications

AT&T is the provider of residential and commercial telephone service in the City of Antioch. AT&T also provides or hosts a variety of telecommunication services such as digital subscriber lines (DSL), internet service providers (ISP), Web hosting, virtual private networking, and wireless/cellular and paging services.

AT&T maintains a central office in Antioch at 100 West Tenth Street. The California Public Utilities Commission (CPUC) requires that the company anticipate and serve new growth. To meet this requirement, AT&T continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with CPUC tariffs and to serve customer demand in the City of Antioch.

Several private companies offer cable and other telecommunication services in Antioch, with the City issuing franchises to these companies, who install and maintain their own lines or fiber optic cables and equipment. Antioch negotiates franchises with both ISP and cable television providers and requires that their coverage includes the entire City.

Gas and Electric Services

Pacific Gas and Electric (PG&E) supplies electricity and natural gas service to the City, which is located within the southeastern portion of PG&E's Delta Distribution Planning Area (DPA). The Delta DPA covers the eastern portion of Contra Costa County from Bay

Point to Discovery Bay. The project area would be located within a subsection of the Delta DPA—the Brentwood DPA—which includes the rapidly growing southern and eastern portion of Antioch. Electricity distribution facilities that serve the City of Antioch are located throughout the DPA.

PG&E indicates that the current capacity of the Brentwood DPA is 308 megawatts (MW), which is the total capacity of the three banks at Brentwood Substation, one bank at the Lone Tree Substation, and the capacities of the seven feeders from Contra Costa Substation. Peak loads in 2007 were 264.8 MW in the Brentwood DPA, and are projected to increase to 328.1 MW by 2009, exceeding the current total capacity by approximately 20.1 MW. However, future capacity in this area will be increased to 340.7 MW with the addition of a second bank and one 21-kV circuit at Lone Tree Substation in 2009, as described below.

Construction of the new PG&E Lone Tree distribution substation, a three-bank 230/21 kilovolt (kV) distribution substation in Antioch (near the intersection of Heidorn Ranch Road and Sand Creek Road), began in September 2007. The substation was completed in June 2008 to meet the expected load growth and demand for electricity in the Brentwood DPA. PG&E has completed the installation of one 230/21kV bank and one 21kV feeder at the Lone Tree Substation. A second 21kV feeder from the station will also be completed in the summer of 2008. Additional transformer banks and 21-kV circuits will be a combination of overhead conductors on poles and underground cable in conduit. PG&E is also looking to the future and is currently evaluating new sites to build additional substations in the Brentwood DPA.

PG&E updates all load forecasts every year. If an update for the Delta DPA or for the southeastern portion of the DPA indicates that the load growth is different than forecasted, the DPA expansion would be timed to match the faster or slower growth.

Natural gas is supplied to the City via a number of gas transmission lines located in east Contra Costa County. As with electricity demand, PG&E does not use a standard multiplier for estimating the demand for natural gas, and instead calculates by reviewing new service applications. Based on current information, PG&E expects to have adequate gas supply for anticipated growth in the City, including the Roddy Ranch project.

Regulatory Setting

Senate Bill 901, 221, and 610

Signed into law on October 16, 1995, Senate Bill 901 (SB 901) requires every urban water supplier to identify as part of its urban water management plan, the existing and planned sources of water available to the supplier over a prescribed five-year period.

Signed into law on October 8, 2001, SB 221 established a process whereby sufficient water supply must be identified and available before a final subdivision map may be approved for any residential development of 500 homes or more or if a water supplier has fewer than 5,000 service connections and a proposed development would increase the number of connections by at least 10 percent. State Bill 610 (SB 610) similarly

requires public agencies to check with their water agency to determine whether water supplies are sufficient to serve the project.

SB 610 applies when a city proposes to approve a “project” that meets any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project.

Assembly Bill 939

Assembly Bill 939 (AB 939), the California Integrated Waste Management Act of 1989, mandates the reduction of solid waste disposal in landfills. The bill mandated a minimum 50 percent diversion goal by 2000. In response, the City of Antioch passed the Construction & Demolition Debris Recycling Ordinance and instituted a Single-Stream Residential Recycling Cart. As a result of these actions, of the more than 160,000 tons of waste generated by Antioch in 2005, only about 80,000 tons were sent to landfills. Since 2007, Antioch has achieved the mandated 50 percent diversion goal.

California Energy Commission

Title 24, Part 6, California’s Energy Efficiency Standards for Residential and Nonresidential Buildings was established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. New standards were adopted by the Commission in 2001 as mandated by Assembly Bill 970 (AB 970) to reduce California’s electricity demand. The new standards went into effect on June 1, 2001.

City of Antioch General Plan

The General Plan contains numerous objectives and polices designed to implement its vision related to utilities and service systems. The applicable policies of the General Plan relating to utilities and service systems are designed to ensure adequate capacity, maintenance of infrastructure, and ensuring efficient and responsible use of resources pursuant to environmental goals and objectives as outlined in the General Plan.

Relevant policies within the General Plan, as listed below, govern the management and design of utilities and service systems in the City.

- Policy 8.4.2a As part of the design of water systems, provide adequate pumping and storage capacity for drought and emergency conditions, as well as the ability to provide fire flows required by the Contra Costa County Fire Protection District.
- Policy 8.4.2b Ensure that adequate infrastructure is in place and operational prior to occupancy or new development; such that (1) new development will not negatively impact the performance of water facilities serving existing developed areas, and (2) the performance standards set forth in the Growth Management Element will continue to be met.
- Policy 8.5.2a As part of the design of sewer systems, provide adequate capacity for average and peak conditions.
- Policy 8.5.2b Ensure that adequate infrastructure is in place and operational prior to occupancy of new development, such that new development will (1) not negatively impact the performance of sewer facilities serving existing developed areas, and (2) the performance standards set forth in the Growth Management Element will continue to be met.
- Policy 8.6.2b Require provision of attractive, convenient recycling bins and trash enclosures in new residential and non-residential development.
- Policy 8.6.2c Provide and promote opportunities to reduce solid waste generation at home and in businesses and public facilities, making possible the safe disposal of hazardous materials.
- Policy 8.6.2d Require builders to incorporate interior and exterior storage areas for recyclables into new commercial, industrial, and public buildings.
- Policy 8.6.2h The City of Antioch shall follow State regulations in implementing the goals, policies, and programs in order to achieve and maintain a 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting.
- Policy 8.6.2j The City shall require all development projects to coordinate with appropriate departments and/or agencies to ensure that there is adequate waste disposal capacity to meet the waste disposal requirements of the project, and the City shall recommend that all development projects incorporate measures to promote waste reduction, reuse, recycling, and composting.
- Policy 10.7.2g Require public and private development projects to be in compliance with applicable National Pollution Discharge Elimination System (NPDES) permit requirements, and require the implementation of best management practices to minimize erosion and sedimentation resulting from new development.

- Policy 10.8.2a Continue to implement Title 24 of the State Building Code, and provide incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24 through increased use of passive, solar design and day-lighting.
- Policy 10.8.2b Promote the use of site design, landscaping, and solar orientation to decrease the need for summer cooling and winter heating.
- Policy 10.8.2i The City shall review all development plans prior to approval to guarantee that energy conservation and efficiency standards of Title 24 are met and are incorporated into the design of the future proposed project.

Policy Consistency Analysis

Implementation of the proposed project would create additional demands on the water and wastewater systems of the City. In accordance with the applicable policies in Sections 8.4.2 and 8.5.2 of the General Plan, the projected water supply demands and wastewater generation rates of the project have been thoroughly evaluated in conjunction with the local agencies. Quantitative analyses of the project's water supply demands are discussed further in the Water Supply Assessment prepared by Brown and Caldwell in September, 2006 and this analysis is summarized in the section below (4.13.2, Impacts and Mitigation Measures). The section also includes an analysis of the project's wastewater demands and found that, with improvements proposed as part of the project, adequate capacity would exist to serve the project. Therefore, the project is consistent with the policies included in the Water Facilities and Wastewater Management sections of the General Plan.

Mitigations measures related to solid waste disposal would include the provision of recycling bins and trash enclosures, consistent with the policies listed in Section 8.6.2 Solid Waste Management.

Mitigation contained in **Section 4.10, Noise** would ensure that home designs are in compliance with the sound and insulation standards of Title 24. The Design Review Board will review project plans for individual home designs to ensure that the project incorporates opportunities to reduce heating and cooling through building materials and orientation.

4.13.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Significance criteria for the project's potential public utility system impacts are drawn from CEQA Guidelines Appendix G. The project would have a potentially significant impact on utilities if it would:

- a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- c. Require or result in the construction of new storm water drainage facilities, the construction of which could cause significant environmental effects;
- d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- g. Comply with federal, state, and local statutes and regulations related to solid waste.

Additionally, the General Plan utilized the following thresholds of significance in evaluating utilities and service system impacts if the project would:

Water

- Increase water demand such that available existing or planned supply is exceeded, or if development is proposed in areas outside the planned water service boundary.

Wastewater

- Result in dry weather wastewater flows that exceed existing or planned water treatment, storage, and disposal capacity of the wastewater provider.

Communications and Energy

- Substantially increase reliance on natural gas and oil, or substantially decrease reliance on renewable energy sources, thereby resulting in wasteful, inefficient, and unnecessary consumption of energy.
- Have an adverse effect on local and regional energy supplies and/or on requirements for additional capacity.

Less Than Significant Impacts

Water Supply Demands

Implementation of the project would increase water supply demands from the CCWD. The proposed project would receive potable water from the City of Antioch, which is currently located within the CCWD, Zone IV service area. As seen in **Figure 3.7**, there are two proposed potable water line corridors that could connect to the project area. The first corridor would be located on the west side of Deer Valley Road, within the right-of-way of the future roadway alignment, and would intercept with the project area in the

East Phase. The second water line corridor would extend from the north, beneath Empire Mine Road, and would intercept with the project area in the West Phase.

In accordance with SB 610, 221, and 910, a Water Supply Assessment (WSA) of the proposed project was prepared by Brown and Caldwell in September, 2006. To estimate the potential water demand for the Roddy Ranch Development project, water use factors presented in the City Urban Water Management Plan Update (Brown and Caldwell, 2006) were used. Unit demands for commercial areas were based on data presented in the Water Systems Master Plan Update (Brown and Caldwell, 1999). Implementation of the proposed project could result in an annual demand of 336 afy (0.3 mgd). Demand resulting from the proposed project area is summarized in **Table 4.13-1**.

Table 4.13-1 Estimated Water Use in the Project Area

Use Category	Number of Units (or Acres)	Unit Demand Factors	Annual Water Use (afy)
Single-family	574 du ^a	0.509 afy/du	291
Multi-family	100 du	0.282 afy/du	28
Commercial	5.1 acres ^b	3.41 afy/acre	17
Total			336

Source: Brown & Caldwell, 2006.

^a Dwelling Unit

^b Conversion of 225,000 ft² of proposed commercial space = 5.1 acres

Note: It should be noted that these demand assumptions do not account for the non-potable water demand of the Roddy Ranch Golf Course which is currently being served by the City of Brentwood with non-potable water purchased from the East Contra Costa Irrigation District. The Roddy Ranch subdivision would not utilize non-potable water.

City Water Requirements With and Without the Project Area

Based on population estimates conducted by Brown & Caldwell (2006), projected water use for the City with and without the proposed project were predicted. City build-out is assumed to occur in 2036 based on the Measure K maximum population and linear growth based on ABAG projections. **Table 4.13-2** presents those estimates, assuming that the project area would be approximately 50 percent built out in 2012 and 100 percent built out in 2015. ³

³ Based on the current economic outlook and the applicant's current construction schedule, these dates will likely be moved back. The table therefore represents a conservative assumption of construction in that it assumes that it would occur more quickly.

Table 4.13-2 Estimate of City Water Requirements With and Without Roddy Ranch Project

Year	Percent Build-out for Project Area	Annual Water Demand (afy)		
		Project Area	City w/o Project	Combined Total
2012	50	168	22,055	22,223
2015	100	336	22,979	23,315
2021	100	336	24,132	24,468
2026	100	336	25,284	25,620
2031	100	336	26,437	26,773
2036	100	336	27,590	28,926

Source: Brown & Caldwell, 2006

At build-out, the project-related water demand increases the overall City water demand by about 1.5 percent. These projections represent an upper limit for water use because they do not account for water conservation beyond that already included in the Uniform Plumbing Code (UPC) and the State of California regulations. Based solely on CCWD water supply planning, CCWD would have the capacity to satisfy the City's entire demand; thus, the City would not be required to utilize its other sources (river diversion, runoff to the municipal reservoir, and recycled water).

Assessment of Supply Vulnerability

Water supply and demand reliability comparisons for 2036 are provided in **Table 4.13-3**, assuming various conditions regarding the future availability of surface supplies and the adoption of water demand management measures. The table presents three water supply scenarios: average/normal water year, single dry-water year, and multiple dry-water years. The possible future reduction in water supply to the City of Antioch due to drought conditions cannot be precisely predicted; however, the following assumptions were made:

- A single dry-water year would result in no reduction in either the normal year supply or demand;
- The surface water supplies to the City of Antioch water systems would be progressively reduced during a multiple-dry-year scenario, up to a 30 percent reduction starting the third of multiple dry water years; and
- Mandatory/voluntary reductions in demand would occur during multiple dry-year periods, with a 10 percent reduction in the first year and 15 percent reduction in all subsequent years.

Based on available supplies and reasonable levels of local water conservation, the City has adequate supply to meet normal, single, and multiple dry years including the demands from the project area.

Local Communications and Energy Providers

Telecommunication

Additions to City of Antioch’s infrastructure, zoning changes, or growth could cause a need for expansion or changes in telecommunications infrastructure. Expansion of infrastructure involves finding suitable sites on which to place equipment. Suitable sites must meet requirements for the physical transmission of telecommunication services while also conforming to Antioch’s guidelines. As discussed previously, the CPUC requires telecommunication companies to anticipate and serve new growth.

Development of the proposed project would affect the service capacity of providers of telecommunications services. However, the build out analyzed by the General Plan EIR assumed a much larger project on the Roddy ranch site and found that the implementation of applicable General Plan policies would result in a less than significant impact. The project as proposed would therefore result in a less than significant impact.

Table 4.13-3 Water Supply Vulnerability Comparison of Supply and Demand During Normal, Single Dry-Water Year, and Multiple Dry-Water Years

	Average/ Normal Water Year (2036)	Single Dry Water Year (2036) ^a	Multiple Dry Water Years				
			Year 1 (2032) ^a	Year 2 (2033) ^b	Year 3 (2034) ^c	Year 4 (2035) ^c	Year 5 (2036) ^c
Sustainable Water Supply (mgd)							
Surface Water	38,000	38,000	38,000	26,525	25,120	25,188	25,257
Ground-water	0	0	0	0	0	0	0
Recycled Water	530	530	530	530	530	530	530
Total	38,530	38,530	38,211	27,055	25,650	25,718	25,784
Demands	28,049	28,049	27,127	24,622	23,450	23,646	23,842
Surplus (or Deficit)	10,481	10,481	11,084	2,433	2,200	2,073	1,945

Source: Brown & Caldwell, 2006.

^a Assumes no reduction of either demand or supply in single dry water year or first of multiple dry water years.

^b Assumes a 10 percent reduction in surface water supply from CCWD; a zero supply from San Joaquin River due to increased salinity levels; and a 10 percent voluntary/mandatory reduction demand.

^c Assumes a 15 percent reduction in surface water supply from CCWD; a zero supply from San Joaquin River due to increased salinity levels; and a 15 percent voluntary/mandatory reduction demand.

Energy Providers

Implementation of the proposed project would increase demand for PG&E’s electricity services. However, as previously discussed, the ongoing construction of new substations within the Brentwood DPA is increasing the service capacity of the DPA well beyond what would be required for the project and build-out of the General Plan.

Natural gas is supplied to the City via gas transmission lines in east Contra Costa County. Based on current information, PG&E expects to have adequate gas supply for anticipated

growth in the City. However, serving the proposed project will require the installation of a new regulator station and the piping necessary to reach that geographical location. An 8-inch pipeline will likely be utilized to minimize pressure loss and ensure adequate capacity as gas is delivered to the project.

Sections 10.8.2 of the General Plan contains policies to reduce or minimize the effects of additional demand and consumption of energy resources associated with prospective growth within the City. Mitigation contained in section 4.10 Noise would ensure that home designs are in compliance with the sound and insulation standards of Title 24. The Design Review Board will review project plans for individual home designs to ensure that the project incorporates opportunities to reduce heating and cooling through building materials and orientation. Therefore, impacts to communication and energy providers are considered less than significant.

Wastewater Volumes

The project would generate wastewater volumes that would increase service demands from the DDS.

Extension of Wastewater Main Lines

Development of the proposed project would require the installation of new wastewater collection lines to serve the project area, as the existing sewer line located under Deer Valley Road is at capacity and cannot accommodate the additional anticipated project flows. **Figure 3.7** illustrates the proposed utility corridors for the project.

A sewer main line currently terminates at Heidorn Ranch Road, and extension of this sewer line is planned as part of new residential development (Aviano) located to the east of the new Kaiser Permanente Medical Facility. Should this development be implemented, the project could connect to this line through a utility corridor located on the east side of Deer Valley Road within the right-of-way of the future roadway alignment. Additional property along Deer Valley Road would be required to accommodate the proposed widening of the roadway as well as the planned placement of utility lines.

If the offsite developments are not implemented prior to the construction of the Aviano project, the Roddy Ranch project would be required to extend the wastewater line from the terminus at Heidorn Ranch Road, pursuant to the applicable mitigation measures identified in that EIR.

Wastewater Generation Rates

According to the DDS, Bridgehead pump station expansion improvements are being constructed to accommodate projected flows from development anticipated pursuant to Measure K. The DDS has anticipated the growth associated with the project area, which is expected to generate approximately 0.151 mgd of wastewater daily, as seen in **Table 4.13-4**.

Table 4.13-4 Wastewater Generation Rates

Type of Development	Gallons Per Day (gpd)	Million Gallons Per Day (mgd)
574 Single-Family Residential Units	220 gpd	0.126 mgd
100 Multi-Family Units	170 gpd	0.015 mgd
445,000 square feet of Commercial	1,000 gpd per acre ⁴	0.010 mgd
	Total	0.151 mgd

Source: DDS, 2008.

As previously discussed, the DDS Wastewater Treatment Plant and Bridgehead Pump Station will have maximum operational capacities of 16.5 mgd and 11.75 mgd, respectively, by 2009. The DDS has found that the proposed project will not cause the rated capacity of treatment facilities to be exceeded during normal or peak flows. Furthermore, the General Plan evaluated a much larger project and found that implementation of the General Plan policies would ensure the adequacy of wastewater facilities as build out occurs. The project as currently proposed would therefore result in a less than significant impact to wastewater facilities.

Utility Lines

Implementation of the project would require the construction of new utility lines which would result in direct environmental impacts. Development of the project area, as provided for by Measure K, would receive its utility service, including communication and energy services, via a common trench constructed for all of the utilities (including water, sewer, telecommunication, gas, and electricity). This trench would be located within the Deer Valley Road right-of-way as shown in **Figure 3.7**. A water line also is proposed within the Empire Mine Road right-of-way (to provide a looped system). These utilities would connect on site within the right-of-way of Empire Mine Road and other future on site roadways.

Depending on its location, the construction of the common trench could impact sensitive biological resources, affect water quality through erosion, be susceptible to geotechnical or cultural resource constraints, or otherwise impact undeveloped areas. However, implementation of General Plan policies and project-specific mitigation measures included in **Section 4.4 Biological Resources; Section 4.5, Cultural Resources; Section 4.6 Geology and Soils; and Section 4.8, Hydrology and Water Quality** would reduce these impacts to a less than significant level.

⁴ Commercial area calculated from proposed 225,000 ft² commercial/retail uses, 20,000 ft² Golf Course Clubhouse, and 200,000 ft² hotel = 445,000 ft² (10.2 acres).

Significant Impacts

Impact 4.13.-1: Increased population could affect City's ability to meet requirements for solid waste disposal

The proposed development would result in new residential and commercial impacts related to solid waste disposal that could affect the City's ability to meet the requirements of AB939 related to the reduction of solid waste disposal.

Implementation of the General Plan policies that relate to solid waste would help to reduce the effects of growth and development on solid waste facilities to less than significant. These policies require the City of Antioch to achieve and maintain a 50 percent reduction in solid waste disposal through source reduction, reuse, recycling, and composting.

Mitigation Measure 4.13-1: In addition to the implementation of the General Plan policies relating to solid waste, the project shall include adequate, accessible areas for collecting and loading recyclable materials in accordance with the California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900 through 42911). Final building plans shall include provisions for both interior and exterior storage areas for recyclables, subject to City review. Project plans that clearly delineate these areas shall be submitted to the Planning Department for review and approval prior to issuance of a building permit.

Significance after Mitigation: Less than significant

Cumulative Impacts

Cumulative impacts are addressed in **Chapter 6.0, CEQA Required Conclusions**, of this EIR.

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