Appendix D
Energy Assessment

MEMORANDUM

To: Ruben Salas, Kimley-Horn and Associates

From: Elena Ajdari, Kimley-Horn and Associates

Date: October 11, 2022

Subject: Fontana Plant F20 Reservoirs – Fontana, San Bernardino County, CA – Energy Assessment

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Purpose

The purpose of this technical memorandum is to evaluate potential short- and long-term energy consumption impacts of the Fontana Plant F20 Reservoirs Project (project). The purpose of this Energy Technical Memorandum is to evaluate the potential construction and operational energy consumption associated with the project and determine the level of impact the project would have on the environment.

Project Location

The project is generally located at the terminus of Long View Drive in the City of Fontana, San Bernardino County, California. The project site consists of an existing 0.8-acre site (Assessor's Parcel Number [APN]: 0237-411-17) and 1.0-acre site, which includes of a portion of the adjacent parcel (APN 0237-411-15). The project is situated on vacant land and located approximately 1.8 miles south of Interstate 10 (I-10), 1.5 miles north of State Route 60 (SR-60), and 4.5 miles east of Interstate 15 (I-15). The project site is surrounded by vacant land, with residential communities concentrated further to the north, east, and west.

Project Description

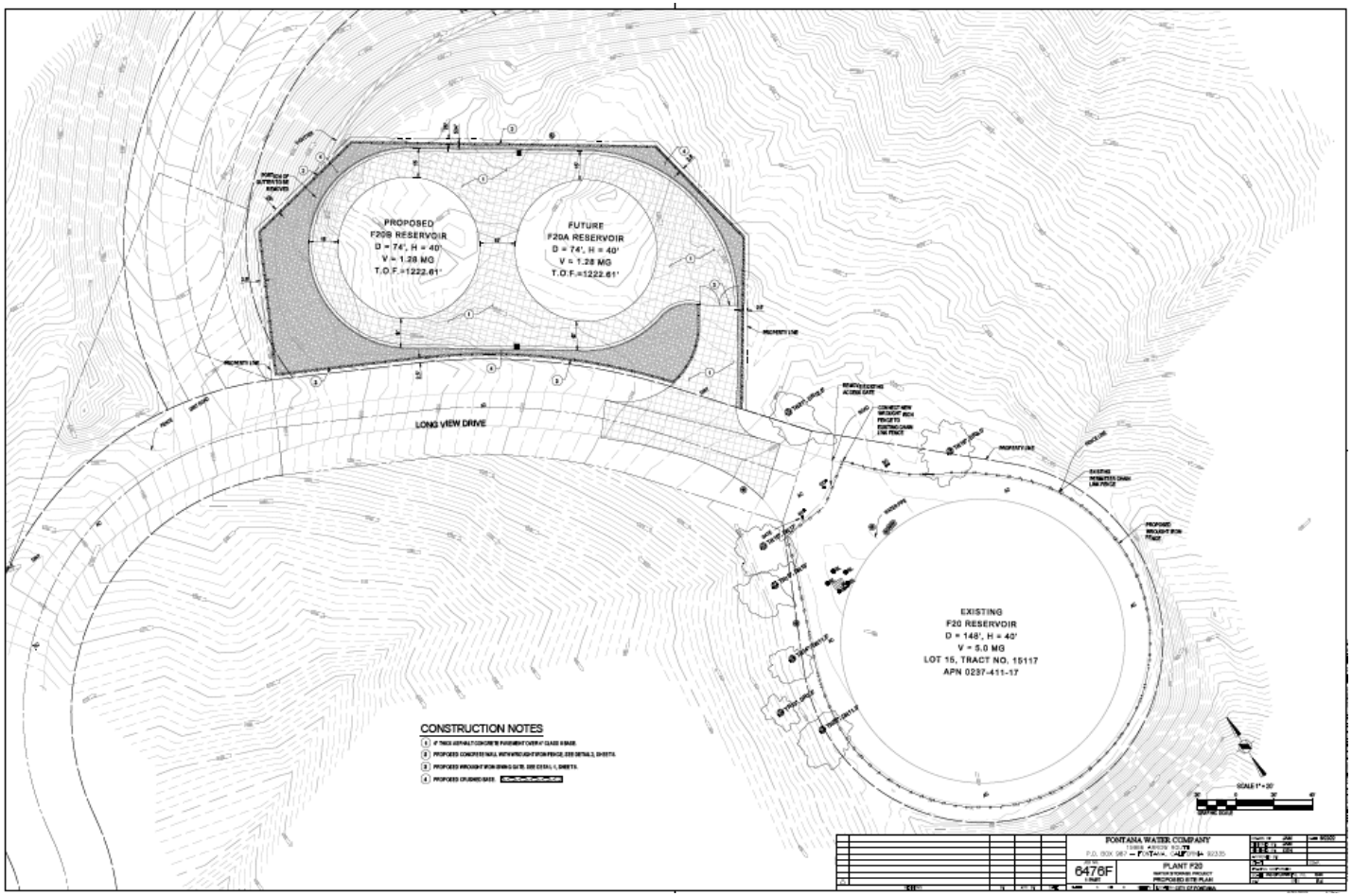
The project consists of the installation and operation of two new 1.28-million-gallon (MG) reservoir tanks [Plant F20 Reservoirs (East) and (West)] to be used for potable water services within Fontana Water Company's (FWC) service area. As shown in Exhibit 1: Site Plan, the proposed reservoir Plant F20 Reservoir (East) and Plant F20 Reservoir (West) would be located just northwest of the existing 5.0 MG Plant F20 Reservoir (South). The Plant F20 Reservoir (East) and Plant F20 Reservoir (West) would be constructed of welded steel, measuring 74 feet in diameter and 40 feet in height.

The proposed project includes the maintenance required by FWC at the existing Plant F20 Reservoir (South). This will be made possible after the construction and successful operation of the Plant F20 Reservoir (East) and Plant F20 Reservoir (West). The maintenance work includes the interior recoating

and exterior patchwork and paint of the Plant F20 Reservoir (South). The maintenance work for the Plant F20 Reservoir (South) is necessary as the existing coating system has exceeded its 20- to-25-year life expectancy. Regional access is provided via I-10 at the Cherry and Citrus Avenue Ramps. Local access is provided via Longview Drive. The project would allow for the FWC to meet the necessary water storage requirements for the community to meet existing water demands for domestic uses, fire suppression, and emergency needs.

Construction is anticipated to begin in 2024 and last for approximately one and half years. Development of the site will require grading for the reservoir foundations, related piping, pavement, light pole foundations, gravel paved surface, wrought iron fencing, and a concrete perimeter retaining wall. No construction activities would be associated with the maintenance of the existing Plant F20 Reservoir (South).

Exhibit 1: Site Plan



Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. CEQA Guidelines Section 15126.2(b) treats "wasteful, inefficient, or unnecessary" energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This technical memorandum has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

Environmental Setting

Energy consumption is analyzed in this technical memorandum due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both construction and long-term operational phases.

Electricity Service

Southern California Edison (SCE) provides electrical services to the City of Fontana (City) through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources; including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services

Southern California Gas Company (SoCalGas) provides natural gas services to the City of Fontana and San Bernardino County (County). Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California's natural gas-fired electric generation increased by 9.5 percent in 2021, accounting for 50.2 percent of in-state generation.[1]

The City's ongoing development review process includes a review and comment opportunity for privately owned utility companies and to provide input on all development proposals. The input facilitates a detailed review of projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

[1] California Energy Commission, *2020 Total System Electric Generation*, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation, accessed October 2022.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 6,922.8 trillion BTUs in 2020 (the most recent year for which this specific data is available).[2] Of California's total energy usage, the breakdown by sector is 34.0 percent transportation, 24.6 percent industrial, 19.6 percent commercial, and 21.8 percent residential.[3] Electricity and natural gas in California are generally consumed by stationary users such as residences, commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2022, taxable gasoline sales (including aviation gasoline) in California accounted for 13,919,678,835 gallons of gasoline.[4]

The electricity consumption attributable to the County from 2010 to 2020 is shown in Table 1: Electricity Consumption in San Bernardino County 2010-2020. As indicated in Table 1, energy consumption in the County increased steadily between 2010 and 2020 with a slight decrease in 2019.

Table 1: Electricity Consumption in San Bernardino County 2010-2020

Year	Electricity Consumption (in millions of kilowatt hours)
2010	13,481
2011	13,730
2012	14,348
2013	14,374
2014	14,731
2015	14,731
2016	14,946
2017	15,282
2018	15,376
2019	15,316
2020	15,969

Source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed October 2022.

The natural gas consumption attributable to the County from 2010 to 2020 is shown in Table 2: Natural Gas Consumption in San Bernardino County 2010-2020. Natural gas consumption in the County fluctuated with increases and decreases occurring annually.

[2] U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2019,* https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed October 2022.

[3] U.S. Energy Information Administration, *California State Profile and Energy Estimates*, *California Energy Consumption by End-Use Sector, 2019*, https://www.eia.gov/state/?sid=CA#tabs-2, accessed October 2022.

[4] California Department of Tax and Fee Administration, *January 2022 – Motor Vehicle Fuel 10 Year Reports*, https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed October 2022.

Table 2: Natural Gas Consumption in San Bernardino County 2010-2020	
Year	**Natural Gas Consumption (in millions of therms)**
2010	492
2011	504
2012	486
2013	503
2014	453
2015	470
2016	494
2017	493
2018	500
2019	547
2020	527
Source: California Energy Commission, *Natural Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed October 2022.	

Automotive fuel consumption in the County from 2011 to 2021 is shown in Table 3: Automotive Fuel Consumption in San Bernardino County 2011-2021. As shown in Table 3, on-road automotive fuel consumption in the County relatively decreased from 2011 to 2013 and increased from 2013 to 2019. Gasoline fuel consumption decreased in 2020 and increased in 2021. Heavy-duty vehicle fuel consumption decreased from 2011 to 2012 and increased from 2013 to 2021 with a light decrease in 2018.

Table 3: Automotive Fuel Consumption in San Bernardino County 2011-2021		
Year	**On-Road Automotive Fuel Consumption (gallons)**	**Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons)**
2011	829,043,622	223,450,227
2012	823,824,155	221,468,396
2013	823,575,913	231,100,540
2014	833,908,390	233,757,358
2015	862,282,542	236,687,334
2016	886,951,688	251,535,041
2017	894,270,493	263,723,118
2018	894,127,745	259,783,109
2019	894,821,914	261,139,639
2020	763,765,305	265,477,739
2021	869,262,611	272,787,528
Source: California Air Resources Board, EMFAC2021.		

5.0 Regulatory Setting

The following is a description of Federal, State, and local environmental laws and policies related to energy consumption that are relevant to the proposed project.

5.1 State of California

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)
Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2016 Standards improved upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential buildings are 28 percent more energy efficient and nonresidential buildings are 5 percent more energy efficient than under the 2013 Standards. Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards use about 53 percent less energy than those built to meet the 2016 standards.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards in three major areas:

- New electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores.

- The promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity.

- The expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020. The CEC has approved the 2022 California Green Building Standards Code and it will take effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[5]

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. Assembly Bill 1109, adopted in 2007, also serves as a framework for lighting efficiency. This bill requires the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing

[5] California Energy Commission. 2022. *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency (accessed October 2022).

Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

5.2 City of Fontana

City of Fontana Climate Action Plan

The City of Fontana Climate Action Plan (Fontana CAP)[6] outlines goals to reduce energy consumption and GHG emissions to become a more sustainable community. Goals include:

- Updating outdoor lighting fixtures, including traffic lights, to LED light fixtures; and
- Construction of new public buildings with more water-efficient fixtures which will in effect reduce building energy consumption.

City of Fontana General Plan

The City of Fontana General Plan (Chapter 12-Sustainability and Resilience)[7] outlines goals to reduce energy consumption and promote energy efficiency. Goals and policies include:

Goal 2: Government facilities and operations are models of resource efficiency.

Policy:

- Incorporate goals into the City Code for resource efficiency in municipal facilities and operations.
- Continue organizational and operational improvements to maximize energy and resource efficiency and reduce waste.

Goal 3: Renewable sources of energy, including solar and wind, and other energy-conservation strategies are available to city households and businesses.

[6] Fontana Climate Adaption Plan 2015. file:///C:/Users/elena.ajdari/Downloads/p16255coll1_169.pdf (Accessed October 2022)

[7] Fontana Climate Adaption Plan 2015. file:///C:/Users/elena.ajdari/Downloads/p16255coll1_169.pdf (Accessed October 2022)

Policy:

- Promote renewable energy programs for government, Fontana businesses, and Fontana residences.

Goal 6: Fontana is a leader energy-efficient development and retrofits.

Policy:

- Promote energy-efficient development in Fontana.
- Meet or exceed state goals for energy-efficient new construction.

6.0 CEQA Thresholds and Methodology

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This memorandum will focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; and/or

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with the project as well as the fuel necessary for project construction. The analysis of the project's electricity and natural gas use is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use for occupancy. The results of CalEEMod are included in the project's Air Quality Assessment, prepared by Kimley-Horn (2022). Modeling related to project energy use was based primarily on the default settings in CalEEMod. The amount of operational fuel use was estimated using CalEEMod outputs for the project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in San Bernardino County. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

7.0 Impacts and Mitigation Measures

Threshold 7.1 Would the project result in wasteful, inefficient, or unnecessary consumption of energy resources?

Energy consumption associated with the proposed project is summarized in Table 4: Project and Countywide Energy Consumption. As shown in Table 4, the project's Construction-related off-road automotive fuel consumption (i.e., fuel consumed during construction) would result in a 0.0219 percent increase in diesel and 0.0005 percent increase in gasoline consumption. Operational energy usage would be negligible and would consist of approximately one trip per month for maintenance worker vehicle trips.

Construction-Related Energy

During construction, the project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading, paving, and building construction. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Some incidental energy conservations would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and California Air Resources Board engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

While construction activities would consume fuels, project-related consumption of such resources would be temporary and would cease upon the completion of construction. In addition, mobile equipment energy usage during construction would be minimized as the project would comply with CARB's idling regulations, which restrict idling diesel vehicles and equipment to five minutes. Additionally, consistent with state requirements, all construction equipment would meet CARB Tier 3 In-Use Off-Road Diesel Engine Standards. Engines are required to meet certain emission standards, and groups of standards are referred to as Tiers. A Tier 0 engine is unregulated with no emission controls, and each progression of standard level (i.e., Tier 1, Tier 2, Tier 3, etc.) generate lower

emissions, use less energy, and are more advanced technologically than the previous tier. CARB's Tier 3 In-Use Off-Road Diesel Engine Standards requires that construction equipment fleets become cleaner and use less energy over time.

Table 4: Project and Countywide Energy Consumption

Energy Type	Project Annual Energy Consumption	San Bernardino County Annual Energy Consumption[1]	Percentage Increase Countywide
Automotive Fuel Consumption[2]			
Project Construction[3,4]			
Diesel	28,182 gallons	128,632,715 gallons	0.0219%
Gasoline	2,270 gallons	489,187,977 gallons	0.0005%

Notes:
1. The project increases in automotive fuel consumption are compared with the countywide fuel consumption (projected) in 2025.
2. Countywide fuel consumption is from the California Air Resources Board EMFAC2021 model.
3. Construction fuel consumption is based equipment and load factors from California Emissions Estimator Model (CalEEMod version 2020.4.0).
4. The estimated construction fuel consumption is based on the project's construction equipment list timing/phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips.

Refer to Appendix A: Energy Data for assumptions used in this analysis.

Table 4 demonstrates the Project's construction-related energy consumption. As indicated in Table 4, the overall diesel fuel consumption during construction of the project would be 28,182 gallons and gasoline consumption would be 2,270 gallons, which would result in a nominal increase (0.0219 percent and 0.0005 percent, respectively) in fuel use in the County. As such, project construction would have a minimal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. A less than significant impact would occur in this regard.

Operational Energy

The proposed project would allow for installation and operation of two additional water reservoir tanks with associated improvements to enhance the service to existing local communities. The proposed reservoir tanks would be located just northwest of an existing 5.0 MG water Reservoir. The required electricity for the new proposed water reservoirs would be provided by the existing generator onsite which feeds the existing water tank to the south of the proposed project site. Therefore, the required energy to operate the project represents a net zero increase. However, energy would be required to operate construction equipment during construction of the new water storage reservoirs.

As such, it is not anticipated that the project would either result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project's operations, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts under these issues are considered less than significant.

Operational fuel usage would be negligible and would consist of approximately one trip per month for maintenance worker vehicle trips. The project would therefore not use energy in a wasteful, inefficient, or unnecessary manner. Thus, operation of the project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

Conclusion

As shown in Table 4, the increase in automotive fuel consumption over existing conditions is minimal (less than one percent). For the reasons described above, the project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand. Thus, the project would not cause a wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation.

Threshold 7.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the project under the California Green Building Standards Code. As discussed above, the project would result in an increased demand for petroleum during construction. In accordance with Title 24 Part 11 mandatory compliance, the Applicant would have (a) 50 percent of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) and low pollutant emitting exterior and interior finish materials, such as paints. Compliance with all of these mandatory measures would decrease the consumption of petroleum.

The project would not conflict with any of the federal, state, or local plans for renewable energy and energy efficiency. Because the project would comply with Parts 6 and 11 of Title 24 and with City of Fontana CAP goals and General Plan policies, no conflict with existing energy standards and regulations would occur. Therefore, impacts associated with renewable energy or energy efficiency plans would be considered less than significant.

Appendix A

Energy Data

Construction Fuel Consumption

On-Site Diesel[1] (off-road construction Equipment)	$MTCO_2e$	Gallons of Fuel[4]	Current County Fuel	Percent
Demolition	0	0		
Site Preparation/Grading	36	3,552		
Building Construction	181	17,833		
Paving	19	1,872		
Architectural Coating	8	788		
Total	244	24,044	128,632,715	0.0187%

Off-Site Diesel[1] (on-road construction trips)				
Demolition	0	0		
Site Preparation/Grading	30	2,956		
Building Construction	12	1,182		
Paving	0	0		
Architectural Coating	0	0		
Total	42	4,138	128,632,715	0.0032%

Off-Site Gasoline[2]				
Demolition	0	0		
Site Preparation/Grading	1	114		
Building Construction	15	1,703		
Paving	3	341		
Architectural Coating	1	114		
Total	20	2,270	489,187,977	0.0005%

Total Diesel Fuel		28,182	128,632,715	0.0219%
Total Gasoline Fuel		2,270	489,187,977	0.0005%
Total Construction Fuel	306	30,452		

Construction Phase[3]	Demolition			Site Preparation			Grading		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2024	0	0	0	9	0	0	27	30	1
2025									
Total	**0**	**0**	**0**	**9**	**0**	**0**	**27**	**30**	**1**

Construction Phase[3]	Infrastructure + Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2024	160	11	13						
2025	21	1	2	19	0	3	8	0	1
Total	**181**	**12**	**15**	**19**	**0**	**3**	**8**	**0**	**1**

Notes:

[1] Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

[2] Fuel used for worker trips assumed to be gasoline.

[3] $MTCO_2e$ rates from CalEEMod (3.0 Construction Details).

[4] For CO2e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.