15 UTILITIES AND SERVICE SYSTEMS

15.1 Introduction

The Utilities and Service Systems chapter of the EIR summarizes the setting information and identifies potential new demands resulting from the proposed projects' water supply, wastewater systems, and solid waste disposal. In addition, the chapter evaluates the potential physical environmental impacts that could result from on- and off-site infrastructure improvements. The chapter shall present analysis of potential impacts related to the implementation of each project independently, as well as potential impacts that could result from implementation of both projects. Information for the Utilities and Service Systems chapter was primarily drawn from the Placer County General Plan[1] and associated EIR,[2] the Granite Bay Community Plan (GBCP),[3] the *2015 Urban Water Management Plan for San Juan Water District* (UWMP),[4] and a 2011 Technical Memorandum prepared by Brown and Caldwell for Placer County.[5]

15.2 Existing Environmental Setting

The following section describes the existing utilities systems, including wastewater conveyance and treatment, water supply and delivery infrastructure, solid waste, and gas and electric infrastructure.

Wastewater Conveyance and Treatment

The following sections will discuss the existing wastewater conveyance and treatment infrastructure in the area of the proposed projects.

<u>Conveyance</u>

Sewer services in the project area are provided by the Placer County Department of Public Works and Facilities, Environmental Engineering and Utilities Division. Placer County operates 44 sewer pump stations, approximately 300 miles of sewer piping, and more than 450 septic tank effluent pump systems. The existing sewer pipeline system within unincorporated areas of the County in the project vicinity are owned and maintained by Placer County Sewer Districts.

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1 Placer County. *Countywide General Plan Policy Document*. August 1994 (updated May 2013).
2 Placer County. *Countywide General Plan EIR*. July 1994.
3 Placer County. *Granite Bay Community Plan.* Adopted February 28, 2012.
4 San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.
5 Brown and Caldwell. *Technical Memorandum: Hydraulic Model Analysis*. February 25, 2011.

Placer County has established several sewer maintenance districts (SMDs), and community service areas (CSAs), shown in Figure 15-1 below. The proposed project sites are within SMD 2.

SMD 3, located north of SMD 2, generally covers the Horseshoe Bar area and SMD 2 generally covers Granite Bay. Historically wastewater generated within SMD-3 was treated at a wastewater treatment plant within SMD 3. However, with completion of the SMD 3 Regional Sewer Project, Placer County has constructed a sewer pipeline and pump station to convey wastewater from SMD 3 to the existing SMD 2 sewer collection system, located in Granite Bay, for treatment at the Dry Creek Wastewater Treatment Plant (Dry Creek WWTP) in Roseville. The SMD 3 Wastewater Treatment Plant has accordingly been decommissioned. A 2011 study conducted for the County by Brown & Caldwell evaluated the pipe capacity effects of routing wastewater from the SMD 3 system to the SMD-2 system by way of a new sewer pipeline.

An existing 18-inch sewer trunk main, running east-west, is located along the southern boundary of both project sites within a 20-foot sewer easement. The existing trunk within the project sites represents a portion of the North Trunk within SMD 2, as shown in Figure 15-2.

West of the Sierra College Boulevard, the 18-inch North trunk main connects to the existing Regional/South Placer Regional Wastewater Authority (SPWA) collection system. From the connection point with the SPWA system, wastewater is conveyed to the Dry Creek WWTP.

Treatment

Sewer treatment for SMD 2 is provided at the Dry Creek WWTP, which is located within the southern edge of the City of Roseville. The Dry Creek WWTP is owned by the City of Roseville and treats wastewater from areas of the City of Roseville, City of Rocklin, and City of Loomis in the South Placer Municipal Utility District (SPMUD) sewer service area, as well as nearby areas within unincorporated portions of Placer County, including the project sites.

Under the Dry Creek WWTP's National Pollutant Discharge Elimination System (NPDES) Permit, Number CA0079502, the Dry Creek WWTP has a permitted average dry weather capacity (ADWF) of 18 million gallons per day (mgd) and a peak wet-weather flow (PWWF) of 45 mgd.[6] As of 2016, the Dry Creek WWTP was operating at approximately 50 percent of the WWTP's permitted flow, with an ADWF of 9 mgd, and a PWWF under 25 mgd.[7] Of the 9 mgd of ADWF currently being treated at the Dry Creek WWTP, approximately 40 percent, or 7.2 mgd originate from unincorporated portions of Placer County, including SMD 2.[8]

6 City of Roseville. *City of Roseville General Plan 2035*. August 17, 2016.
7 *Ibid*.
8 *Ibid*.

Figure 15-1
Placer County SMDs

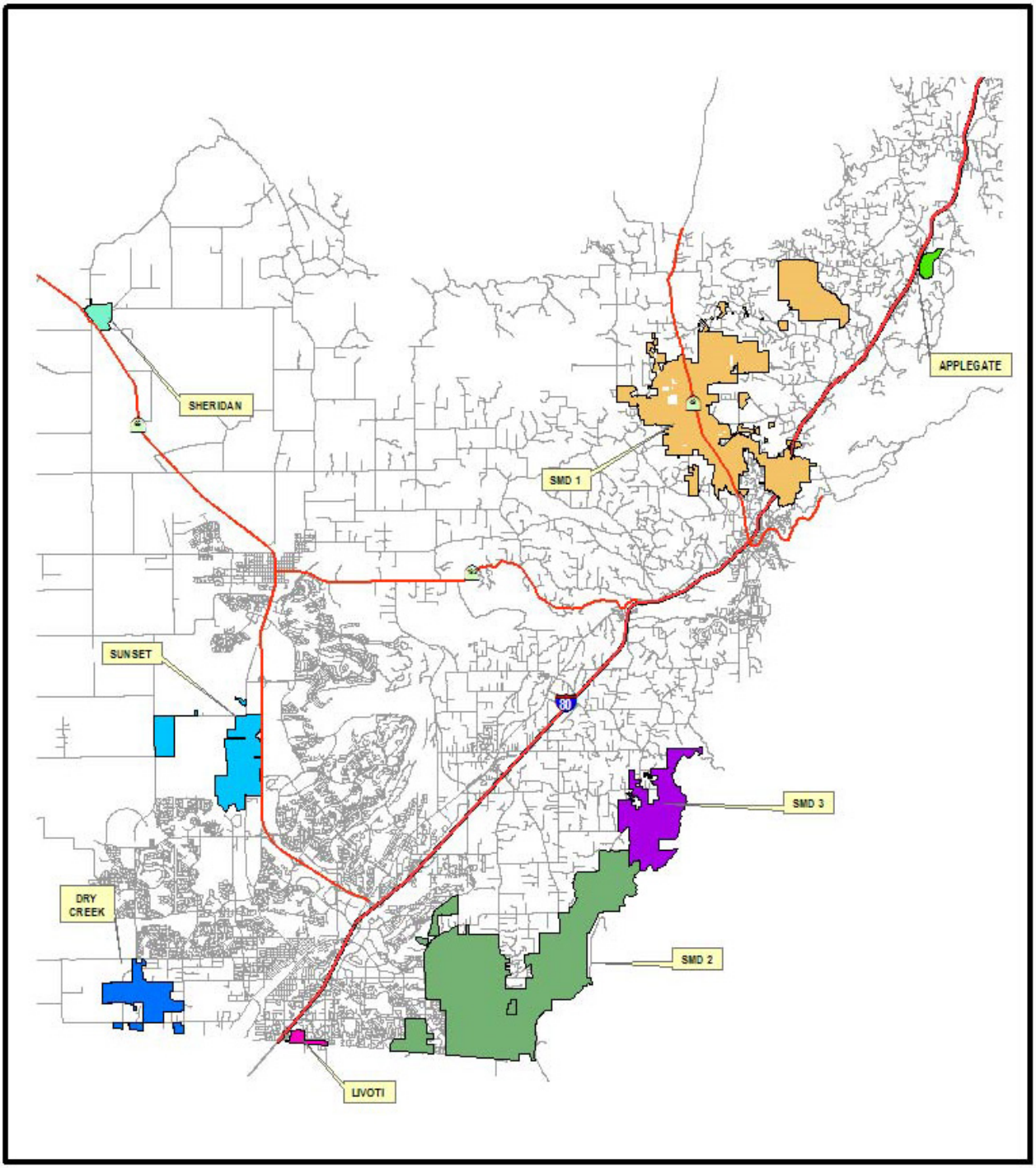
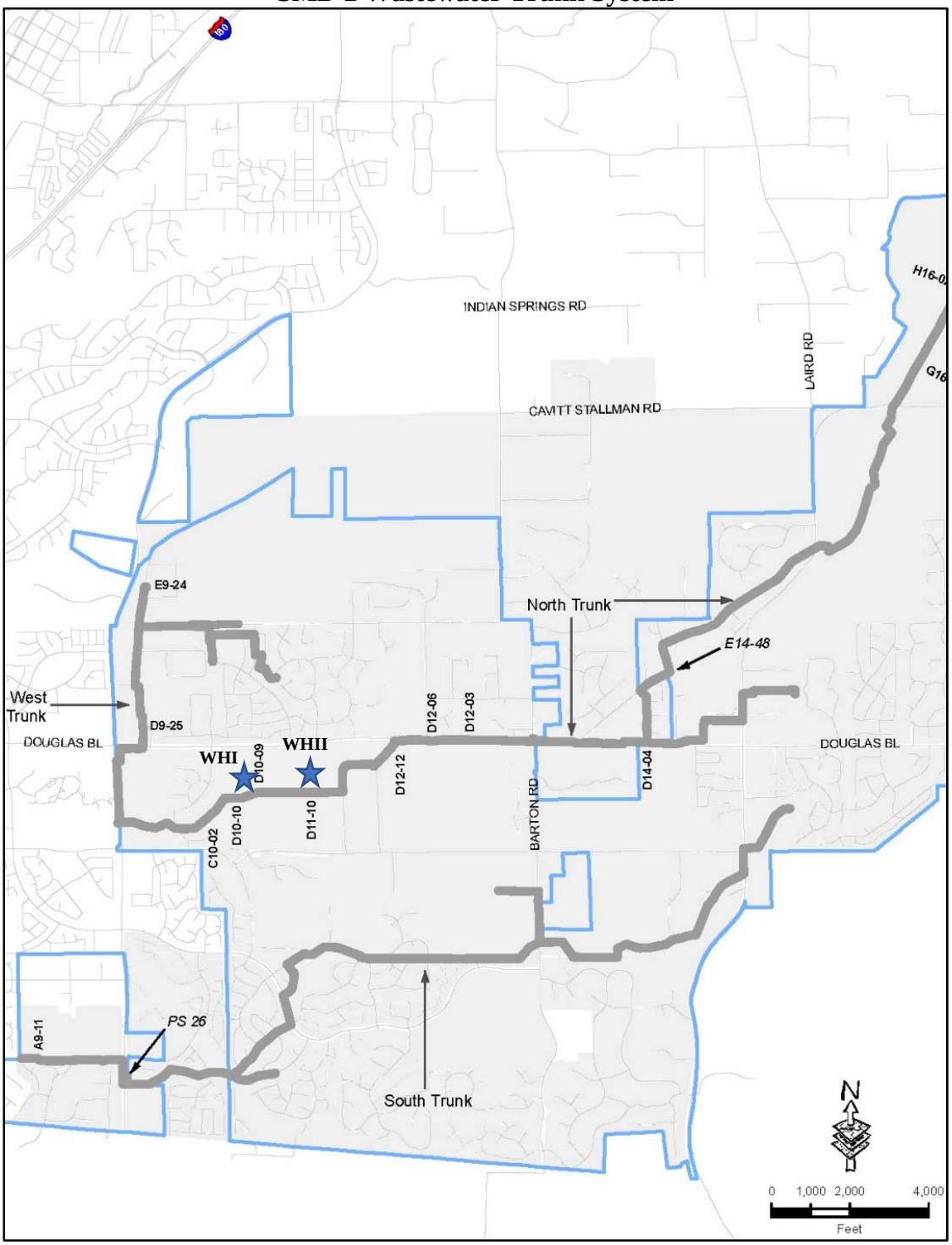


Figure 15-2
SMD 2 Wastewater Trunk System



Tertiary-level treatment at the Dry Creek WWTP consists of screening, primary clarification, aeration, secondary clarification, filtering, and disinfection. Recycled water from the Dry Creek WWTP is used to irrigate four golf courses, several area parks, and some areas of public street landscaping.[9] Treated wastewater from the Dry Creek WWTP that is not used for irrigation purposes is discharged to Dry Creek. Residual solids from the treatment process are transported to the Western Placer Waste Management Authority sanitary landfill or are transferred to a City-approved vendor for off-site land application.

The City of Roseville owns and operates the Dry Creek WWTP on-behalf of the City's Regional Partners, which consist of the City of Roseville, the South Placer Municipal Utility District, and portions of unincorporated Placer County. Per the Operations Agreement among the Regional Partners, upon reaching 75 percent capacity at the WWTP, capacity improvements must be initiated. As stated above, the Dry Creek WWTP currently operates at approximately 9 mgd ADWF out of a permitted capacity of 18 mgd for an available capacity of 50 percent. Although the Dry Creek WWTP currently operates below permitted capacity, buildout demand of the Dry Creek WWTP's service area is estimated to reach approximately 21 mgd. Thus, improvements to the Dry Creek WWTP are likely to be needed prior to buildout of the Dry Creek WWTP's service area. Demand from new development is currently accommodated at the WWTP on a first-come-first-served basis.[10]

Water Supply and Delivery Infrastructure

Both the 18.09-acre Whitehawk I (WHI) project site and the 32.97-acre Whitehawk II (WHII) project site are located within the GBCP area and water is provided by the San Juan Water District (SJWD). The SJWD acts as both a wholesale and retail water supplier to customer agencies in northeastern Sacramento County and southern Placer County. Wholesale water customers include Citrus Heights Water District, Fair Oaks Water District, Orangevale Water Company, and the City of Folsom. The SJWD provides retail water service to a 17-square mile area located east of Roseville and west of Folsom Lake (see Figure 15-3), with 75 percent of the retail service area within Placer County. Approximately 29,444 people resided in the SJWD service area in 2014, with populations expected to rise in concert with growth projected for Orangevale and Granite Bay.[11]

<u>Water Supply</u>

The SJWD provides treated surface water to all retail service and wholesale customers. District water supplies are derived from Folsom Lake, from which water is diverted and delivered to the Sidney N. Peterson Water Treatment Plant (SNPWTP) located at 9935 Auburn Folsom Road in Granite Bay.

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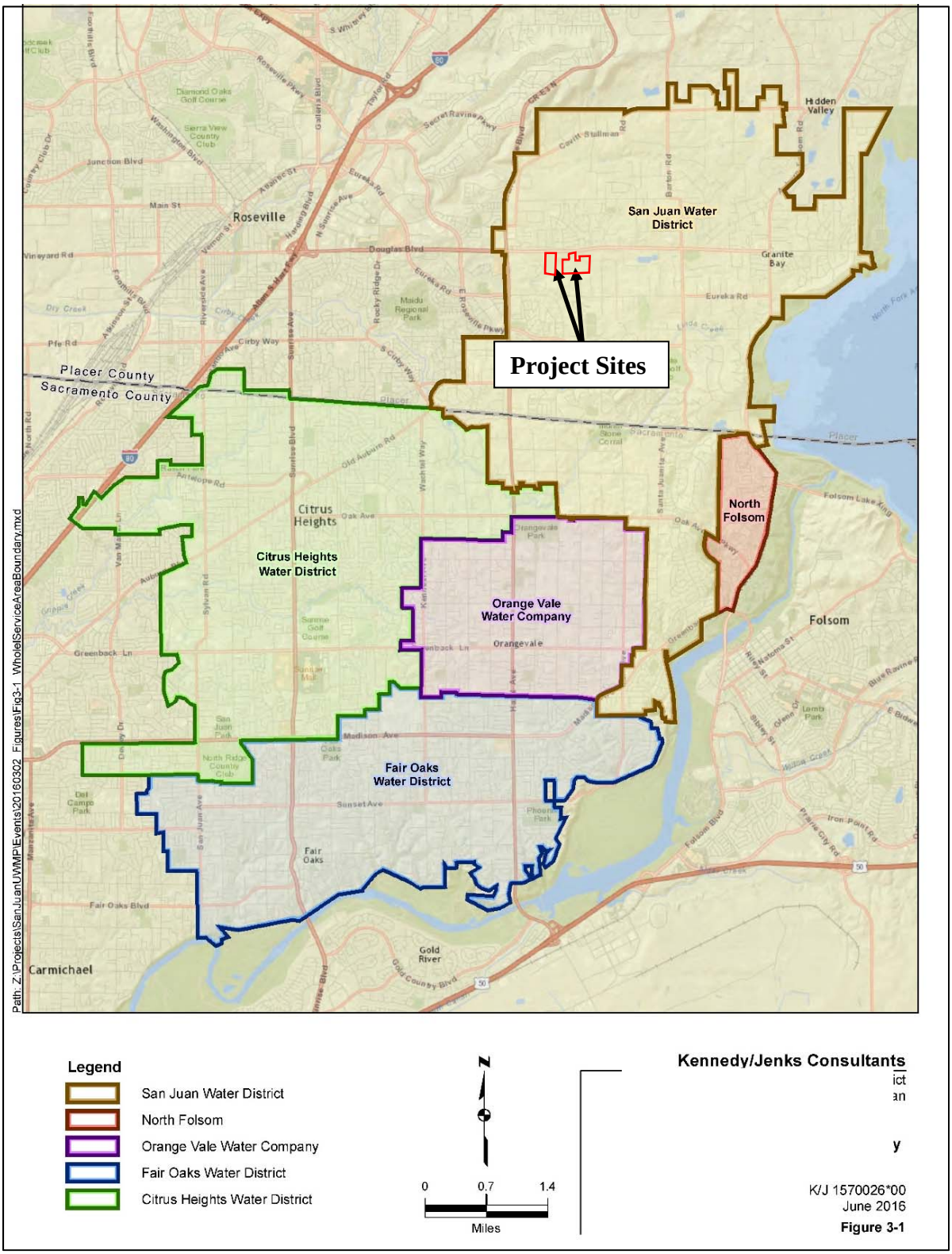
9 City of Roseville. *2015 Urban Water Management Plan* [pg. 6-7]. May 2016.
10 *Ibid.*
11 San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.

Figure 15-3
San Juan Water District Service Area



Source: San Juan Water District. 2015 Urban Water Management Plan for San Juan Water District. June 2016.

The SNPWTP has a treatment capacity of 150 mgd. Treated water is stored in Hinkle Reservoir, which is located adjacent to the SNPWTP. The Hinkle Reservoir has a capacity of 63 million gallons equating to 190 acre-feet of storage capacity. Impoundment of treated surface water in Hinkle Reservoir allows the SJWD to provide capacity during peak demand periods and for emergencies.[12]

Surface water from Folsom Lake is diverted under pre-1914 rights and contracts with various other agencies. Pre-1914 rights include 26,400 acre-feet per year (AFY) and an appropriative water right to an additional 6,600 AFY, for a total of 33,000 AFY. The aforementioned 33,000 AFY are derived from the American River and are delivered from Folsom Lake by the United States Bureau of Reclamation (USBR) under the Central Valley Project (CVP). In addition to the pre-1914 rights, the SJWD is contracted with the USBR for 24,200 AFY of water from the American River. Finally, in 1972, the SJWD entered into a contract with the Placer County Water Agency (PCWA) for delivery of 25,000 AFY until the year 2021, with the option for 20-year renewal periods following the year 2021.[13]

The SJWD's water supplies are summarized in Table 15-1.

Table 15-1
SJWD Average Year Supply (AFY)

SJWD Supply Source	2015	2020	2025	2030	2035	2040
USBR CVP Folsom Lake	24,200	24,200	24,200	24,200	24,200	24,200
Pre-1914 Right	33,000	33,000	33,000	33,000	33,000	33,000
PCWA	25,000	25,000	25,000	25,000	25,000	25,000
Total	**82,200**	**82,200**	**82,200**	**82,200**	**82,200**	**82,200**

Note: Projected water supply is for a normal year based on Sacramento Water Forum definition of Folsom Reservoir inflow projected above 950,000 acre-feet.

Source: San Juan Water District. 2015 Urban Water Management Plan for San Juan Water District. June 2016.

Groundwater

The SJWD does not use groundwater to meet retail service demand within the SJWD's retail service area. On June 23, 2015, the SJWD signed an agreement with the Sacramento Suburban Water District to share ownership, operation, and maintenance of the Antelope Booster Pump-Back Station, which is intended to provide groundwater supplies to the SJWD during dry years, times of limited surface water availability, or other times when the SJWD experiences unplanned

[12] San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.
[13] *Ibid*.

surface water transmission or treatment outages. The Antelope Booster Pump-Back Station has a combined pumping capacity of 10,000 gallons per minute.[14]

Water Demand

The SJWD has estimated the demand for wholesale and retail customers, and the past and projected water demands are presented in Table 15-2. Demand estimates include projected growth in retail and wholesale sectors. Retail demand growth projections rely on growth estimates based on historical-trend growth, as well as growth estimated by the Sacramento Area Council of Governments (SACOG), which included consideration of growth under the GBCP.[15] In addition to demand estimates for the SJWD, Table 15-2 presents a comparison of the estimated water supply for the area.

Table 15-2
SJWD Retail and Wholesale Supply and Demand Comparison (AFY)

	2020	2025	2030	2035	2040
SJWD Demand	58,490	64,441	70,314	76,246	82,200
SJWD Water Supply	82,200	82,200	82,200	82,200	82,200
Surplus	23,710	17,759	11,886	5,954	0

Source: San Juan Water District. 2015 Urban Water Management Plan for San Juan Water District. June 2016.

As shown in Table 15-2, SJWD has estimated that water supplies for the district will exceed the estimated demand through 2035 and meet the estimated demand in 2040. Therefore, SJWD is anticipated to have sufficient water supplies to meet the demands of the SJWD Service area until at least 2040.[16]

Water Supply Reliability

During single and multiple dry years, the SJWD may be subject to reductions in diversions from Folsom Lake, down to a minimum diversion level of 54,200 AFY. Such decreases in diversions would be met by a combination of reductions of PCWA and USBR CVP supplies and would represent a reduction in total available supply by 28,000 AFY, as compared to the average year supply of 82,200 AFY. In response, the SJWD would implement various demand management measures. Such management measures may include steps such as limiting the water available for the City of Roseville for conjunctive uses, instituting conservation pricing, conducting public outreach and education to promote conservation, and/or implement the SJWD's staged Water Shortage Contingency Plan, which includes further demand reduction and conservation measures.

[14] San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.
[15] *Ibid*.
[16] *Ibid*.

To augment the conservation measures discussed above, the SJWD would work with wholesale customers with groundwater access to increase groundwater pumping in order to offset surface water supply. In such circumstances, groundwater would be provided by the Sacramento Suburban Water District through the Antelope Booster Pump-Back Station. Groundwater from the Antelope Booster Pump-Back Station would only be used during dry years when the SJWD's surface water supplies are reduced. The Antelope Booster Pump-Back Station is estimated to provide an additional 5,300 AFY of supply. The SJWD is participating in regional groundwater planning to develop a conjunctive use program intended to increase water supply reliability for the SJWD service area. A component of the conjunctive use program being developed is the offset of groundwater pumping by other agencies in the region during normal water years. Such offsets would have the potential to maximize groundwater storage within the region, which could be used by SJWD and others during dry years when surface water supplies are limited.

Considering the demand reduction and supplemental supply measures that would be implemented by the SJWD, the SJWD anticipates that approximately 54,200 AFY of water supplies would be available, and such supplies would be adequate to meet and exceed water demand during single and multiple dry year events.[17]

Water Quality

Retail water provided by the SJWD is derived from Folsom Lake. Water from Folsom Lake is delivered to the SNPWTP where the water is treated and sent to Hinkle Reservoir for storage. Considering the surface source of SJWD water at Folsom Lake and the treatment conducted at the SNPWTP, the SJWD has not experienced water quality issues recently and water quality issues are not anticipated to occur in the future.[18]

Water Delivery Infrastructure

The SJWD's water distribution infrastructure within the GBCP area includes one hydropneumatics tank, three treated water storage reservoirs, eight pump stations, and approximately 200 miles of transmission and distribution mains. Water delivery infrastructure does not currently exist within either project site. Currently, the nearest water delivery infrastructure is an existing 16-inch waterline that terminates at Douglas Boulevard within Woodgrove Way.

Solid Waste

Solid waste collection services in the project area are provided by Recology Auburn Placer, under contract with Placer County. Recology provides curbside collection of mixed waste (garbage and recyclables), green waste, and some universal and household hazardous wastes by appointment. The mixed waste collected by Recology is delivered to the Western Placer Waste

[17] San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.
[18] *Ibid*.

Management Authority (WPWMA) Materials Recovery Facility (MRF), where waste is processed, recyclables are recovered, and residuals are disposed.

The WPWMA is a regional agency established in 1978 through a Joint Exercise of Powers Agreement between the County of Placer and the cities of Roseville, Rocklin, and Lincoln to acquire, own, operate, and maintain a sanitary landfill site and all related improvements.

The WPWMA designed and built a MRF to divert recyclable materials from being disposed at the landfill. The MRF also processes source separated wood waste and green waste and accepts separated recyclables, including electronics and other universal wastes (e.g. batteries and fluorescent lamps), at the recycling drop-off and buy-back center. The compost portion of the MRF has an annual processing capacity of 82,000 tons (averaged over the year and does not account for seasonal peaks). The MRF is permitted to have up to 75,000 cubic yards (approximately 37,500 tons) of compost material at the facility at any one time.

Residual waste from the MRF is transported to the Western Regional Sanitary Landfill (WRSL) co-located at the site located near SR 65, between Roseville and Lincoln, at the corner of Athens Avenue and Fiddyment Road. The WPWMA owns and oversees all operations on-site – the WRSL, MRF, compost facility, and Permanent Household Hazardous Waste Collection Facility (PHHWCF). A private firm, under contract to WPWMA, manages the day-to-day operation of the facilities. The landfill is specified as a Class II/Class III non-hazardous site. Hazardous waste from households and Conditionally Exempt Small Quantity Generators is accepted at the PHHWCF.

Recovered materials are sold throughout the world, helping to conserve natural resources. Non-recyclable materials are sent to the landfill for disposal. The current space available, together with recovery efforts by the MRF, will delay the WRSL from reaching capacity.[19]

Permit Limits and Site Constraints

The 291-acre WRSL is permitted to accept 1,900 tons per day and 624 vehicles per day; and currently receives an average of 1,077 tons per weekday.[20] The WRSL has a permitted design capacity of 36,350,000 cubic yards and, as of December 2017, has a remaining capacity of 24,468,271 cubic yards. Under current land use and development conditions, the WRSL has a permitted lifespan extending to 2058.[21]

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[19] Western Placer Waste Management Authority. *About WPWMA*. Available at: http://www.wpwma.com/about-wpwma/. Accessed on November 1, 2016.

[20] Western Placer Waste Management Authority. *Comment Letter: Lincoln Meadows Draft Environmental Impact Report*. December 11, 2017.

[21] Placer County Department of Facility Services, Environmental Engineering Division (Solid Waste). *EIR Guidance Document*. November 2017.

The MRF has a permitted processing limit of 1,750 tons per day.[22] According to the WPWMA, for the fiscal year 2016-2017, the average weekday tonnage received at the MRF was 1,191 tons.[23] The MRF expanded in 2007, increasing its processing capacity of municipal solid waste and construction and demolition debris to 2,200 tons per day.[24]

Gas and Electricity Infrastructure

Electricity and natural gas services in the GBCP area are provided by Pacific Gas & Electric (PG&E).

PG&E is one of the largest providers of electricity and natural gas throughout Placer County. PG&E is a San Francisco based, private company, publicly regulated by the California Public Utilities Commission and provides electricity and natural gas to the majority of Northern California. PG&E has ample resources to meet a wide range of projected growth; however, when the time comes, additional improvements to the facilities may be required to meet future growth demands.

Electric infrastructure currently exists to the north of both project sites: for WHII, electric infrastructure exists along the north side of the intersection of Douglas Boulevard/Seeno Avenue; and for WHI, an electric line runs north-south across Douglas Boulevard near the project's frontage. Gas infrastructure exists within Woodgrove Way and Seeno Avenue.

15.3 Regulatory Context

Many agencies regulate public services and utilities. The following discussion contains a summary review of regulatory controls pertaining to utilities and service systems, including federal, State, and local laws and ordinances.

Federal Regulations

The federal environmental laws and policies relevant to utilities and service systems are primarily related to water quality, which is addressed in Chapter 10, Hydrology and Water Quality, of this EIR.

State Regulations

The following are the State environmental laws and policies relevant to utilities and service systems.

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22 California Department of Resources Recycling and Recovery (CalRecycle). *Western Placer Waste Mgmt Authority MRF (31-AA-0001)*. Available at http://www.calrecycle.ca.gov/SWFacilities/Directory/31-AA-0001/. Accessed December 2017.

23 Western Placer Waste Management Authority. *Comment Letter: Lincoln Meadows Draft Environmental Impact Report*. December 11, 2017.

24 Placer County Department of Facility Services, Environmental Engineering Division (Solid Waste). *EIR Guidance Document*. November 2017.

California Green Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three years by the Building Standards Commission (BSC). The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code, is the most recent version of the Code. In addition to the new State-wide mandates, CALGreen encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. The most significant features of the CALGreen Code related to public services and utilities include the following:

- Mandatory reduction in indoor water use, through the use of high-efficiency toilets, faucet aerators and other fixtures; and
- Diversion of 65 percent of construction waste from landfills.

Assembly Bill 939

Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989 contains requirements affecting solid waste disposal in California. AB 939 requires that Counties prepare Integrated Waste Management Plans to implement landfill diversion goals and prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must establish a program for managing and reducing waste generated in the County to meet the 50% waste diversion mandate.

Assembly Bill 1327

Assembly Bill (AB) 1327, the Solid Waste Reuse and Recycling Access Act of 1991 requires jurisdictions to adopt ordinances requiring development projects to provide adequate storage area for collection and removal of recyclable materials. Placer County adopted such an ordinance (Municipal Code Section 8.16.080).

Assembly Bill 1881

Assembly Bill (AB) 1881, the Water Conservation in Landscaping Act of 2006 required the Department of Water Resources (DWR) to update the Model Efficient Landscape Ordinance. Furthermore, AB 1881 required local agencies to adopt the updated model ordinance or an equivalent ordinance by January 1, 2010. If local jurisdictions failed to adopt the updated model ordinance or an equivalent by January 1, 2010, the DWR's updated model ordinance would automatically be adopted by statute. Placer County adopted its Water Efficient Landscape Ordinance (WELO) in October 2017.

Senate Bill 610 and Senate Bill 221

In 2001, the California Legislature enacted two pieces of legislation relevant to environmental review focused on the water consumption associated with large development projects. Senate Bill (SB) 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code (PRC) and Section 10910 et seq. of the Water Code) requires the preparation of water supply assessments (WSAs) for large developments. Government Code section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. SB 221 is designed as a "fail-safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process.

As stated in CEQA Guidelines Section 15155, which reflects SB 610 requirements, any residential development exceeding 500 dwelling units is considered a "water-demand project" and is required to prepare a WSA. The proposed projects include 24 dwelling units and 55 units for WHI and WHII, respectively, for a combined total of 79 dwelling units, which is below the threshold established by SB 610. Thus, a WSA is not required to be prepared for the proposed projects.

Senate Bill 1016

Senate Bill (SB) 1016 of 2007 amended portions of the California Integrated Waste Management Act, allowing the California Integrated Waste Management Board (CIWMB) to use per capita disposal as an indicator in evaluating compliance with the requirements of AB 939. Jurisdictions track and report their per capita disposal rates to CalRecycle.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 – 10656). The Act requires every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, to prepare and adopt an UWMP within a year of becoming an urban water supplier and update the plan at least once every five years. The Act specifies the content that is to be included in an UWMP, and states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry-years. The Act also states that the management of urban water demands and the efficient use of water shall be actively pursued to protect both the people of the State and their water resources. The SJWD prepared a UWMP in 2015.[25]

California Integrated Waste Management Act - Assembly Bill 939

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required

[25] San Juan Water District. *2015 Urban Water Management Plan for San Juan Water District*. June 2016.

to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to $10,000-per-day fines.

Local Regulations

The following local goals and policies are applicable to the proposed projects.

Placer County General Plan

The following applicable goals and policies related to utilities and service systems are from the Placer County General Plan.

General Public Facilities and Services

Goal 4.A To ensure the timely development of public facilities and the maintenance of specified service levels for these facilities.

Policy 4.A.1 Where new development requires the construction of new public facilities, the new development shall fund its fair share of the construction. The County shall require dedication of land within newly developing areas for public facilities, where necessary.

Policy 4.A.2 The County shall ensure through the development review process that adequate public facilities and services are available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the following conditions are met:

a. The applicant can demonstrate that all necessary public facilities will be installed or adequately financed (through fees or other means);
b. The facilities improvements are consistent with applicable facility plans approved by the County or with agency plans where the County is a participant; and,
c. The facilities improvements are designed and built to the current standards of the agency providing service.

Policy 4.A.3 The County shall require that new urban development is planned and developed according to urban facility standards.

Water Supply and Delivery

Goal 4.C To ensure the availability of an adequate and safe water supply and the maintenance of high quality water in water bodies and aquifers used as sources of domestic supply.

Policy 4.C.1 The County shall require proponents of new development to demonstrate the availability of a long-term, reliable water supply. The County shall require written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy. Where the County will approve groundwater as the domestic water source, test wells, appropriate testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of suitable groundwater.

Policy 4.C.2 The County shall approve new development based on the following guidelines for water supply:

a. Urban and suburban development should rely on public water systems using surface supply.
b. Rural communities should rely on public water systems. In cases where parcels are larger than those defined as suburban and no public water system exists or can be extended to the property, individual wells may be permitted.
c. Agricultural areas should rely on public water systems where available, otherwise individual water wells are acceptable.

Policy 4.C.6 The County shall promote efficient water use and reduced water demand by:

a. Requiring water-conserving design and equipment in new construction;
b. Encouraging water-conserving landscaping and other conservation measures;
c. Encouraging retrofitting existing development with water-conserving devices; and,
d. Encouraging water-conserving agricultural irrigation practices.

Sewage Conveyance, Treatment, and Disposal

Goal 4.D The County shall require wastewater conveyance and treatment facilities that are sufficient to serve the Placer County General Plan proposed density of residential, commercial, and public/institutional uses in a way which protects the public and environment from adverse water quality or health impacts.

Policy 4.D.2 The County shall require developments outside of an existing sewer service area and needing new connections to public conveyance and treatment facilities to be annexed into the sewer service area providing service.

Policy 4.D.4 The County shall require developments needing new connections to construct wastewater conveyance facilities which are sized and located to provide sewer service based on permitted densities and applicable sewer shed area. Wastewater conveyance systems shall be designed for gravity flow. Where gravity conveyance systems are not feasible, the agency providing service may approve pumping service where a site specific engineering analysis demonstrates the long-term cost effectiveness of pumped facilities.

Policy 4.D.5 The County shall require developments needing new connections to pay their fair share of the cost for future public wastewater facilities which support development based on the Placer County General Plan. The fair share will be based on the demand for these facilities attributable to the new development.

Policy 4.D.6 The County shall promote efficient water use and reduced wastewater system demand by:

a. Requiring water-conserving design and equipment in new construction as required in California law (AB 1881);
b. Encouraging retrofitting with water-conserving devices; and
c. Designing wastewater systems to minimize inflow and infiltration.

Policy 4.D.9 The County shall promote functional consolidation of wastewater facilities.

Policy 4.D.10 The County shall require all public wastewater facilities to be designed and built to the current standards of the agency providing service.

Landfills, Transfer Stations, and Solid Waste Recycling

Goal 4.G To ensure the safe and efficient disposal or recycling of solid waste generated in Placer County.

Policy 4.G.1 The County shall require all new urban/suburban development, excluding rural development, to include provisions for solid waste collection.

Policy 4.G.2 The County shall promote maximum use of solid waste source reduction, recycling, composting, and environmentally-safe transformation of wastes.

Policy 4.G.6 The County shall ensure that landfills and transfer stations are buffered from incompatible development.

Policy 4.G.7 The County shall require that all new development complies with applicable provisions of the Placer County Integrated Waste Management Plan.

Granite Bay Community Plan

The following are the applicable goals and policies related to utilities and service systems from the GBCP.

Public/Quasi-Public Services

Goal 11.1.1.1 Require sanitary sewer facilities, both collection and treatment, which are sufficient to serve the Plan area's proposed density of residential, commercial, and public/institutional uses in a way which protects the public and environment from adverse water quality or health impacts.

Policy 11.1.1.2 Require developments needing new connections to construct sanitary sewer collection facilities for their project which are adequately sized and located to provide sewer service which support development based on the permitted densities of the Granite Bay Community Plan/Land Use Element. Sanitary sewer collection systems shall be designed for gravity flow. The agency providing service may approve pumping service where a site specific engineering analysis demonstrates the long-term cost effectiveness of pumped facilities.

Policy 11.1.1.3	Require all public sanitary sewer facilities to be designed and built to the current standards of the agency providing service.
Policy 11.1.1.4	Require developments needing new connections to pay their fair share of the cost for future public sanitary sewer facilities which support development based on the permitted densities of the Granite Bay Community Plan/Land Use Element. The fair share will be based on the demand for these facilities attributable to the new development.
Policy 11.1.1.5	Prior to acceptance of completed project improvements, require proponents of new development within a sewer service area to provide written certification from the service provider that collection and treatment services are available.
Policy 11.3.1.2	Allow development only where an adequate water supply and distribution system is available to serve such development.
Policy 11.3.1.5	Encourage the development and maintenance of the most cost-effective water treatment and delivery systems possible.
Policy 11.3.1.6	Allow development only where an adequate supply and distribution system is in place or can be installed to serve such development at the developer's cost.
Policy 11.3.1.7	Encourage water conservation whenever possible and in accordance with state law and regulations, and District Ordinances. Current State law requires a 20 percent reduction in water use from the baseline 10 year average per capital water usage. Although there is currently adequate water supply, the State law requires a reduction in the amount of water used per person. This law does not restrict new development, but new development must also meet the reduced water requirement on a per capita basis.
Policy 11.6.3.1	Local service power lines, telecommunications and other cabled services will be located underground, where feasible and desirable.

Placer County Water Efficient Landscape Ordinance

The Placer County Landscape Design Guidelines incorporate the County's Water Efficient Landscape Ordinance (WELO). The County's WELO established water efficiency requirements for developments throughout the County based on the amount of landscaped areas included in proposed projects, and whether the project involves new development or renovation type activities. Water use efficiency in the WELO is to be achieved through the use of drought tolerant plantings, and proper landscaping, as well as specific requirements for irrigation systems. The specific requirements for water use efficiency in landscaping would be confirmed during design reviews for proposed projects. Specifically, the WELO requires applications to include Landscape Packages, which would present water budgets, soil management reports, grading plans, landscape design plans, irrigation plans and other information related to the overall design of landscaping within projects.

15.4 Impacts and Mitigation Measures

The following section describes the standards of significance and methodology used to analyze and determine the proposed projects' potential impacts related to utilities and service systems. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines and the County's Initial Study Checklist, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed projects would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater delivery, collection or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new on-site sewage systems;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Require sewer service that may not be available by the area's waste water treatment provider;
- Result in significant adverse impacts related to project energy requirements; or
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs in compliance with all applicable laws.

Impacts related to storm drainage facilities are addressed in Chapter 10, Hydrology and Water Quality, of this EIR.

Issues related to the following issue areas are discussed in Chapter 16, Effects Not Found to be Significant, of this EIR, including whether the proposed project would:

- Require or result in the construction of new on-site sewage systems.

Method of Analysis

Determinations of the significance of the proposed projects' impacts were made based on the project's modifications to existing or planned utilities, and the ability of the existing utilities to accommodate the proposed projects, using the above significance criteria.

Water Supply

The 2015 UWMP prepared for SWJD and water demand estimates prepared for the proposed projects was used to determine the adequacy of existing water supplies for the proposed projects.

Wastewater System

Wastewater generation for each project has been estimated based on the number of units anticipated within each project and a per-unit demand factor of 400 gallons per day (gpd).[26] Potential impacts related to implementation of either or both of the proposed projects on wastewater conveyance were determined based on the information provided in the 2011 Technical Memorandum prepared by Brown and Caldwell for the SMD 2 and SMD 3 systems.

Solid Waste

Solid waste generation from the proposed projects was estimated and considered with respect to the anticipated capacity at the solid waste facilities that would serve the proposed projects. Sources of solid waste generation for the proposed projects include vegetation removed during site preparation, construction material waste, and operational waste from proposed residences and landscape maintenance. The solid waste analysis of this chapter is based on solid waste calculations performed using information from the U.S. EPA's report, *Estimating 2003 Building-Related Construction and Demolition Materials Amounts*,[27] as well as CalRecycle operational solid waste generation rates.

[26] Placer County. *Placer County Land Development Manual* [Section 6 - Sewerage]. 2005.
[27] U.S. Environmental Protection Agency. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts.* 2009.

Natural Gas and Electricity

The natural gas and electricity demand of the proposed projects were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 software. As discussed in further depth in Chapter 5, Air Quality, of this EIR, CalEEMod provides a standardized platform for the estimation of air quality emissions within California. To calculate air quality emissions, CalEEMod estimates the amount of natural gas and electricity that operation of a proposed project would demand. CalEEMod outputs are included as Appendix C to this EIR.

Project Impacts and Mitigation Measures

As discussed in Chapter 3, Project Description, of this EIR, although the County has elected to evaluate both the WHI and WHII projects in a single EIR, it is reasonable to consider WHI and WHII as separate projects under the independent utility test, given that each proposal has independent utility and is not necessary for the other to proceed. As such, the following discussion analyzes the potential impacts of the WHI and WHII projects separately. In addition, each impact statement includes an analysis of the combined effects of the two projects

15-1 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or require sewer service that may not be available by the area's waste water treatment provider. Based on the analysis below, the impact is *less than significant.*

As discussed above, wastewater from the project sites would be treated at the Dry Creek WWTP, which is operated by the City of Roseville.

WHI

Operation of the 24-unit WHI project would result in the generation of an ADWF of approximately 9,600 gpd of wastewater (24 units x 400 gpd/unit = 9,600 gpd), which is equivalent to approximately 0.0096 mgd. As of 2016, the Dry Creek WWTP was operating at 50 percent capacity, with a remaining capacity of 9 mgd ADWF.[28] The 0.0096 mgd of ADWF anticipated during operation of the proposed project would be well within the available capacity at the Dry Creek WWTP; therefore, the Dry Creek WWTP has adequate capacity to serve the projected demand from WHI in addition to the WWTP's existing commitments.

WHII

Operation of the 55-unit WHII project would result in the generation of an ADWF of approximately 22,400 gpd of wastewater (55 units x 400 gpd/unit = 22,400 gpd), which is equivalent to approximately 0.022 mgd. As of 2016, the Dry Creek WWTP was operating

[28] City of Roseville. *City of Roseville General Plan 2035*. August 17, 2016.

at 50 percent capacity, with a remaining capacity of 9 mgd ADWF.[29] The 0.022 mgd of ADWF anticipated during operation of the proposed project would be well within the available capacity at the Dry Creek WWTP; therefore, the Dry Creek WWTP has adequate capacity to serve the projected demand from WHII in addition to the WWTP's existing commitments.

WHI and WHII

Operation of both the WHI and WHII projects would result in the generation of an ADWF of approximately 32,000 gpd of wastewater (79 units x 400 gpd/unit = 32,000 gpd), which is equivalent to approximately 0.032 mgd. The 0.032 mgd of ADWF anticipated during operation of the proposed project would be well within the available capacity at the Dry Creek WWTP; therefore, the Dry Creek WWTP has adequate capacity to serve the projected demand from WHI and WHII in addition to the WWTP's existing commitments.

The Dry Creek WWTP discharges tertiary treated effluent to Dry Creek under an existing NPDES permit. The NPDES permit includes Waste Discharge Requirements, which include stringent effluent limitations for ammonia, aluminum, cadmium, carbon tetrachloride, cyanide, dibromochloromethane, dichlorobromomethane, iron, manganese, mercury, total chlorine residual, and zinc. Dry Creek WWTP is currently in compliance with all existing permitting, and, thus, effluent meets the RWQCB requirements within the NPDES permit. By permitting the Dry Creek WWTP for a maximum ADWF of 18 mgd, the RWQCB has determined that the Dry Creek WWTP can treat the foregoing volume of wastewater without exceeding the NPDES discharge requirements. Considering that the Dry Creek WWTP has adequate capacity to serve the ADWF of the proposed projects, either independently or when considered together, in addition to the provider's existing commitments, the proposed projects would not result in the Dry Creek WWTP exceeding permitted capacity or the RWQCB's treatment requirements. Therefore, the proposed projects would not exceed wastewater treatment requirements of the applicable RWQCB or require sewer service that may not be available by the area's wastewater treatment provider, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)
None required.

15-2 Require or result in the construction of new water or wastewater delivery, collection or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Based on the analysis below, the impact is *less than significant.*

The proposed projects include both water and wastewater infrastructure to serve the proposed residences.

[29] City of Roseville. *City of Roseville General Plan 2035*. August 17, 2016.

Water Conveyance Infrastructure

As presented in Figure 15-4 and Figure 15-5, the proposed project sites do not contain any existing water conveyance infrastructure.

Both proposed projects would include improvements to existing utility infrastructure along the project frontages to Douglas Boulevard. The water conveyance infrastructure that would be included in the WHI project only, the WHII project only and both projects are discussed below.

Water Conveyance Infrastructure WHI Only

Figure 15-4 shows that water would be conveyed to the WHI project site following the extension of the existing 16-inch water line in Douglas Boulevard. WHI would include extension of the existing 16-inch line from the current terminus of the line at the intersection of Douglas Boulevard and Woodgrove Way, approximately 250 feet east to the eastern property line of the project site. One connection would be made to the extended 16-inch water line with an eight-inch water line that would be routed from Douglas Boulevard through the proposed internal WHI streets, to each of the proposed residential units.

The existing 16-inch water main infrastructure within Douglas Boulevard would be sufficiently sized to accommodate the increased demand from WHI, and WHI would not require the construction of other new or expanded water conveyance infrastructure.

Water Conveyance Infrastructure WHII Only

Water would be conveyed to the WHII project site following the extension of the existing 16-inch water line in Douglas Boulevard. In the absence of WHI, implementation of WHII would require extension of the 16-inch water line within Douglas Boulevard from the line's existing terminus to the eastern boundary of the WHII project site, which would be a distance of approximately 1,700 feet.

As shown in Figure 15-5, from the extended 16-inch water line in Douglas Boulevard, 8- and 12-inch water lines would extend south, into the project site within the proposed private roadways. All proposed residential units would be connected to the proposed water lines.

The existing 16-inch water main infrastructure within Douglas Boulevard would be sufficiently sized to accommodate the increased demand from WHII, and WHII would not require the construction of new or expanded water conveyance infrastructure.

Figure 15-4
WHI Preliminary Utility Plan

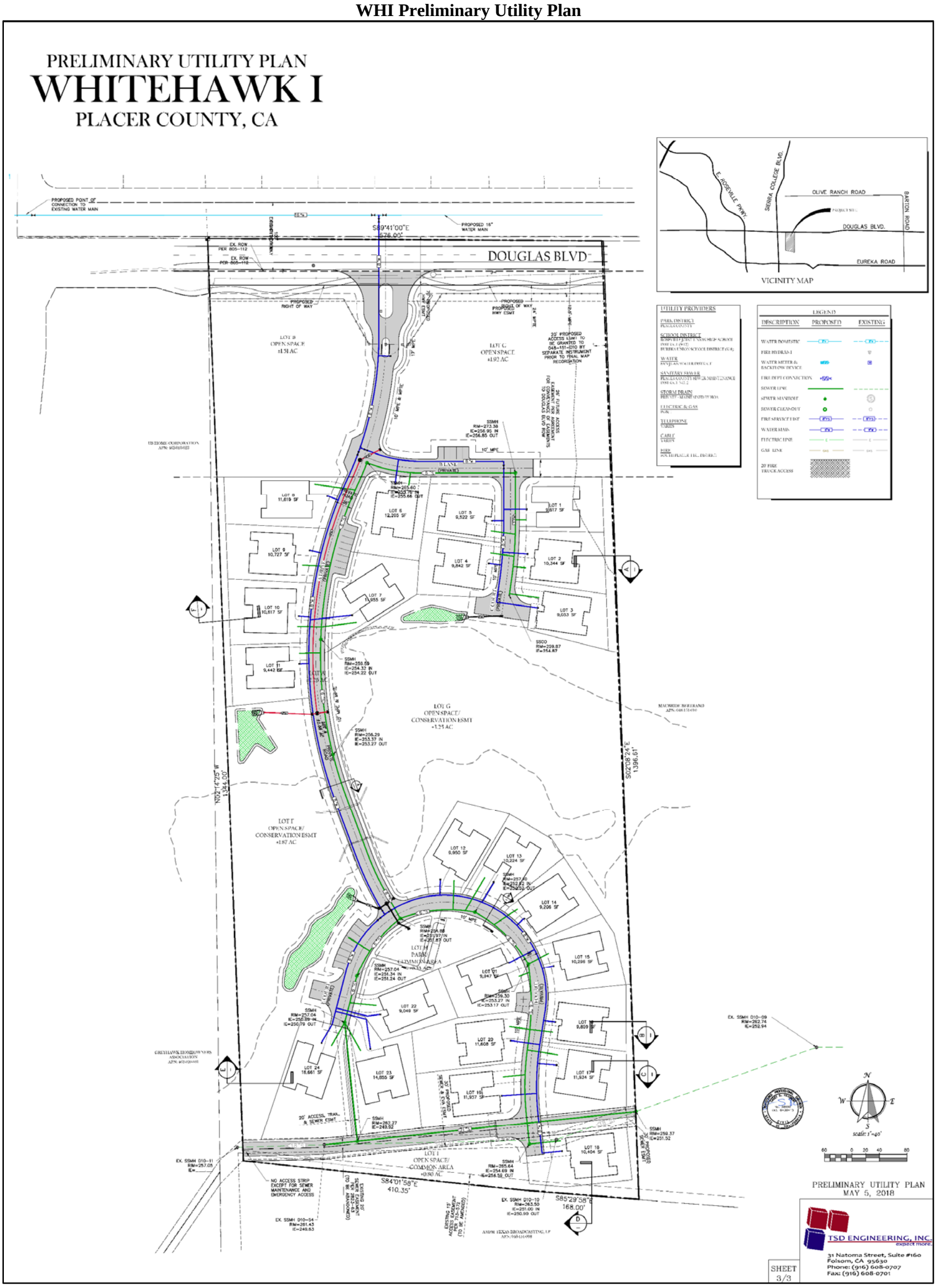
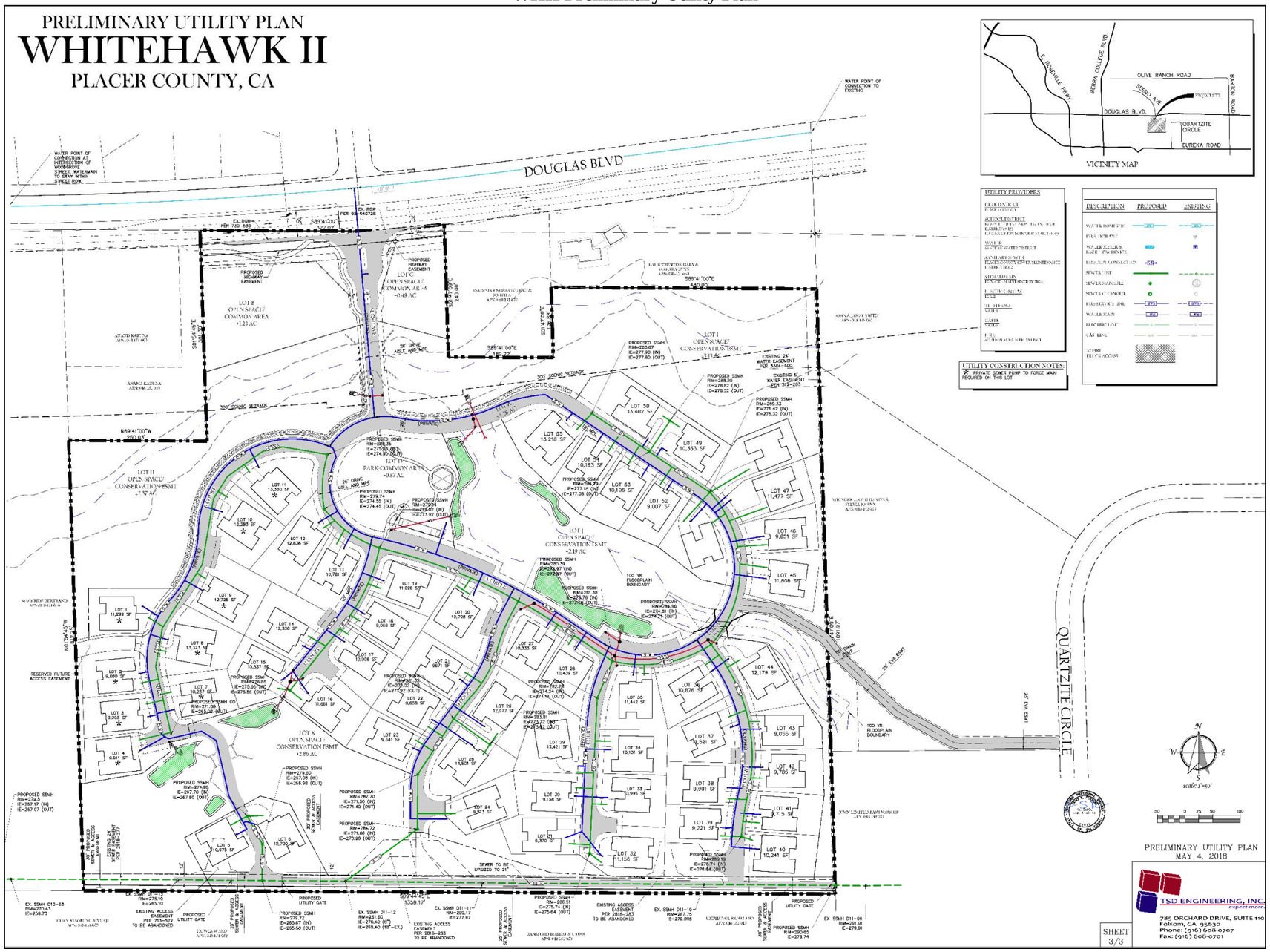


Figure 15-5
WHII Preliminary Utility Plan



Water Conveyance Infrastructure WHI and WHII

Buildout of both proposed projects would result in the extension of the existing 16-inch water main in Douglas Boulevard past the WHI site to the eastern boundary of the WHII site. It should be noted that extension of the existing 16-inch water main in Douglas Boulevard to the eastern boundary of the WHII project site would also occur should only the WHII project be implemented, as discussed above. Internal water conveyance infrastructure would be implemented as discussed above for each project independently, and as shown in Figure 15-4 and Figure 15-5.

The existing 16-inch water main infrastructure within Douglas Boulevard would be sufficiently sized to accommodate the increased demand from both projects, and the proposed projects would not require the construction of other new or expanded water conveyance infrastructure.

Should either or both proposed projects be implemented, the proposed on-site water conveyance infrastructure would be designed to meet standard residential fire flow requirements. The proposed water systems throughout the site would include residential hook-ups as well as hydrant connections, and each unit connection would provide fire flows necessary for a residential fire sprinkler system in addition to the domestic water service.

Construction of all such infrastructure required for both projects would be financed by the project applicant. While the majority of water conveyance infrastructure would be constructed on-site, the extension of the existing 16-inch water main in Douglas Boulevard, and portions of the proposed 8- and 12-inch connections to the water main would be constructed off-site. Such off-site infrastructure would be constructed within Douglas Boulevard, which was previously disturbed during construction of the Douglas Boulevard roadway. Therefore, construction of off-site water conveyance infrastructure related to implementation of either or both of the proposed projects is unlikely to result in physical environmental impacts; nonetheless, the potential for such impacts to occur is analyzed throughout this EIR.

<u>Wastewater Conveyance</u>

As presented in Figure 15-4 and Figure 15-5, both of the proposed project sites contain portions of an existing 18-inch SMD 2 wastewater trunk line (i.e., “North Trunk”) along the southern portions of each site. In addition to the existing wastewater conveyance infrastructure, the conveyance infrastructure that would be included in the WHI project only, the WHII project only and both projects are discussed below.

Wastewater Conveyance Infrastructure WHI Only

Figure 15-4 shows that wastewater would be collected from proposed residences within the WHI site in six-inch wastewater lines. The proposed six-inch wastewater lines would direct wastewater flows to the southern portion of the WHI site. Implementation of WHI

would include construction of a new 21-inch segment of wastewater line along the southern portion of the project site that would be used to bypass this portion of the existing 18-inch segment of the North Trunk within the project site, which is currently undersized to serve the project and future buildout of SMD 2. Specifically, for WHI, as shown in Figure 15-4, the existing 18-inch wastewater line would be upsized from the eastern property line westward to manhole D10-54. The proposed six-inch lines within the proposed roadways would be connected to the new 21-inch wastewater main at one point, near the southwestern corner of the project site.

Wastewater Conveyance Infrastructure WHII Only

As shown in Figure 15-5, wastewater would be collected from proposed residences within the WHII site in various wastewater lines. Proposed wastewater lines include four-inch force lines, six-inch gravity lines, and eight-inch gravity lines. The internal wastewater lines would be directed to the southern portion of the WHII site. Similar to the WHI project, the existing 18-inch North Trunk sewer line within the southern portion of the project site would be upsized to 21 inches. Specifically, for WHII, the existing 18-inch wastewater line would be upsized from manhole D11-11, eastward, past the eastern boundary of the WHII project site to manhole D11-09. The proposed wastewater lines within the WHII site would be connected to the North Trunk main at two points within the WHII project site.

The required upsizing of the existing 18-inch wastewater line from the eastern boundary of the WHII site to the manhole D11-09 would require limited off-site construction work. The existing 18-inch wastewater line is located within a sewer line easement area, which has been disturbed by previous placement of the existing 18-inch line and is comprised of a gravel access road. Thus, construction work associated with the sewer line upsizing would occur in an area that has been previously disturbed. Nevertheless, the potential impacts related to off-site infrastructure improvements are addressed throughout this EIR. For example, see Chapter 7 for potential impacts related to off-site biological resources and Chapter 8 for potential impacts related to off-site cultural resources.

Wastewater Conveyance Infrastructure WHI and WHII

Buildout of both WHI and WHII would result in construction of wastewater infrastructure as shown in Figure 15-4 and Figure 15-5. As discussed above, such infrastructure would include wastewater conveyance lines within each project site, as well as upsizing necessary portions of the existing 18-inch North Trunk sewer conveyance line within WHI and WHII, and from the eastern boundary of the WHII project site to manhole D11-09.

The aforementioned North Trunk sewer improvements that would be completed as part of the WHI and WHII projects are consistent with the pipe upsize requirements identified in the service requirement letters received for the proposed projects from the Placer County Facility Services Department in 2015 and 2016. As noted in the 2016 service requirement letter for WHII:

> An existing sewer pipeline runs through the existing parcels. Upsize the existing sewer pipes between District manholes (MH) MH D11-09 to MH D11-10 and MH D11-10 to MH D11-11 to accommodate future conditions according to previous project studies. The Project shall construct the complete sewer segment between the existing manholes, and is eligible for reimbursement of the costs to construct the portions the sewer pipe that is outside of the project parcel limits. The Project is eligible for a Reimbursement Agreement to repay the project for the remaining costs, if any, after the fair share fee credits noted in Condition 10 below is applied toward the construction of the offsite portion of the sewer improvement…
>
> Projects with growth beyond the original assessment District (intensifications) shall pay a fair share fee for future improvements of the existing sewer trunk lines to provide necessary capacity at build-out. Prior to or at sewer permit issuance, the estimated fair share fee of $2,289.00 per EDU is required. The sewer connection fees may increase to include the fair share fee pending Placer County Board of Supervisors approval.[30]

In both the 2015 and 2016 service requirement letters, the conditions state that the projects shall both upsize certain sections of the sewer trunk that run through each of the WHI and WHII projects, as well as pay fair share contributions for each project for any future offsite improvements to provide necessary capacity at build-out. The County has considered the anticipated improvements necessary to accommodate planned buildout of the SMD 2.

The "previous project studies" refer to an analysis done by RMC on the project in 2006 which assumed more intensive uses (assisted living facilities) and confirmed there was adequate downstream line capacity at that time. Since that time, Brown & Caldwell completed an analysis for the County (2011) which analyzed various scenarios for adding flows following the abandonment of the SMD 3 treatment facility located in northeast Granite Bay.

By way of background, Placer County has established several SMDs, shown in Figure 15-1 above. The Brown & Caldwell analysis evaluated SMD 2 and 3. These SMDs are relevant to the WHI and WHII projects because the sewer trunk line downstream of the project sites receives wastewater from these two SMDs. SMD 3 generally covers the Horseshoe Bar area and SMD 2 generally covers Granite Bay. It is important to note that the 2011 Brown & Caldwell study evaluated the pipe capacity effects of routing wastewater from the SMD 3 system to the SMD 2 system by way of a new sewer pipeline. This project is known as the SMD 3 Regional Sewer Project and has subsequently been completed. Placer County has constructed a sewer pipeline and pump station to convey wastewater from SMD 3 to the existing SMD 2 sewer collection

[30] Placer County. *Requirements for Service for Whitehawk II (Formerly Known as Granite Bay 33), PLN15-00301, 55 Lot Subdivision, (APN 048-151-061-000).* October 31, 2016.

system, located in Granite Bay, for treatment at the Dry Creek WWTP. The SMD 3 WWTP has accordingly been decommissioned.

The 2011 Brown and Caldwell Technical Memorandum describes the hydraulic model analysis of the SMD 2 trunk sewers under various land use development and flow projection scenarios. The purpose of the analysis was to simulate the effects of PWWF on the existing system, determine which land use development scenarios may cause capacity deficiencies in the SMD 2 trunk sewer system, and identify where those problems would be expected to occur. Once capacity deficiencies were identified, the model was used to identify recommendations to resolve them. Recommendations discussed include upsizing specific pipe reaches and changing the future SMD 3-to-SMD 2 connection point.

The hydraulic modeling analysis was performed for seven distinct flow projection scenarios as directed by Placer County. The scenarios were developed to simulate the impact of current (2010) and build-out peak wet weather flows (PWWF) on the existing trunk sewer system. Flows from SMD 2-only and from SMD 2 and SMD 3 were modeled for the Current (2010), Ultimate Build-out and Interim Scenarios to show the impact that SMD 3 development would have above and beyond the impact of projected SMD 2 development.

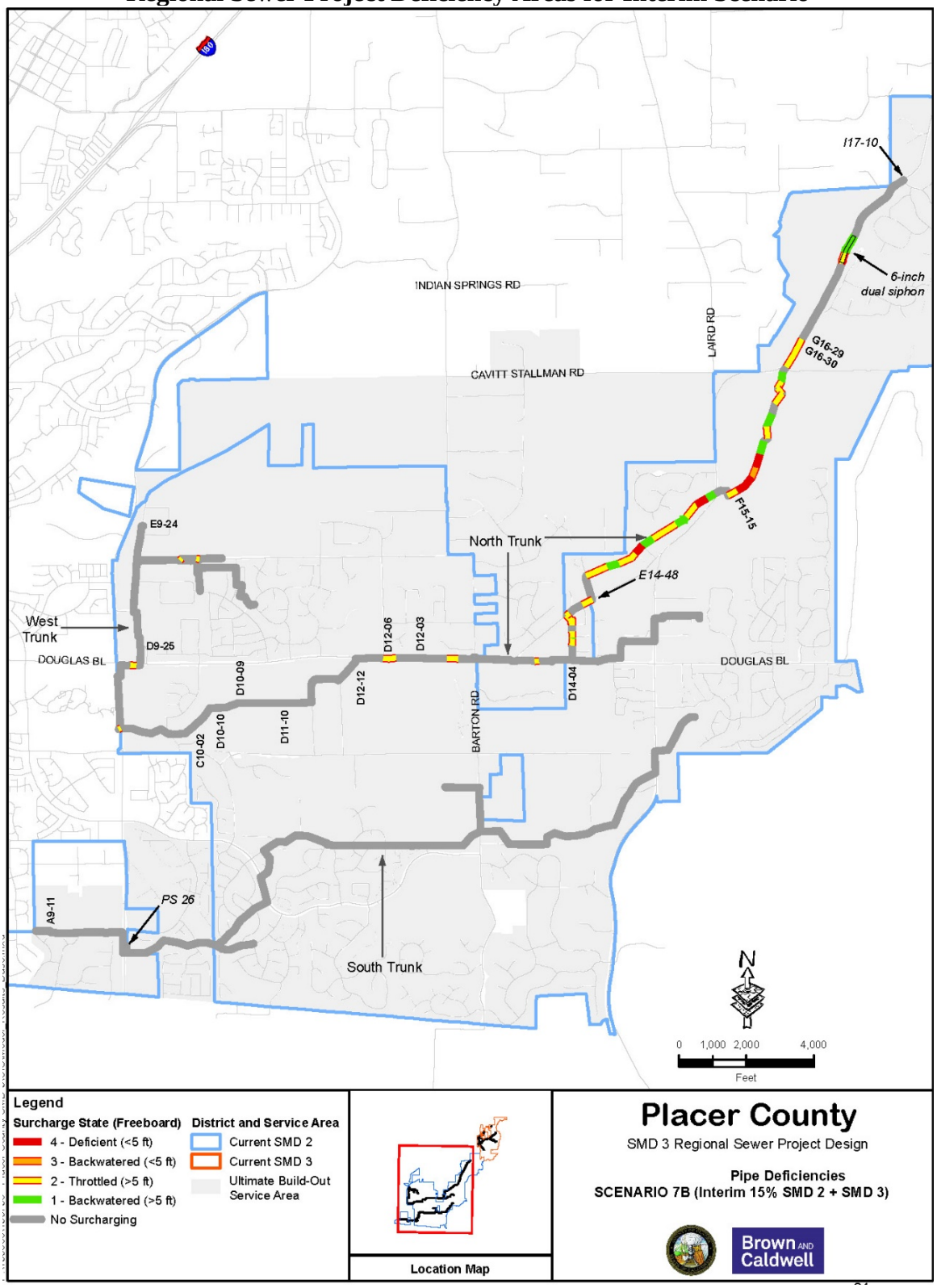
The capacity analysis was performed for the three major trunk sewer network components: the North Trunk; the South Trunk; and the West Trunk (see Figure 15-2). The 18-inch North Trunk is located on the south side of both WH project sites. Wastewater from each of the proposed projects would flow to the North Trunk.

As shown in Figure 15-6 below (Figure 3-14 in the Brown and Caldwell Technical Memorandum, identified as Scenario 7B), at an “interim condition” of 15 percent growth (15 percent of projected buildout equivalent dwelling units [EDUs]]]]]]), including SMD 3 flows, all projected line deficiencies were upstream of the WHI and II projects. Upsizing of the existing collection system downstream of the project is not required for the projected interim condition.

Growth in both SMD 2 and SMD 3 was simulated by gradually increasing the percentage of connected parcels expected in future development, resulting in proportionate increases in the PWWF. The percentage increase in connected area was applied across the sewersheds for both SMD 2 and SMD 3 until deficiencies were identified in the SMD 2 trunk sewers. When between 10 and 15 percent of the connections expected between current and buildout scenarios for both the SMD 2 and SMD 3 sewersheds had occurred, additional deficiencies were detected upstream of the WHI and WHII projects. The 15 percent scenario was defined as the “interim scenario.”

It should be noted that, in addition to pipe deficiencies shown in “red” in Figure 15-6 below, other pipe conditions are identified, which are not considered “deficiencies”, requiring improvement upgrades.

Figure 15-6
Regional Sewer Project Deficiency Areas for Interim Scenario



The 2010 EDU count used in the Brown and Caldwell Technical Memorandum was 8,210 EDUs. The 2010 EDU count includes 6,868 EDUs in SMD 2, 609 EDUs in SMD 3, 218 EDUs in SPMUD, 513 EDUs in the City of Roseville, and 2 EDUs in the SMD 3 urban growth area (UGA). The projected Buildout EDU count was determined to be 12,964 or an increase of 4,754 EDUs. The interim EDU count is projected at 8,924 or 713 additional EDUs over the 2010 count. Of the increase of 4,754 EDUs, 3,024 EDUs are projected within SMD 2 (64 percent) and 799 in SMD 3 (16.8 percent).

According to County building permit records through April 2018, since 2010, 222 new primary and secondary dwelling units have been completed and five units have been demolished for a net of 217 new units in the GBCP area. In addition, 28 units are currently under construction, including primary and secondary units and one demolition permit issued but not finalized, for a total of 27 net new units upcoming. Since 2010, one congregate care home with 86 beds has been completed. Environmental Engineering calculates each bed as the equivalent of 0.286 dwelling units, for 25 EDUs within the completed congregate care home. In total, 269 new EDU's have been added or are under construction in the Community Plan area. Based on the EDU count from the 2010 study, the percentage increase number of EDUs based upon building permit data has been 3.28 percent.

A number of subdivisions approved since 2010 have come online and have vacant lots within them. There are also new residential projects and congregate care facilities that have been approved but not started construction. In addition, there are projects such as Whitehawk I and II that have been proposed but not approved. Such approved lot or subdivisions and proposed future projects include 456 housing units and 340 congregate care beds (equal to 97 EDUs), for a total of 553 new EDUs. The completed or under construction, approved/unbuilt, proposed EDU count is projected to be 9,032, an increase of 10.0 percent (822 EDUs)[31] since 2010.

Comparing to the 15 percent Interim Growth scenario of 8,924 EDUs used in the Brown and Caldwell Technical Memorandum, the percentage of buildout EDUs (4,754 EDUs) completed since 2010 (269 EDUs) is 5.65 percent. With completed since 2010, approved/unbuilt, and proposed total units of 822 units, the percentage in Interim Buildout EDUs is 17.3 percent (822/4,754 EDUs). This is over the projected interim condition of 15 percent of future new EDUs used in the model (4,754) (i.e., 0.15*4,754 = 713 EDUs) in the Interim scenario. See Table 15-3 and Table 15-4 for a summary.

The above analysis was completed to demonstrate the relative growth rate within the GBCP area since 2010 and projected into the future based upon approved and known projects. The analysis presented above shows the existing sewer system can accommodate both the proposed WHI and WHII projects in addition to the proposed ("interim") developments.

[31] 822 = 553 units approved or proposed since 2010 + 269 units completed or under construction.

Table 15-3 Interim Growth Scenario	
	EDUs
2010 EDU Count	8,210
Buildout EDU Count	12,964
Difference	4,754
Interim EDU Increase (15 percent of 4,754)	**713**

Table 15-4 Completed and Proposed Growth Within the GBCP Area Since 2010		
	EDUs	**Percent of Build-Out of EDUs**
Completed or Underway since 2010 in Community Plan Area	269	5.65%
Vacant Lots, Unbuilt and Proposed Subdivisions/Projects	822	17.3%

The analysis takes a conservative approach and assumes all of the known projects would be approved and built, and all of the constructed homes since 2010 connect to sewer. The analysis does not determine which trunk lines the individual new homes constructed or pending/proposed projects connect to. It should be noted that the building permit data did not include commercial construction and the EDUs associated with such development, though there has been limited new commercial construction in Granite Bay since 2010. It should further be noted that there are areas within SMD 3 that are outside the GBCP area yet connect to sewer that flows through SMD 2. However, there has been negligible new construction in such areas of SMD 3.

The SPWA is a joint powers authority formed to fund regional wastewater and recycled water facilities in southwestern Placer County for three partner agencies: the City of Roseville, SPMUD, and portions of Placer County. The foregoing partner agencies entered into a series of Funding and Operations Agreements to finance regional wastewater and recycled water facilities in southwestern Placer County. Currently, the regional facilities funded by the SPWA include recycled water facilities, trunk sewer lines, the City of Roseville Dry Creek WWTP, and the Pleasant Grove WWTP. In the event the regional facilities near capacity, the agreements contain mechanisms, terms, and conditions that provide for the expansion of the facilities to serve the needs of the parties.

In order to implement the goals and objectives of the County's General Plan and GBCP, and to mitigate the impact of additional sewage flows caused by new development to the sewerage collection and treatment system, the expansion of certain sanitary sewer facilities is necessary for the planned buildout of the Community Plan. The WH projects would be required to upsize portions of the North Trunk line on the project sites to accommodate future buildout conditions of the sewer shed. Such upsizing work is required by the Requirement of Service Letters and is based upon the analysis contained in the 2011 Brown and Caldwell Technical Memorandum.

Connection fees for wastewater are required pursuant to Section 13.12.010 of the County Code to provide for the impact of the connection on the existing capacity of the sewerage system.

Conclusion

The proposed projects would include provision of adequate water infrastructure within the project site as well as extension of the existing water main within Douglas Boulevard as needed for the projects independently or combined. Furthermore, adequate on-site wastewater infrastructure would be provided, and the existing portions of the North Trunk present within the project sites would be upsized as required. Potential environmental impacts related to the construction of on-site and off-site water and wastewater infrastructure is analyzed throughout this EIR. Although the projects independently and together would not contribute to or cause deficiencies within any of the wastewater conveyance infrastructure in SMD 2, both projects would be subject to "fair share fees" for regional improvements to wastewater conveyance infrastructure. Considering the inclusion of adequate on-site water and wastewater conveyance infrastructure, as well as the upsizing of the on-site portions of the North Trunk and payment of all required "fair share fees," the proposed projects would be considered to result in a ***less-than-significant*** impact related to the construction of new water or wastewater infrastructure.

Mitigation Measure(s)
None required.

15-3 Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed. Based on the analysis below, the impact is *less-than-significant*.

The proposed projects would include development of a total of 79 residential units over two sites. The implementation of either or both of the proposed projects would result in increased water demand from the proposed residential units, park areas, and landscaped areas. Potential water demands resulting from the proposed projects are discussed separately, and together, below.

WHI

Operation of the 24-unit WHI project is anticipated to include a maximum daily usage of 27,600 gpd for domestic purposes, 16,439 gpd for irrigation of parks and landscaped areas within the project site, as well as a maximum demand of 1,500 gallons per minute per dwelling unit for fire protection purposes in the case of fire emergencies. Considering the daily demand estimates above, the proposed project would be anticipated to demand approximately 30.92 AFY for domestic purposes and 18.41 AFY for irrigation purposes, for a total non-emergency water demand of 49.33 AFY.

On July 30, 2015, the SJWD provided Placer County with a letter of water availability, informing the County that SJWD maintained adequate water supplies to serve the WHI project.[32] The letter of water availability included conditions to be met by the project applicant prior to initiation of water service and noted that water would be reserved by SJWD for the proposed WHI project.[33] Considering the above, and the water supply surpluses shown in Table 15-2, adequate water supply exists to serve the WHI project.

WHII

Operation of the 55-unit WHII project is anticipated to include a maximum daily usage of 64,400 gpd for domestic purposes, 10,352 gpd for irrigation of parks and landscaped areas within the project site, and a maximum demand of 1,500 gallons per minute per dwelling unit for fire protection purposes in the case of fire emergencies. Considering the daily demand estimates above, the proposed project would be anticipated to demand approximately 72.14 AFY for domestic purposes and 11.59 AFY for irrigation purposes, for a total non-emergency water demand of 83.73 AFY.

On July 30, 2015, the SJWD provided Placer County with a letter of water availability, informing the County that SJWD maintained adequate water supplies to serve the WHII project.[34] The letter of water availability included conditions to be met by the project applicant prior to initiation of water service and noted that water would be reserved by SJWD for the proposed WHII project.[35] Considering the above, and the water supply surpluses shown in Table 15-2, adequate water supply exists to serve the WHII project.

WHI and WHII

Implementation of both WHI and WHII would result in a maximum annual water demand of 133.06 AFY (49.33 AFY + 83.73 AFY = 133.06 AFY for non-emergency purposes. Considering that SJWD has provided letters of water availability for both projects and reserved water for both projects, and Table 15-2 surplus water supplies exist to serve the proposed projects should both projects be implemented.

Conclusion

Based on the above analysis, expansion of existing or construction of new water facilities, or new entitlements to serve the proposed projects would not be necessary. Therefore, the proposed project would result in a ***less-than-significant*** impact related to water supply and conveyance facilities.

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32 San Juan Water District. *Letter of Water Availability for the "Whitehawk I" Development Project, Granite Bay (APN 048-151-001-000: PLN15-00025)*. July 30, 2015.

33 *Ibid.*

34 *Ibid.*

35 *Ibid.*

Mitigation Measure(s)
None required.

15-4 Result in significant adverse impacts related to project energy requirements. Based on the analysis below, the impact is *less than significant*.

WHI and WHII

Development of the proposed projects would increase demand for electricity and natural gas services in order to serve the proposed residences. It should be noted that a discussion of energy conservation is included in Chapter 17, Cumulative Impacts and Other CEQA Sections, within this EIR.

Energy consumption for the proposed projects was estimated separately and together using CalEEMod. The results of the electricity and natural gas energy consumption estimations are presented in Table 15-5 below.

Table 15-5
Estimated Annual Electricity and Natural Gas Consumption

	Electricity (kWh/yr)	Natural Gas (kBTU/yr)
WHI	202,651	620,033
WHII	464,408	1,420,910
WHI & WHII	633,706	2,040,940

Source: CalEEMod April 2018 (Appendix C).

It should be noted that the 2019 Building Energy Efficiency Standards that will take effect on January 1, 2020 would introduce a requirement that certain residential developments, including some single-family and low-rise residential developments, include on-site solar energy systems capable of producing 100 percent of the electricity demanded by the residences. Certain residential developments, including developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement; however, such developments would continue to be subject to all other applicable portions of the 2019 Building Energy Efficiency Standards. The 2019 Building Energy Efficiency Standards will also encourage demand responsive technologies, including battery storage and heat pump water heaters, and improve thermal envelopes of new buildings through high performance attics, walls, and windows to improve energy savings.[36] Considering the existence of tree canopy within both project sites, the extent to which new residences within the project sites may be exempted from on-site solar energy requirements is uncertain. Therefore, to provide a conservative analysis of potential energy demands from the proposed projects, energy demands presented in Table 15-5 include the

[36] California Energy Commission. *2019 Building Energy Efficiency Standards, Frequently Asked Questions.* March 2018.

assumption that only five percent of total energy demands would be met through on-site solar energy systems.

According to the California Energy Consumption Data Management System, in 2016, Placer County reported total electricity consumption for residential uses of 1,4022.46 GWh.[37] Therefore, the proposed projects, when considered together, would result in a 0.005 percent annual increase in the current electricity consumption for Placer County. It should be noted that while both projects combined would result in an 0.005 percent annual increase in electricity consumption, WHI would represent an 0.001 percent increase, and WHII would represent an 0.003 percent increase. Therefore, whether considered separately or together, the proposed projects would result in minor increases in current electricity demand.

In addition, according to the CalEEMod results for the proposed projects, the WHI project would be expected to consume approximately 6,201.8 therms per year of natural gas, while the WHII would be expected to consume approximately 14,212.5 therms, and the combined projects would consume approximately 20,414.3 therms. According to the California Energy Consumption Data Management System, in 2016, Placer County reported total gas consumption for residential uses of 57.08 million therms.[38] Therefore, the proposed projects would result in a minor 0.04 percent increase in the current gas consumption for Placer County. If considered independently, WHI would represent an 0.01 percent increase in natural gas consumption, while WHII would represent a 0.02 percent increase in natural gas consumption, both of which would be considered minor increases.

The project applicant would be responsible for funding the installation of necessary on-site gas and electricity infrastructure to serve the projects. As discussed in the Existing Environmental Setting section above, electric infrastructure currently exists within Douglas Boulevard. The WHI project would include installation of a single connection point to such infrastructure, while the WHII project would include one or two connections to the existing infrastructure within Douglas Boulevard. Natural gas infrastructure would be extended from Woodgrove Way to provide service to the WHI project site, while the WHII project would be served by a proposed natural gas tie-in at Seeno Avenue.

The proposed projects, considered separately or in combination, would represent a minor increase in gas and electricity consumption within the County, and the increase in demand resulting from implementation of the proposed projects would have a ***less-than-significant*** impact to gas and electricity facilities.

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37 California Energy Consumption Data Management System. *Electricity Consumption by County*. Available at: http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed March 2018.

38 California Energy Consumption Data Management System. *Gas Consumption by County*. Available at: http://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed March 2018.

Mitigation Measure(s)
None required.

15-5 Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs in compliance with all applicable laws. Based on the analysis below, the impact is *less than significant*.

Most solid waste collected in unincorporated Placer County is delivered to the WPWMA MRF where waste is processed, recyclables are recovered, and residuals are disposed. The proposed projects would generate solid waste associated with construction activities as well as from future residents of the proposed developments. Construction debris would be disposed of in accordance with applicable federal, State, and local regulations and standards. Solid waste collection services would be provided by Recology Auburn Placer and the WRSL and MRF.

As described above, the 320-acre WRSL has a remaining capacity of 24,468,271 cubic yards,[39] a maximum daily throughput of 1,900 tons, and a permitted lifespan extending to 2058.[40] The MRF has a permitted processing limit of 2,200 tons per day and 1,014 vehicles per day. The average weekday tonnage received at the MRF for 2016/2017 was 1,191 tons, which is 1,009 tons per day less than the permitted amount.[41] Considering the remaining daily capacity at the MRF is 1,009 tons, the MRF has a remaining annual capacity of at least 368,285 tons.

The construction activity of the projects would generate debris, which could create a short-term impact on solid waste disposal, while the future residents of the properties would generate residential wastes over the long-term life of the projects. To estimate the solid waste generated during building construction, the U.S. EPA's report, *Estimating 2003 Building-Related Construction and Demolition Materials Amounts*, was used for each project independently. Per the U.S. EPA's report, residential construction activities generate an average of 4.39 lbs/sf of waste.[42]

WHI

Construction Waste Generation

Proposed residences within both projects are anticipated to be sized between 2,760 to 3,246 square feet (sf). To provide a conservative analysis, the average unit size was

[39] Western Placer Waste Management Authority. *Comment Letter: Lincoln Meadows Draft Environmental Impact Report*. December 11, 2017.
[40] Western Placer Waste Management Authority. *About WPWMA*. Available at http://www.wpwma.com/about-wpwma/. Accessed March 2017.
[41] Placer County Department of Facility Services, Environmental Engineering Division (Solid Waste). *EIR Guidance Document*. July 2014
[42] U.S. Environmental Protection Agency. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts.* 2009.

assumed to be 3,246 sf. Based on the assumed average unit size, buildout of 24 units within WHI would include construction of 77,904 sf of building space, construction of which would result in the generation of approximately 341,999 lbs (171 tons) of construction waste (77,904 sf x 4.39 lbs waste/sf = 341,999 lbs).

The construction debris estimate presented above represents a conservative analysis of the maximum potential waste production from the construction process. The CALGreen Code requires at least 65 percent diversion of construction and demolition waste for projects permitted after January 1, 2017. As such, a minimum of 111 tons would be diverted away from landfill disposal during construction of WHI. Considering the applicable CALGreen Code requirements, buildout of WHI would result in the generation of approximately 60 tons of construction waste. Construction waste generation represents a short-term increase in waste generation. The WRSL is permitted to accept 1,900 tons/day or 693,500 tons per year. Therefore, waste from construction associated with the WHI project would equal approximately 0.008 percent of the WRSL's total annual permitted capacity. A contribution of a maximum of 0.008 percent of the WRSL's total annual permitted capacity would not be considered a substantial amount of waste, and the WRSL has adequate capacity to accept such waste.

Operational Waste Generation

During operation of the project, the future residents would produce solid waste that would be collected by Recology and transferred to the WRSL. Operational solid waste generation from the proposed project has been estimated based on an average waste generation rates for single-family residential development of 10.2 pounds per unit per day.[43] As such, WHI, with 24 proposed units would produce 244.8 lbs of waste per day. A total of 244.8 lbs per day would equate to approximately 45 tons per year. The total waste production of 45 tons per year would represent approximately 0.006 percent of the WRSL's daily permitted capacity. Therefore, the project would not be considered to contribute significant amounts of waste to the WRSL, and the WRSL has sufficient capacity to handle the increase in waste generation resulting from the project.

<u>WHII</u>

Construction Waste Generation

Additionally, buildout of 55 units within WHII would include construction of 178,530 sf of building space, construction of which would result in the generation of approximately 783,747 lbs (392 tons) of construction waste (178,530 sf x 4.39 lbs waste/sf = 783,747). A minimum of 254 tons would be diverted away from landfill disposal during construction of WHII. Considering the applicable CALGreen Code requirements, WHII would result in the generation of approximately 138 tons of construction waste.

[43] California Department of Resources Recycling and Recovery. *Estimated Solid Waste Generation Rates*. Available at: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed March 2018.

The WRSL is permitted to accept 1,900 tons/day or 693,500 tons per year. Therefore, waste from construction associated with the WHII project would equal approximately 0.02 percent of the WRSL's total annual permitted capacity. A contribution of a maximum of 0.02 percent of the WRSL's total annual permitted capacity would not be considered a substantial amount of waste, and the WRSL has adequate capacity to accept such waste.

Operational Waste Generation

WHII would produce approximately 561 lbs of waste per day. A total of 561 lbs per day would equate to approximately 102 tons per year. The total waste production of 102 tons per year would represent approximately 0.015 percent of the WRSL's daily permitted capacity. Therefore, the project would not be considered to contribute significant amounts of waste to the WRSL, and the WRSL has sufficient capacity to handle the increase in waste generation resulting from the project.

WHI and WHII

Construction Waste Generation

Considered together, implementation of the proposed projects would generate an estimated 563 tons of construction waste. A minimum of 365 tons would be diverted away from landfill disposal during construction of WHI and WHII. Considering the applicable CALGreen Code requirements, the projects combined would produce approximately 198 tons of construction waste.

The WRSL is permitted to accept 1,900 tons/day or 693,500 tons per year. Therefore, waste from construction associated with both projects would equal approximately 0.028 percent of the WRSL's total annual permitted capacity. A contribution of a maximum of 0.028 percent of the WRSL's total annual permitted capacity would not be considered a substantial amount of waste, and the WRSL has adequate capacity to accept such waste.

Operational Waste Generation

Implementation of both projects would result in a total potential waste production of 805.8 lbs per day. A total of 805.8 lbs per day between both projects would equate to 294,117 lbs per year (147.1 tons per year). The combined total waste production of 147.1 tons per year would represent approximately 0.02 percent of the WRSL's daily permitted capacity.

Conclusion

Thus, solid waste generated from the construction and operation of the proposed projects would not exceed the permitted capacity of the WRSL and MRF; as a result, the proposed projects would be served by a landfill with adequate capacity and a ***less-than-significant*** impact would result.

Mitigation Measure(s)
None required.