
IV. ENVIRONMENTAL IMPACT ANALYSIS

P. UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

This section addresses the potential utilities and service systems impacts with respect to the proposed project and includes an evaluation of the existing services provided to the project site, future needs, and the potential impacts the proposed project would have related to wastewater, water supply, stormwater, waste disposal, and energy.

METHODOLOGY

Potential project impacts on wastewater, water supply, stormwater, waste disposal, and energy systems were evaluated based on the adequacy of existing and planned infrastructure and the capacity to meet additional demand for these services resulting from the proposed project. The following factors were taken into consideration for the impact analysis: (1) whether the proposed project would require construction of new facilities or expansion of existing facilities; (2) whether the proposed project would require construction of new or expansion of existing stormwater drainage facilities; (3) whether the proposed project would require new or expanded entitlements for water supply; (4) whether the proposed project would result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the project; (5) whether the proposed project would be served by a landfill with sufficient capacity to serve the project; or (6) whether the proposed project would result in the unnecessary, wasteful, or inefficient use of energy. The responsible agencies were contacted regarding potential impacts on their facilities. In addition, various utilities and service systems policies and guidelines as defined by the City of Chico ("City") were also reviewed and considered during the project impact analysis.

ENVIRONMENTAL SETTING

Wastewater

Wastewater treatment for the City is provided by the City of Chico Water Pollution Control Plant ("WPCP"), located approximately 4.0 miles southwest of the city in the western portion of Butte County. Currently, WPCP has a 12 million gallon per day ("mgd") capacity with plans to expand to 15 mgd in the future. According to the General Plan EIR, as of 2006, the average daily dry weather flow is approximately 7.2 mgd. Table 4.12.5-3 of the General Plan EIR described the project wastewater flows through the year 2025, projecting 11.8 mgd for the year 2015, 13.5 mgd for the year 2020, and 15.2 mgd for the year 2025. The WPCP treats wastewater flows to a "secondary" level, making it suitable for the irrigation pasture land, food crops in which the edible portion does not come in contact with the water, and areas of restricted public access.

The General Plan EIR acknowledges that additional wastewater treatment and infrastructure capacity improvements would be needed to serve future development.

Stormwater

Storm drainage management within the City is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. As the project site is currently undeveloped, storm drainage and runoff in the area is managed by unpaved shoulders, roadside swales, and naturally occurring drainages. The storm drainage system in the surrounding developed area consists of primarily drop inlets located along streets. Water in the system is transported to outfall locations located along the major creeks including Sycamore, Mud, Comanche, Big Chico, and Little Chico Creeks and Lindo Channel.

Water Supply

Water service is provided to the area surrounding the project site by the Chico District of the California Water Service Company ("Cal Water"). Determining the actual supply available to Cal Water in any given year is complicated by several factors. There has not been a comprehensive hydrogeologic investigation of the basin to define its safe yield, nor has there been a legal adjudication of groundwater rights for basin pumpers. This is partly due to the relative abundance of groundwater resources in this region of the Sacramento Valley. Although there has been a general decline on groundwater levels over the long term, this decline has not been significant enough to warrant immediate concern. The aquifers beneath the Chico-Hamilton City District contain large volumes of stored groundwater, and groundwater levels have recovered quickly after past drought events.

Because of the difficulty in defining an exact supply quantity available to the Chico District, the theoretical supply could be considered the amount that Cal Water has the ability to pump. The design capacity of all the active wells is currently 90,288 acre-feet/year. A more conservative estimate may be 80 percent of this capacity, which is 72,230 acre-feet/year. However, this value greatly exceeds the projected water usage, and it may be unrealistic to characterize the available supply. Cal Water recognizes the need for responsible management of groundwater resources and is committed to implementing conservation programs to minimize its pumping in the basin, and will remain supportive of the management efforts of Butte and Glenn Counties. Cal Water only pumps enough water to meet the needs of its customers. The projected water supply source and volume for the City is summarized in Table IV.P-1.

Table IV.P-1. Water Supply Projections

Water Source	Acre-Feet/Year					
	2016	2020	2025	2030	2035	2040
Groundwater	31,978	29,397	32,162	33,981	35,916	37,974

Source: City of Chico General Plan DEIR

Waste Disposal

Residential and commercial recycling and garbage collection, debris box service, and compactor service for residents and businesses within the City of Chico are provided by two companies, Recology Butte Colusa Counties and North Valley Waste Management (“NVWM”). The majority of solid waste generated in the City of Chico is disposed of at the Neal Road Sanitary Landfill, which is owned by Butte County and operated by the Butte County Public Works Department.¹ According to the Draft EIR for the 2030 Chico General Plan, the Neal Landfill has a remaining capacity of 85.9% and the landfill is expected to operate until 2033 accommodating a 2.5% to 3.5% annual increase in waste due to anticipated growth in Chico and Butte County.

Energy

Pacifica Gas & Electric (“PG&E”) is the primary electricity and natural gas provider to the northern and central parts of California including the City of Chico. PG&E, which is regulated by the California Public Utilities Commission, provides electricity to all or part of the 47 counties in California, including Butte County. PG&E charges connection and user fees for all new development, and sliding use-based rates for electrical and natural gas service. In 2014, PG&E obtained 35.8 percent of electricity from its own generation sources and the remaining 64.2 percent from outside sources. PG&E-owned generating facilities include nuclear, natural gas, and hydroelectric, with a net generating capacity of more than 7,684 megawatts. Outside suppliers to PG&E include California Department of Water Resources, irrigation districts, renewable energy suppliers, and other fossil fuel-fired suppliers. PG&E operates approximately 141,700 circuit miles of transmission and distribution lines. PG&E is interconnected with electric power systems in the western Electricity Coordinating Council, which includes 14 western states; Alberta and British Columbia, Canada; and parts of Mexico. In 2014, PG&E delivered 86,303 gigawatt-hours of electricity to its 5.3 million electrical customers.

¹ CalRecycle. *Facility/Site Summary Details: Neal Road Recycling and Waste Facility (04-AA-0002)*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/04-AA-0002/Detail/>. Accessed August 2016.

PG&E also provides natural gas to all or part of 39 counties in California comprising most of the northern and central portions of the State, including Butte County. PG&E obtains its natural gas supplies from western North America, including basins in western Canada, the Rocky Mountains, the southwestern United States, and California. PG&E operates approximately 49,100 miles of transmission and distribution pipelines, and three underground storage fields with a combined storage capacity of 48.7 billion cubic feet (“Bcf”). In 2014, PG&E delivered 269 Bcf of natural gas to its 4.4 million natural gas customers.

REGULATORY SETTING

Federal

United States Environmental Protection Agency (U.S. EPA)

Clean Water Act

The federal Clean Water Act (“CWA”) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. The CWA made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. The CWA assists in the development and implementation of waste treatment management plans and practices by requiring provisions for treatment of waste using best management practices (“BMPs”) technology before there is any discharge of pollutants into receiving waters, as well as the confined disposal of pollution, so that it will not migrate to cause water or other environmental pollution. Additionally, CWA funds the construction of sewage treatment plants under the construction grants program.

National Pollutant Discharge Elimination System

The Water Permits Division (“WPD”) within the U.S. EPA Office of Wastewater Management leads and manages the National Pollutant Discharge Elimination System (“NPDES”) permit program. As authorized by the CWA, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the U.S. The NPDES permit program oversees stormwater management and sewer and sanitary sewer overflows.

State

Porter-Cologne Water Quality Control Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act (“Porter-Cologne Act”) to preserve, enhance and restore the quality of the State's water resources. The Porter-Cologne Act established the State Water Resources Control Board (“SWRCB”) and the nine individual Regional Water Quality Control Boards (“RWQCBs”) as the principal state agencies with the responsibility for controlling water quality in California. Under the Porter-Cologne Act, water quality policy is established, water quality standards are enforced for both surface and groundwater, and the discharges of pollutants from point and non-point sources are regulated. The Porter-Cologne Act authorizes the SWRCB to establish water quality principles and guidelines for long-range resource planning, including groundwater and surface water management programs and control and use of recycled water.²

The Region 5 (Central Valley) RWQCB office has jurisdiction over of Butte County and includes the Sacramento River and San Joaquin River, two of the State’s major rives, that drain in the

² *United States Department of Energy, Porter-Cologne Water Quality Control Act, Accessed at: <http://www.etec.energy.gov/Regulation/Porter-Cologne-Water-Quality-Control-Act.htm>. April 22, 2008.*

region. The RWQCB develops and enforces water quality objectives and implementation plans that safeguard the quality of water resources throughout the Central Valley. In accordance with Section 13263 of the California Water Code, RWQCBs are authorized to issue Waste Discharge Requirements (“WDR”), as well as periodically review self-monitoring reports submitted by the discharger, and perform independent compliance checking, and take enforcement action if necessary.

California Water Plan Update 2009

The California Water Plan is the state’s guidance document for integrated water management and sustainability, and the California Department of Water Resources (“DWR”) updates this Plan every five years. The most recent update in 2009 provides a statewide strategic plan until the year 2050. Two major initiatives of the California Water Plan include: (1) integrated regional water management that enables regions to implement strategies appropriate for their own needs and helps them become more self-sufficient, and (2) improved statewide water management systems that provide for upgrades to large physical facilities, such as the State Water Project, and statewide management programs essential to the California economy (DWR, 2009).

California Urban Water Management Planning Act

California Water Code Sections 10610-10656 established the Urban Water Management Planning Act, requiring all urban water suppliers prepare urban water management plans and updated them every five years. Cal Water adopted an Urban Water Management Plan for the Chico District in 2007.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009, and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into its own code requirements for landscaping. For new landscaping projects of 2,500 square feet or more, the applicant is required to submit a detailed “Landscape Documentation Package” in conjunction with their building permits that discusses water efficiency, soil management, and landscape design elements.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to: (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, Senate Bill (SB) 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The current standards were updated in 2013 and went into effect on July 1, 2014. The Energy Commission is now in the process of developing the 2016 Standards, which will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2016 Standards will go into effect on January 1, 2017. The 2013 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year. The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

Local

2015 Urban Water Management Plan, Chico-Hamilton District

The 2015 UWMP, Chico-Hamilton District, is a foundation document and source of information for Water Supply Assessments and Written Verifications of Water Supply. The 2015 UWMP provide long-range planning for water supply and source data for development of a regional plan and city and county general plans. The plan includes descriptions of water sources, a water shortage contingency plan, water use provisions, and a supply and demand comparison.

City of Chico Storm Water Management Program

The purpose of the SWMP is to present a program that is consistent with Federal and State regulations and to meet permitting requirements that will prevent pollutants from entering into the storm drainage system. The objectives of the SWMP are to provide guidance to the public

and businesses, and act as a coordinating entity towards a cohesive storm water program. The SWMP is a comprehensive program comprised of various elements and activities designed to reduce storm water pollution to the maximum extent possible and eliminate prohibited non-storm water discharge in accordance with Federal and State laws and regulations. These laws and regulations are implemented through NPDES municipal storm water discharge permits.

City of Chico General Plan

The proposed project is subject to relevant goals, policies, and actions listed in the City of Chico 2030 General Plan. Goals, policies, and actions related to wastewater, stormwater, water supply, and waste disposal are included below. For a discussion of project consistency with additional applicable land use policies please refer to Section IV.J (Land Use and Planning), of this Draft EIR.

Policy PPF5-4.1 (Sanitary Sewer System) – Improve and expand the sanitary sewer system as necessary to accommodate the needs of existing and future development.

Policy PPF5-4.4 (Wastewater Flows) – Ensure that total flows are effectively managed within the overall capacity of the Water Pollution Control Plant.

Policy PPF5-5.2 (Future Water System) – Consult with Cal Water to ensure that its water system will serve the City's long-term needs and that State regulations SB 610 and SB 221 are met.

Policy PPF5-5.3 (Water Conservation) – Work with Cal Water to implement water conservation management practices.

Policy PPF6-6.2 (Storm Water Drainage) – Continue to implement a storm water drainage system that results in no net increase in runoff.

Policy PPF6-6.3 (Storm Water Drainage BMPs) – To protect and improve water quality, require the use of Best Management Practices (BMPs) for storm water drainage infrastructure suited to the location and development circumstances.

Policy PPF6-6.4 (Water Runoff) – Protect the quality and quantity of water runoff that enters surface waters and recharges the aquifer.

Policy PPF8-8.1 (Waste Recycling) – Provide solid waste collection services that meet or exceed state requirements for source reduction, diversion, and recycling.

Policy S-4.3 (Fire Safety Standards and Programs) – Support the development and implementation of standards and programs to reduce the fire hazards and review development and buildings applications for opportunities to ensure compliance with relevant codes.

Policy SUS-3.3 (Municipal Waste Reduction) – Reduce consumption and increase recycling and reuse of materials in City operations.

Policy OS-3.3 (Water Conservation and Reclamation) – Encourage water conservation and the reuse of water.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

Based on the Appendix G, Environmental Checklist Form, of the State *CEQA Guidelines*, the project would have a significant impact on the environment related to wastewater 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 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 or expansion of existing 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 inadequate 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;
- (g) comply with federal, state, and local statutes and regulations related to solid waste; or
- (h) result in inefficient, wasteful, or unnecessary consumption of energy?

Utilities and Service Systems Issues not Further Analyzed

The following issues were addressed in the Initial Study (see Appendix A) and Section IV.A of this Draft EIR and were determined to result in no impact or a less-than-significant impact and not warrant further analysis:

- Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste

Project Impacts and Mitigation Measures

Impact UTIL-1 Wastewater Treatment Capacity

The City of Chico would serve the site upon construction of the proposed project. Wastewater generation was calculation on the assumptions that (1) single family resident produces 288 gallons per equivalent dwelling unit (EDU) unit per day of wastewater, (2) one unit of multi-family residential is equivalent to 0.63 Edu, and (3) all other non-residential uses produced 1,500 gallons of wastewater per acre. Table IV.P-2 summarizes the wastewater generation estimate for the proposed project.

Table IV.P-2. Wastewater Generation Estimate

Wastewater Source	Unit	gal/day
Single Family Residences	469 EDU	135,072
Multi-Family Residential Units	147 EDU	42,336
Southern Commercial	4.7 Acres	7,050
Northern Commercial	5.5 Acres	8,250
Landscape Irrigation	11.5 Acres	17,250
Total gal/day		209,958
Total mgd		0.2099
Notes: 288 gallons per equivalent dwelling unit (EDU) unit per day for residential units, 1 Multi-Family is equal to 0.63 EDU, 1,500 gallons per acre per day Source: City of Chico General Plan DEIR		

The Chico treatment plant has a capacity to treat 9.0 mgd but currently receives 7.0 mgd from Cal Water's Chico service area. The net increase of 0.2099 mgd attributable to the proposed project represents a little more than three (3) percent of flows received from the Cal Water service area (7.0 mgd), and would not exceed the capacity of the treatment plant. Therefore, this is a less than significant impact.

Impact UTIL-2 Water Supply

Cal Water would supply the project site with potable water service during operation. The following assessment is based up on a Water Supply Assessment (WSA) performed by Cal Water in accordance with California SB 610. The WSA can be found in Appendix G of this DEIR. An SB 610 WSA must address the adequacy of the water supply to meet estimated demands of the proposed project over the next 20 years in addition to those of Cal Water's existing customers and other anticipated future users under normal, single dry year and multiple dry year conditions (Water Code §10911(a)). SB 610 and SB 221 require that the information developed to address the adequacy of the water supply question be included in the administrative record that serves as the evidentiary basis for an approval action by the local public agency.

As state in Section III (Project Description), the following development assumptions were utilized:

- 1. 469 Single Family Lots – including irrigated landscaped areas
- 2. 233 Units of Multi-family dwelling units
- 3. up to 205,000 square feet of medical/dental offices may be developed on Lot 472
- 4. up to 240,000 square feet of commercial mixed uses may be constructed on Lots 471 and 474

Table IV.P-3 summarizes the potable water consumption estimate for the proposed project.

Table IV.P-3. Potable Water Consumption Estimate

Water Use Type	gal/day	acre-feet/year (AFY)
Single Family Residences	163,775	183.5
Multi-Family Residential Units	9,623	10.8
Southern Commercial	29,664	33.2
Northern Commercial	85,920	96.2
Landscape Irrigation	20,038	22.4
Total AFY		346.1
Note: 1 acre-foot = 325,851 gallons Source: California Water Service Company, 2017.		

Cal Water adopted its current CH District UWMP in June 2016. Per Section 10910(c) (3) of the Water Code, the water supply assessment is based on information contained in the UWMP, updated water demand data for 2016, 2017 and other sources cited within it. Cal Water concluded in their WSA that the CH District supplies are adequate to meet forecasted demands for the proposed project, those associated with existing Cal Water customers, two major developments - Meriam Park and Oak Valley and increases in demand due to some customer relaxation of water conservation practices for the next 20+ years. Furthermore, the project could meet water supply demands under normal, single dry year and multiple dry year conditions. Impacts would be less than significant.

Impact UTIL-3 Drainage Facilities

Development of subdivisions on APNs 002-190-041, 018-510-009, and 018-510-008 would remove the braided network of intermittent streams observed on the west and northwest side of the project site. Stormwater runoff would be piped through these subdivisions and discharged to existing storm drains along Fremont Street, Bruce Road, and Skyway Road. The City's existing storm drain system conveys runoff to Comanche Creek, about 1.0 mile southwest of the project site.

Stormwater runoff from development of the proposed RS-20 lots on APN 018-510-007 would be piped through the associated streets and discharged to the Butte Creek Diversion Channel. As a result, project operations could potentially increase the rate, volume, and/or duration of stormwater discharges into the Butte Creek Diversion Channel, which could contribute to stream channel hydromodification downstream of the project site in Butte Creek.

The proposed project would be required to comply with the Construction General Permit, which requires preparation and implementation of a SWPPP, including BMPs to reduce and eliminate sediment during construction activities. The proposed project would also be required to comply with the Small MS4 General Permit during operational activities, which requires implementation of post-construction stormwater management measures, such as LID design standards to capture and treat runoff from impervious surfaces. While compliance with the Small MS4 General Permit would ensure that the rate, volume, and/or duration of stormwater discharges would not substantially increase during operations, the stormwater discharges into the Butte Creek Diversion Channel would be more concentrated at new storm drain connections, which could result in localized erosion of the channel near the points of discharge. Therefore, alteration of the existing drainage patterns into the channel and encroachment on the levee could result in need runoff to downstream waterways that necessitate a need to construct new or expanded storm drainage facilities.

Furthermore, portions of the project site along the Butte Creek Diversion Channel, Crouch Ditch, and unnamed streams on the northwest and southeast sides of the project site are mapped within a FEMA 100-year flood zones (Figure 1). The proposed project would change the existing topography and place structures within the FEMA 100-year flood zones, which could increase the extent, depth, and velocity of flood flows relative to existing conditions. This could result in a substantial increase in erosion and downstream siltation during a 100-year flood event. Implementation of *Mitigation Measures HYDRO-1* and *HYDRO-2* would reduce potentially significant impacts related to erosion and siltation from altered drainage patterns to a less-than-significant level.

Impact UTIL-4 Landfill Capacity

This impact assesses the potential for the proposed project to generate substantial amounts of solid waste that result in inadequate landfill capacity or conflict with statutes or regulations concerning solid waste.

Construction Waste

The proposed project would result in the construction of up to 445,000 square feet of new commercial uses. Using a non-residential construction waste generation rate published by the United States Environmental Protection Agency, an estimate of the total construction debris generated by the proposed project is provided in Table IV.P-4.

Table IV.P-4. Construction Solid Waste Generation

Land Use Type	Square Feet	Waste Generation Rate	Waste Generation	
			Tons	Cubic Yards
Non-residential	445,000	3.89 pounds/square foot	865.5	1211.7
Single-Family	844,200	4.38 pounds/square foot	1,848.8	2,588.3
Multi-Family	233,000	3.89 pounds/square foot	453.2	634.5
Total			4,434.5	
Notes: Single Family Home estimated at 1,800 square feet. Multi-Family unit assumed to be 1,000 square feet 1 ton= 2,000 pounds, 1 ton = 1.4 cubic yards Source: U.S. Environmental Protection Agency, 1998				

Development of the proposed project would generate an estimated 4345.5 cubic yards of construction debris. This waste volume represents less than 0.02 percent of the 20.8 million cubic yards in available capacity at the Neal Road Recycling and Waste Facility. Therefore, short-term construction impacts on landfill capacity would be less than significant.

Operational Waste

Table IV.P-5 summarizes the proposed project's operational waste generation based on rates provided by Cal Recycle. After accounting for existing waste generation, the proposed project would result in a usage of 2,259.8 cubic yards of solid waste on an annual basis.

Table IV.P-5. Operational Solid Waste Generation

Land Use Type	Square Feet	Waste Generation Rate	Waste Generation	
			Tons	Cubic Yards
Non-residential construction	445,000	4.8 pounds/square foot	1068	1,495.2
Single-Family	469	10 lb/dwelling unit /day	855.9	1,198.3
Multi-Family	233	4 lb/dwelling unit /day	170.09	238.3
Total			2,931.8	
Notes: 1 ton= 2,000 pounds, 1 ton = 1.4 cubic yards Source: U.S. California Department of Resources Recycling and Recovery, 2006				

The proposed project's net increase in operational waste generation represents less than 0.01 percent of the 20.8 million cubic yards in available capacity at the Neal Road Recycling and Waste Facility. Moreover, the values shown in the table are not adjusted to account for recycling and waste reduction activities that would serve to divert waste from the landfill. Therefore, long-term operational impacts on landfill capacity would be less than significant.

Impact UTIL-6 Energy Usage

PG&E would provide electricity and natural gas service to the proposed project. Tables IV.P-6 and IV.P-7 provide an estimate of the proposed project's annual energy consumption for both residential and commercial uses. The estimated electricity and natural gas consumption of the proposed project includes the assumed maximum developed of 469 single family homes, 233 multi-family residential units, 205,000 square feet (sf) of southern commercial development, and 240,000 sf of northern commercial development. Annual energy consumption for the proposed project was estimated utilizing the average energy consumption for the region data provided by the U.S. Energy Information Administration.

Table IV.P-6. Site Energy Consumption for Residential

Land Use Type	Average Annual Electricity (kWh)	Estimated Annual Electricity Consumption (kWh)	Average Annual Natural Gas (cf)	Estimated Annual Natural Gas Consumption (cf)
Single Family Residences	11,013	5,165,097	59,000	27,671,000
Multi-Family Residential Units	5,280	1,230,240	23,000	5,359,000

Source: U.S. Energy Information Administration. 2013. Table CE2.5 Household Site Fuel Consumption in the West Region.

Table IV.P-7. Site Energy Consumption for Commercial

Land Use Type	Average Annual Electricity (kWh/sf)	Estimated Annual Electricity Consumption (kWh)	Average Annual Natural Gas (cf/sf)	Estimated Annual Natural Gas Consumption (cf)
Southern Commercial	15.8	3,239,000	19.6	4,018,000
Northern Commercial	14.9	3,576,000	13.2	3,168,000

Source: U.S. Energy Information Administration. 2016. Table C19. Electricity Consumption and Conditional Energy Intensity by Census Division.
U.S. Energy Information Administration. 2016. Table C29. Natural Gas Consumption and Conditional Energy Intensity by Census Division.

Based on the information shown in Tables IV.P-6 and IV.P-7 above, the proposed project is estimated to demand a net total of approximately 13,210,337 kWh of electricity and 40,216,000 cubic feet of natural gas annually after full project buildout. As stated above, PG&E delivered 86,303 gigawatts of electricity and 269 billion cf of natural gas in 2014. Therefore, the proposed project would result in 0.015% of PG&E's total annual electricity usage and 0.015% of PG&E's total annual natural gas usage. Additional construction and operational energy use and conservation is provided in Section VI. (General Impact Categories) of this Draft EIR.

All new residential and non-residential development would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the U.S. As such, the proposed project would not result in the unnecessary, wasteful, or inefficient use of energy. Impacts would be less than significant.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of *Mitigation Measures HYDRO-1* and *HYDRO-2*, as listed in Section IV.I (Hydrology & Water Quality), would reduce project impacts related to stormwater drainage to a **less-than-significant** level. Impacts related to wastewater, water supply, solid waste, and energy use would be **less than significant**.

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