

3B.16 UTILITIES AND SERVICE SYSTEMS – WATER

3B.16.1 AFFECTED ENVIRONMENT

This discussion places an emphasis on describing the affected environment for locations where physical environmental impacts would occur as a result of the construction and operation of the Off-site Water Facilities. For this issue area, the discussion is focused to Zone 4 of the “Water” Study Area.

POTABLE WATER DISTRIBUTION

Potable water supplies for the “Water” Study Area are provided by numerous public and private wholesale and retail water service providers. These public and private entities acquire water from surface and groundwater supplies, treat the water, and distribute the treated water to users. Within Sacramento County, there are 28 water purveyors that are responsible for treating and distributing local sources of surface water and groundwater to their respective customer bases. The Sacramento County Water Agency (SCWA) is responsible for providing water to all areas within the County not served by one of the 28 purveyors and serves areas in Zone 40, which overlaps portions of Zone 4 of the Off-site Water Facilities Study Area. The City is responsible for providing potable water to users within its city limits and would be responsible for supplying water to SPA.

New water supply infrastructure proposed as part of the Off-site Water Facilities would be constructed to serve areas within the SPA and, therefore, would be under the purview of the City. The new water system constructed in conjunction with the project would be separate from the City’s system to the north of U.S. 50. The City’s current total water demand (2006) for areas within the city limits is 27,392 acre-feet per year (AFY) and includes non-potable industrial water use at Aerojet. The 5,600 AFY of demand for the SPA is separate from the City’s current demand and would be served by separate infrastructure. Water use within the current city limits is projected to experience a slight decrease by 2030 to 27,069 AFY based on average unit water demand factors applied to City land uses assumed in the City’s 2005 Urban Water Management Plan (UWMP). This minor decrease in water use is largely attributed to a decrease in water use for construction activities. However, with the recent passage of Senate Bill (SB) 7 – Statewide Water Conservation, the estimates are likely to be further reduced depending on the City’s established baseline usage.

Pursuant to an agreement between the City and Aerojet, industrial water demands for Aerojet will be met through either treated groundwater from Aerojet’s Groundwater Extraction and Treatment (GET) Program or from a new source of water that Aerojet would pay the City to acquire and deliver. This agreement would effectively reduce projected potable water demands within the City by 2,731 AFY in 2030 to 24,338 AFY.

Central Valley Project

Water supplies that the City proposes to acquire from NCMWC are derived from the Central Valley Project (CVP), which is operated by U. S. Bureau of Reclamation (Reclamation). The CVP consists of 20 dams and reservoirs, 11 power plants, and 500 miles of major canals, as well as conduits, tunnels, and related facilities and are described in further detail in Section 3B. 9, “Hydrology and Water Quality – Water.”

Water supplies managed as part of the CVP include approximately 9 million AFY (MAF) of water with annual deliveries averaging approximately 7 MAF of water for agricultural, urban, and wildlife uses. Of this total, approximately 600,000 AFY is allocated for municipal and industrial uses. In addition, approximately 800,000 AFY is allocated to fish and wildlife habitat and 410,000 AFY to state and Federal wildlife refuges and wetlands, pursuant to the Central Valley Project Improvement Act (CVPIA).

SANITARY SEWER COLLECTION

Sanitary sewer collection and treatment service within eastern portions of Sacramento County, including the City, is provided by the Sacramento Regional County Sanitation District (SRCSD) and its cooperating agency Sacramento Area Sewer District (SASD), formerly County Sanitation District No. 1 (CSD-1). The current SASD service area is approximately 286 square miles with more than 2,700 miles of sewer lines and serves over 950,000 people (CSD-1 2006). Zone 4 of the “Water” Study Area traverses the Aerojet Trunk Shed, which is served by the Folsom East and Aerojet Interceptors. These interceptors connect into the Bradshaw Interceptor, which conveys wastewater to the Sacramento Regional Wastewater Treatment Plant, west of Elk Grove, south of Sacramento.

The 2006 SASD Draft Master Plan Update (master plan) identifies the need for several new sewers in the vicinity of Zone 4 of the “Water” Study Area, including a new trunk line to serve the Aerojet property SRCSD is also proposing to upgrade the Mather Interceptor along Douglas Road and Sunrise Boulevard.

ELECTRICAL GENERATION AND TRANSMISSION

The Sacramento Municipal Utility District (SMUD) provides electrical service to Sacramento County. SMUD operates several 12- and 69-kilovolt (kV) overhead electrical lines along portions of Folsom Boulevard, Prairie City Road, Sunrise Boulevard, White Rock Road, Excelsior Road, Florin Road, and Douglas Road. In the eastern portion of the Off-site Water Facilities Study Area, SMUD operates a series of 230-kV electrical transmission lines that roughly parallel Grant Line Road and are part of the state’s larger electrical transmission grid.

NATURAL GAS

Pacific Gas and Electric Company (PG&E) is the natural gas service provider for most of Sacramento County. Natural gas is delivered to Zone 4 of the “Water” Study Area through PG&E’s existing network of underground natural gas pipelines. These pipelines are generally less than eight inches in diameter and housed in major roadways including Folsom Boulevard, Mather Boulevard, Sunrise Boulevard, Douglas Road, and Florin Road.

SOLID WASTE

Solid waste generated within Zone 4 of the “Water” Study Area is collected by the County or private carrier and transported to local transfer station(s) prior to disposal at Kiefer Landfill, which is located on 1,084 acres east of the intersection of Kiefer Boulevard and Grant Line Road. Kiefer Landfill has a permitted capacity to receive 10,800 tons of solid waste per day, and its estimated closure date is in 2064 (California Integrated Waste Management Board 2007). Kiefer Landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal and has a total capacity of 117 million cubic yards – or 58 million tons. Currently, the landfill is operating below permitted capacity and will have capacity for the next 40 years based on current disposal rates (Sacramento County 2008b).

All non-recyclable solid waste generated during construction and operation of the Off-site Water Facilities is expected to ultimately be disposed of at Kiefer Landfill.

3B.16.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to utilities and service systems that apply to the Off-site Water Facility Alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

The following state plans, policies, regulations, and laws related to public utilities are relevant to the Off-site Water Facilities alternatives, and are described in detail in Section 3A.16, “Utilities and Service Systems – Land:”

- ▶ California Integrated Waste Management Act
- ▶ California Public Utilities Commission Decision 95-08-038
- ▶ California Building Energy Efficiency Standards

California Green Building Standards

The draft 2010 California Green Building Standards (CALGREEN) Code was unanimously adopted by the California Building Standards Commission and requires all new buildings in the state to be more energy efficient and environmentally responsible. CALGREEN will require that every new building constructed in California reduce water consumption by 20%, divert 50% of construction waste from landfills and install low pollutant-emitting materials. It also requires separate water meters for nonresidential buildings’ indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies. CALGREEN is scheduled to become effective on January 1, 2011, the current draft is provided for informational purposes only pending publication.

Senate Bill 7, Statewide Water Conservation

The goal of Senate Bill (SB) 7 is to require state to achieve a 20% reduction in urban per capita water use in California by December 31, 2020. SB 7 also includes an incremental goal of reducing per capita water use by 10% by December 31, 2015. The supplier must use one of the following methods for developing its urban water use target:

- ▶ 80% of the baseline per capita daily water use.
- ▶ Per capita daily water use that is estimated using the sum of an indoor residential use of 55 gallons per capital per day (gpcd) for landscape irrigated through dedicated or residential meters or connections, the model water efficient landscaping ordinance water efficiency equivalent + CII use equivalent to 90% of baseline CII water use by 2020.
- ▶ 95% of applicable state hydrologic region target as set forth in state’s draft 20x2020 Water Conservation Plan.
- ▶ Other methods identified and developed by the California Department of Water Resources (DWR) through a public process and reported to the legislature no later than December 31, 2010.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Water Supply

The Sacramento County General Plan Public Facilities Element encourages new development to be served by existing public water systems, either by annexation to an existing water purveyor’s service area or by extension or creation of a benefit zone of the SCWA (Sacramento County 1993). Objectives of the General Plan policies include minimizing impacts on in-stream water flows in the Sacramento and American Rivers and consolidating water service under existing public water systems.

Pursuant to California Water Code Section 10610, the City of Folsom adopted its 2005 UWMP in April 2006 (City of Folsom 2006). The UWMP provides information on existing and projected water supplies, assesses the

reliability of these supplies given a range of hydrologic conditions, identifies the various customer types and their existing and projected demands, and provides a variety of water management strategies to reduce demand and conserve water resources. Although the “Water” Study Area does not include the city limits, it does include portions of the City’s water service area south of Folsom Boulevard. Additionally, the Off-site Water Facilities water supplies and demands from the Folsom South of 50 SPA were not considered in the 2005 UWMP.

The City signed the January 2000 Water Forum Agreement (WFA), a nonbinding memorandum of understanding (MOU) with two coequal objectives: 1) to provide a reliable and safe water supply for the region’s economic health and planned development to the year 2030; and 2) to preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River. The MOU includes a Purveyor Specific Agreement for the City that identifies actions for achieving reductions in surface water diversion in dry years.

Solid Waste

The California Integrated Waste Management Act (CIWMA) of 1989, also commonly known as Assembly Bill (AB) 939, requires local agencies to implement source reduction, recycling, and composting in efforts to divert 50% of their solid waste from landfills by the end of 2000. This act further required every city and county in California to prepare a Source Reduction and Recycling Element, a report describing (1) the chief characteristics of each jurisdiction’s waste, (2) existing waste diversion programs and rates of waste diversion, and (3) the new or expanded programs the jurisdiction intends to implement to achieve the mandated rates of diversion. Waste diversion rates within the City have ranged from 27 to 32% since 2003 (CIWMB 2008).

3B.16.3 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. For the purposes of this analysis, an impact to existing and proposed utilities and service systems would be significant if the Off-site Water Facilities would:

- ▶ exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- ▶ require or result in the construction of new water, drainage, or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- ▶ require new or expanded water supply entitlements available to serve the project;
- ▶ result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments;
- ▶ result in substantial disruption(s) to existing public and/or provide utility service providers and supporting infrastructure;
- ▶ be served by a landfill with insufficient permitted capacity to accommodate the project’s solid waste disposal needs; or
- ▶ not comply with Federal, state, and local statutes and regulations related to solid waste.

Energy Efficiency

In accordance with criteria adopted from Appendix F of the State CEQA Guidelines, and encompassing the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts, Off-site Water Facilities-related impacts to energy resources are considered to be potentially significant if the Off-site Water Facilities would:

- ▶ Result in wasteful, inefficient, and unnecessary consumption of energy during the project construction, operation, maintenance, and/or removal that cannot be feasibly mitigated; or
- ▶ Preempt future energy development or future energy conservation.

ANALYSIS METHODOLOGY

This analysis provides an evaluation of the potential impacts to existing utilities and service systems based on actions outlined in Chapter 2, “Alternatives.” Findings and conclusions presented in the impact analysis are based on foreseeable changes to existing conditions as result of the Off-site Water Facilities and the significance criteria presented above. Given that implement of the Off-site Water Facility Alternatives involves the construction of water supply conveyance and treatment facilities, the “B,” or “Water” sections of Chapter 3 provide a comprehensive analysis of the range of potential environmental effects of the Off-site Water Facility Alternatives currently under consideration.

ISSUES NOT DISCUSSED FURTHER IN THIS EIR/EIS

The Off-site Water Facilities as described in Chapter 2, “Alternatives” include the construction of new water supply conveyance and treatment infrastructure. The specific impacts associated with construction, such as air quality degradation and noise generation, as well as other construction-related impacts are addressed in each technical section throughout the “B,” or “Water” sections of Chapter 3 and Chapter 4, “Other Statutory Requirements.”

IMPACT ANALYSIS

Impacts that would occur under each of the Off-site Water Facility Alternatives are identified as follows:

NCP (No USACE Permit Alternative)

PA (Proposed Off-site Water Facility Alternative)

1 (Off-site Water Facility Alternative 1 – Raw Water Conveyance – Gerber/Grant Line Road Alignment and White Rock WTP)

1A (Off-site Water Facility Alternative 1A Raw Water Conveyance – Gerber/Grant Line Road Alignment Variation and White Rock WTP)

2 (Off-site Water Facility Alternative 2 Treated Water Conveyance – Douglas Road Alignment and Vineyard SWTP)

2A (Off-site Water Facility Alternative 2A Treated Water Conveyance – Excelsior Road Alignment Variation and Vineyard SWTP)

2B (Off-site Water Facility Alternative 2B Treated Water Conveyance – North Douglas Tanks Variation and Vineyard SWTP)

3 (Off-site Water Facility Alternative 3 Raw Water Conveyance – Excelsior Road Alignment and White Rock WTP)

3A (Off-site Water Facility Alternative 3A Raw Water Conveyance – Excelsior Road Alignment Variation and White Rock WTP)

4 (Off-site Water Facility Alternative 4 Raw Water Conveyance – Easton Valley Parkway Alignment and Folsom Boulevard WTP)

4A (Off-site Water Facility Alternative 4A Raw Water Conveyance – Easton Valley Parkway Alignment Variation and Folsom Boulevard WTP).

The impacts for each alternative are compared relative to the PA at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT **Generation of Wastewater.** *The operation of the Off-site Water Facility Alternatives would generate wastewater that would require off-site conveyance and treatment.*
3B.16-1

NCP, PA, 1, 1A, 2, 2A, 2B, 3, 3A, 4, and 4A

Implementation of the Off-site Water Facility Alternatives would not directly or indirectly exceed wastewater treatment requirements of the Central Valley RWQCB, or exceed the capacity of the SRCSD’s Folsom Interceptor. The Off-site Water Facility Alternatives would involve the use of surface water supplies, which currently meets strict drinking water standards, and therefore, the Off-site Water Facilities would not involve the use of a water supply that could otherwise contribute to a violation of any water quality standards or WDRs for SRCSD. Potential indirect effects to SRCSD’s ability to meet future WDRs and water quality standards as a consequence of growth within the SPA is broadly evaluated at a programmatic level in Section 3A.16.3 and in the context of growth-inducing impacts in Chapter 4, “Other Statutory Requirements.”

Once operational, the WTP would generate a very minor quantities of wastewater and as described and analyzed in more detail in Section 3B.9, “Hydrology and Water Quality – Water,” all solids generated from treatment-related operations would be hauled off-site and not into the sanitary sewer system. Further and in the context of the SPA and the amount of sanitary sewer conveyance and treatment capacity required to service the SPA at full buildout, the Off-site Water Facilities WTP’s additional contribution would be negligible and ultimate connection would need to occur through the trunk system constructed for the SPA. For this reason, the Off-site Water Facility Alternatives are not expected to interfere with SRCSD’s existing commitments for wastewater service and the **direct** and **indirect** impacts to existing and planned wastewater infrastructure are expected to be **less than significant**. This issue is discussed further in the context of growth-inducing impacts in Chapter 4, “Other Statutory Requirements.” *[Similar]*

The Off-site Water Facilities constructed under these alternative would connect with existing or planned sanitary sewer infrastructure and would not require additional off-site wastewater conveyance or treatment infrastructure. Therefore, no additional off-site impacts beyond those identified in “B” or “Water” sections of Chapter 3 for all the Off-site Water Facility Alternative would occur. Because the alternatives would connect with existing or planned sanitary sewer infrastructure, the **direct** and **indirect** impacts would be **less than significant**. *[Similar]*

Mitigation Measure: No mitigation measures are required.

IMPACT **Changes in Operation of the Central Valley Project Water Supply Entitlement.** *The operation of the Off-site Water Facility Alternatives would not infringe upon the water rights of other legal users of water.*
3B.16-2

NCP, PA, 1, 1A, 2, 2A, 2B, 3, 3A, 4, and 4A

The Off-site Water Facility Alternatives would involve a slight change in operation of the CVP service system to deliver water to City through the Freeport Project service area instead of NCMWC. The assigned CVP water entitlement would continue to be stored in upstream reservoirs, but would be delivered under an M&I schedule as opposed to the existing agricultural delivery schedule. Instead of diverting water at NCMWC's service area, the Off-site Water Facilities would divert CVP water at the Freeport Project intake approximately 20 miles downstream.

As described in more detail in Section 3B.9, "Hydrology and Water Quality – Water," and shown in Table 3B.9-3, the change in the current delivery schedule would result in a minor increase in the diversion of surface water during winter and spring months, however, this increase equates to less than 0.04% in relation to the minimum flows at Freeport during these months. This increase would be offset by a more substantial decrease in diversions during the months of July and August, which is the height of the irrigation season or when demands for surface water are at their highest. Notwithstanding this change in the CVP delivery schedule, the remaining changes to flows within the Sacramento River as a result of the Off-site Water Facilities area are largely attributed to the lower quantity of return water that makes it back to the river following use within the SPA as compared to the NCMWC. However, given that this minor increase would occur during periods when higher flows are present within the Sacramento River, the operation of the Off-site Water Facilities would not significantly affect other diversions within the Sacramento River and Delta, including SWP and CVP water exports. These **direct** and **indirect** impacts are considered **less than significant**. *[Similar]*

As described in Chapter 2, "Alternatives," all build-out alternatives for the SPA would require less than 5,600 AFY to supply both potable and non-potable water demands during normal and dry years. As provided in Table 3B.9-3, the purchasing and acquisition of 8,000 AFY of CVP water from NCMWC would be sufficient to accommodate demands from all uses within the SPA, including demands during dry years. The conclusions contained in the Water Supply Assessment in Appendix M further confirm these findings and provide a level of conservation that could foreseeable be less than required in the future with the passage of SB 7 in 2009. The CVP supply in question has been delivered for over the past 50 years and given that the Freeport Project diversion is an existing diversion facility north of the Delta, this supply is not subject to the controversy currently centered around conveyance through and diversion of CVP water supplies from the Delta. Additionally and as support in Chapter 2, "Alternatives," the City has entered into preliminary MOUs with the necessary parties (e.g., SCWA) required to facilitate wheeling of the secured CVP supplies. Based on these considerations, the CVP supply and conveyance agreements are considered reliable and sufficient to meet all water demands generated from uses within the SPA. Based on these circumstances, these **direct** and **indirect** impacts are considered **less than significant**. *[Similar]*

Mitigation Measure: No mitigation measures are required.

IMPACT **Potential Disruption to Existing Utilities and Infrastructure.** *Construction of the Off-site Water Facilities has the potential to disrupt existing public and private utilities and infrastructure.*
3B.16-3

NCP, PA, 1, 1A, 2, 2A, 2B, 3, 3A, 4, and 4A

Several municipal and private utilities, including those owned and operated by SCWA, PG&E, SMUD, SRCSD, and CSD-1, have existing underground utilities and future projects proposed within Zone 4 of the Off-site Water Facilities Study Area. Construction activities associated with the Off-site Water Facility Alternatives could

potentially result in a disturbance of existing utilities or conflict with planned utility projects. Without a clear understanding of the location and placement of existing utilities, including existing sanitary sewer, natural gas, and potable water lines, Off-site Water Facilities-related trenching operations could come into contact with such utilities thereby disrupting service and potentially endangering construction workers. This **direct** impact is considered **potentially significant**. **Indirect** impacts from potential service disruptions would also be **potentially significant** if the duration of the outage extend for longer than few days. *[Similar]*

Potential impacts to SCWA as a result of a reduced conveyance capacity within the Freeport Project would be minimized through the compliance with the conditions contained within the MOU between the City and SCWA as provided in Appendix M-III. Even though the MOU is a non-binding agreement, without it the Off-site Water Facility Alternatives could not occur. For this reason, **direct** and **indirect** operational impacts to SCWA would be **less than significant**. *[Similar]*

Mitigation Measure 3B.16-3a: Minimize Utility Conflicts by Implementing an Underground Services Alert.

Underground utilities and service connections shall be identified prior to commencing any excavation work through the implementation of an Underground Services Alert (USA). The exact utility locations will be determined by hand-excavated test pits dug at locations determined and approved by the construction manager (also referred to as “pot-holing”). Temporary disruption of service may be required to allow for construction. No service on such lines would be disrupted until prior approval is received from the construction manager and the service provider.

Implementation: City of Folsom Utilities Department

Timing: Prior to construction of all Off-site Water Facilities

Enforcement: Public and Private Utilities, where applicable, including: Sacramento County Sanitation District, Pacific Gas and Electric, Sacramento Municipal Utility District, City of Folsom Public Works Department, Sacramento County Department of Water Resources, Sacramento County Water Agency, City of Rancho Cordova Public Works Department, Sacramento County Roads and Airports, and Aerojet Corporation.

Mitigation Measure 3B.16-3b: Coordinate with Utility Providers and Implement Appropriate Installation Methods to Minimize Potential Utility Service Disruptions.

Prior to installation, the City shall consult with SCWA, SRCSD, CSD-1, and PG&E to determine proper installation methods and final design criteria to minimize the potential for disruptions to existing and planned utilities.

Implementation: City of Folsom Utilities Department

Timing: Prior to construction of all Off-site Water Facilities

Enforcement: Public and Private Utilities, where applicable, including: Sacramento County Sanitation District, Pacific Gas and Electric, Sacramento Municipal Utility District, City of Folsom Public Works Department, Sacramento County Department of Water Resources, Sacramento County Water Agency, City of Rancho Cordova Public Works Department, Sacramento County Roads and Airports, Golden State Water Company and Aerojet Corporation.

Implementation of Mitigation Measures 3B.16-3a and 3B.16-3b would reduce potentially significant impacts under Alternatives PA, 1, 1A, 2, 2A, 2B, 3, 3A, 4, and 4A to a **less-than-significant** level by requiring consultation with the respective utility operators to determine potential utility conflicts.

IMPACT **Increased Generation of Solid Waste.** *Construction and operation of the Off-site Water Facilities would generate solid waste, which could impact the City's ability to comply with solid waste diversion requirements of the state.*
3B.16-4

NCP, PA, 1, 1A, 2, 2A, 2B, 3, 3A, 4, and 4A

Construction of the Off-site Water Facilities would generate substantial amounts of construction debris, especially during the construction of the structural foundations, and to a lesser extent, during the installation of the conveyance pipeline. Some materials excavated during Off-site Water Facilities trenching would be used as fill materials at the WTP or storage tanks sites(s). Once collected, non-reusable solid wastes generated during construction (including recyclable materials) would be taken to the nearest Materials Recovery Facility/transfer station with non-recyclables being transferred to the Class III, Kiefer Landfill.

As provided in the affected environment discussion, Kiefer Landfill has 40 years of remaining capacity based on current disposal rates. The quantity of solid wastes generated during WTP operations would be minor, consisting primarily of domestic-type wastes, and managed on-site by the City. Sludge-handling following dewatering and drying would be land-applied as agricultural fertilizer to willing buyers or hauled to the Kiefer Landfill. Neither the total annual solid waste generated by the Off-site Water Facilities, nor the degree of increase from existing conditions, would be considered a significant level that would potentially exceed landfill capacity.

The City as part of the operation of the Off-site Water Facilities would, to the extent applicable, participate in existing recycling and waste diversion programs. The Off-site Water Facilities would ensure suitable storage locations and containers for recyclable materials in or around the project buildings and public outdoor spaces, and the design, location, and maintenance of recycling collection and storage areas. Therefore, the contribution of the Off-site Water Facilities to the overall waste stream in and of itself is not considered significant, and with continued participation and adherence to these programs, implementation of the Off-site Water Facilities would not require or result in new or expanded landfill facilities or impede the City's ability to meet mandated waste diversion requirements. These **direct** and **indirect** impacts are considered **less than significant**. *[Similar]*

Mitigation Measure: No mitigation measures are required.

IMPACT **Potential Inefficient Energy Consumption.** *Construction and operation of the Off-site Water Facilities could result in the inefficient consumption of energy thereby adversely affecting current and future energy conservation efforts.*
3B.16-5

NCP, PA 1, 1A, 3, 3A, 4, and 4A

During construction, the Off-site Water Facility Alternatives would consume energy in two general forms: 1) the fuel energy consumed by construction vehicles and equipment; and 2) bound energy used in the manufacturing and processing of construction materials such as steel, concrete, pipes, lumber, and glass. Energy in the form of fuels used for construction vehicles and other equipment would be used during site clearing, grading, and construction. Such fuel energy use would be temporary and not represent a significant or permanent commitment to the use of energy. In addition, given high fuel prices, contractors have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Though Off-site Water Facilities construction is not anticipated to occur until 2010, substantial reductions in energy inputs for construction materials can be achieved by selecting building and construction materials composed of recycled materials, which require substantially less energy to produce than from non-recycled materials. Examples of recycled building materials include the use of: 1) recycled nylon in interior carpeting; 2) recycled plastic for moldings and interior finishes; 3) fly ash in concrete; and 4) recycled rubber in asphalt. The extent to which recycled materials would be used during construction of the Off-site Water Facilities has not yet been determined.

There would also be some non-renewable petroleum-based fuel savings resulting from Mitigation Measures 3B.2-1a and 3B.2-1b in Section 3B.2, “Air Quality – Water,” which would prevent the unnecessary idling of vehicles and equipment and require that vehicles and equipment be properly maintained. In addition, a Solid Waste Diversion and Recycling Plan (or such other documentation to the satisfaction of the City) would be required to be in place that demonstrates the diversion from landfills and recycling of all non-hazardous, salvageable, and re-useable wood, metal, plastic, and paper products during construction and demolition activities. This would minimize the waste of bound energy used in the original manufacturing and processing of construction materials. Taken together, these Off-site Water Facilities characteristics and mitigation measures demonstrate that the proposed Off-site Water Facilities would assist the region in increasing its reliance on renewable, non-petroleum-based energy resources. This **direct** impact would be **potentially significant**. *[Similar]*

Off-Site Water Facilities Operations

The Off-site Water Facilities WTP, booster pump station, and distribution infrastructure would increase demands for electricity within the “Water” Study Area. Based on energy consumption calculations used to quantify greenhouse gas emissions (GHGs) and provided in Appendix M, operations of the collective Off-site Water Facilities at build-out within the SPA could require upwards of 20.7 megawatts hours (MWh) annually. This increase in energy use would represent a new demand for electricity. With the implementation of measures recommended in Mitigation Measure 3B.4-1b to minimize the generation of GHGs, these measures would also promote energy efficiency consistent with standards contained in Title 24 of the California Code of Regulations (2007) and CALGREEN, aimed at the incorporation of energy-conserving design and construction.

Existing electrical distribution infrastructure exists adjacent each of the WTP sites, and any improvements and extensions required to accommodate the Off-site Water Facilities would be limited to on-site locations and performed in consultation with SMUD prior to installation.

Because the Off-site Water Facilities would not result in an extended disruption in service provided by a utility and would be operated in the most efficient manner possible, the **potentially significant direct** impact generated by additional power supply requirements and would be reduced to a less-than-significant level. *[Similar]*

Mitigation Measures: Implement Mitigation Measures 3B.4-1a and 3B.4-1b.

2, 2A, and 2B

The impact discussion for the above alternatives, as it relates to construction-related energy consumption, would generally apply to Alternatives 2, 2A, and 2B. However, given that these alternatives further integrate the Off-site Water Facilities components with existing water supply infrastructure operated by SCWA, additional efficiencies would be expected in terms of the reduced length of the conveyance alignment, especially for Off-site Water Facility Alternative 2B, and a corresponding reduction in the need for the manufacturing and processing of construction materials such as steel, concrete, pipes, and lumber for the WTP. This **direct** impact would be **less than significant**. *[Lesser]*

Off-site Water Facility Alternatives 2, 2A, and 2B would integrate water treatment operations into SCWA’s Vineyard SWTP thereby potentially achieving additional energy efficiencies by requiring the Vineyard SWTP to

operate closer to its design capacity. However, the new power requirements generated under Alternative 2B, the most-energy efficient Off-site Water Facility Alternatives, could still exceed 7,000 MWh per year. This **direct** impact is **potentially significant**. [*Lesser*]

Mitigation Measures: Implement Mitigation Measures 3B.4-1a and 3B.4-1b.

With the application of Mitigation Measures 3B.4-1a and 3B.4-1b, the City's energy usage during construction and operation of the Off-site Water Facilities would be minimized to the maximum extent feasible and therefore the impact would be reduced to a **less-than-significant** level.

3B.16.4 RESIDUAL SIGNIFICANT IMPACTS

Construction of the Off-site Water Facility Alternatives would involve activities that could directly impact existing utility services; however, with mitigation implementation, the identified impacts would be reduced to less-than-significant levels through proper notification and coordination. Operational impacts would be minimized and addressed through interagency MOUs and therefore, are not expected to result in any residual significant unavoidable impacts to public and private utility and service systems.

Water supplies proposed for use within the SPA have a demonstrated reliability over the historic record and would not lead to further limits on other existing or potential water right users. Based on these circumstances, the proposed CVP water supply would be sufficient to accommodate projected water demands and, therefore, no residual, significant and unavoidable impacts would occur.

Construction and operation of the Off-site Water Facilities would be conditioned to be as energy efficient as feasible and would be required to maximize recycling opportunities to minimize the quantity of solid waste transported to existing landfills. Based on these circumstances, no residential, significant and unavoidable impacts related to energy use would occur.

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