4.17. UTILITIES AND SERVICE SYSTEMS

This section includes the following discussion and analysis related to utilities and service systems: existing environmental setting and regulatory context; methodology and criteria for evaluating impacts; and the results of the impact assessment, including identification of potentially significant impacts and corresponding mitigation measures to avoid or substantially lessen such impacts to the extent feasible. The Water Supply Assessment (WSA) prepared for the proposed VCIP is contained in Appendix F of this PEIR.

PEIR Scoping Comments

During the PEIR Scoping process, the District received two letters containing comments regarding utilities and service systems (see PEIR Scoping Report in Appendix A of this document). These comments are summarized below.

Pacific Coast Federation of Fishermen's Associations & Planning and Conservation League (PCL), et al.

The comment letter suggests that the proposed conversion of 130,000 acres of agricultural lands to municipal and industrial development covered by the VCIP will reduce the water needs per acre and should reduce the federal water allocation associated with these lands, and cumulatively reduce full contract quantities delivered to Westlands.

[Potential water supply impacts of VCIP implementation in relation to the existing physical environment are addressed in Section *4.17.3. Environmental Impact Analysis*, under Impact UTS-2, and Section *4.10. Hydrology and Water Quality*, under Impact HYD-2. Potential impacts of VCIP implementation on the existing physical environment related to agricultural resources are addressed in Section *4.2. Agriculture and Forestry Resources*. Matters pertaining to federal Central Valley Project (CVP) water contracts and allocations unrelated to physical impacts of VCIP implementation are outside the scope of this PEIR.]

Leadership Counsel for Justice & Accountability

The comment letter requests that the PEIR provide: "accurate information about the amount of water that will be used, where these resources will come from, and how much groundwater will remain in the aquifer as a result of the actual transition of actively irrigated land to solar. The comment letter also requests that the EIR include a holistic analysis of all water resources to be used for implementation of the VCIP, including but not limited to water used during construction, water needed for the projects, and water used for cooling of solar panels."

The comment letter requests that the District ensure any groundwater that will be utilized for implementation of the projects in the VCIP do not put the community water systems of Cantua Creek or El Porvenir at risk of being dewatered.

The comment letter requests that the PEIR analyze all potential impacts associated with implementation of the VCIP on small water systems, community water systems, and domestic wells, including but not limited to, obstructing access to groundwater, degrading groundwater quality as a result of groundwater depletion associated with VCIP implementation, and groundwater source pollution. The commenter also requests that adequate mitigation measures be included in the PEIR and not be delegated to other processes, including but not limited to local GSA mitigation programs, SAFER projects implementation, nutrient management plans, etc.
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[Potential water supply impacts are addressed in Section *4.17.3. Environmental Impact Analysis*, under Impact UTS-2, and Section *4.10. Hydrology and Water Quality*, under Impact HYD-2.]

4.17.1. Environmental Setting

Water Supply

The VCIP Plan Area lies entirely within the Fresno County portion of the District's service area. Under existing conditions, water supply for agricultural irrigation is obtained from pumped groundwater and from surface water deliveries conveyed through the District's water distribution system. Pursuant to its agricultural water service contract with the U.S. Bureau of Reclamation (USBR), the District transports untreated (i.e., raw, non-potable) water for municipal and industrial purposes to the Cities of Huron and Coalinga, the unincorporated communities of Cantua Creek, Three Rocks/El Porvenir, Five Points, and Westside/O'Neill, as well as Naval Air Station (NAS) Lemoore and various agricultural processing facilities. The untreated water is treated to drinking water standards by these entities at community or private treatment plants and distributed by their water supply lines.

For agricultural users, the primary source of irrigation water in the District is surface water from the CVP which is delivered to the District by USBR via the San Luis Canal / California Aqueduct. Under its current contract with the USBR, the District is entitled to receive 1.195 million acre-feet (AF) of surface water delivery during years when 100 percent of this CVP water is allocated. The District conveys its allocated CVP contract water to authorized end-users pursuant to its rules and regulations through a series of lateral pipes extending from the San Luis Canal to metered valves located throughout the District.

In recent years, actual deliveries of CVP contract water to the District have been dramatically curtailed. Also, passage of the Central Valley Project Improvement Act and adoption of other regulations which dedicate more water to fish and wildlife, place the District at a very low priority for water allocation during times of shortage. During the 10 years between 2015 and 2024, the District received an average of 36 percent of its CVP contract water. In 2014, 2015, 2021 and 2022, the District received "zero" allocations of CVP contract water, and in 2016 received 5 percent of its CVP contract water (WWD 2025a). To meet the irrigation requirements of planted crops under such conditions, private landowners on non-District-owned lands augment reduced CVP water supplies with pumped groundwater or by acquiring supplemental water. Since the groundwater is relatively high in salinity, the amount of groundwater that can be blended with the higher quality surface water is limited by the generally low salinity tolerance of crops. Due to the unavailability of surface water deliveries during the years noted above, combined with the quality and quantity constraints on groundwater pumping, an average of approximately 189,640 acres were idled or fallowed annually within the District between 2015 and 2024 (see Section *4.2. Agriculture and Forestry*) (WWD 2025a).

In January 2020, the District's Board of Directors adopted the Groundwater Sustainability Plan (GSP) for the 622,215-acre Westside Subbasin (Subbasin), which includes the District's entire service area of 614,700 acres. In December 2024, the District's Board of Directors adopted the 2025 Amendment to the GSP (DWR 2025). The GSP process determined that the long-term sustainable yield across the Subbasin is 305,000 AF per year

(WWD 2024b). Under the GSP, approximately 525,000 acres within the Subbasin[1] are eligible to receive a Groundwater Allocation, subject to limits on the volume of groundwater that can be pumped in a given year without negative impacts identified in the GSP. The groundwater allocation program includes a "transition period" from 2022 to 2030, in which a uniform annual allocation was initially established at 1.3 AF/acre and then, starting in 2024, is subsequently reduced each year by 0.1 AF/acre until 2030 when the allocation would reach 0.6 AF/acre (WWD 2021a, 2024a, DWR 2025a). For purposes of this PEIR, the available groundwater supply for the Plan Area is assumed to be 0.6 AF per acre per year, as construction would be projected to start in 2028, with full buildout in 2038. (See Appendix F of this PEIR and Section *4.10. Hydrology and Water Quality*, item 'e', for a full discussion of the District's GSP, including its 2025 GSP Amendment.)

Wastewater Collection and Treatment

There are two community wastewater collection and treatment systems within the VCIP Plan Area. These are in the communities of El Porvenir/Three Rocks and Cantua Creek where wastewater services are provided by County Service Area No. 30 and 32, respectively, and are operated by the Fresno County Department of Public Works. The wastewater systems include community sewer systems, package treatment plants, and disposal lagoons (Fresno County 2023b). The Harris Ranch Resort and other commercial centers on Interstate 5 (I-5) also have larger wastewater systems. The communities of O'Neill Ranch/Westside and Five Points are served by individual septic systems, as are the individual rural dwellings, ranches, and agricultural processing facilities in the Plan Area. The adjacent and nearby communities with large wastewater collection and treatment systems include the cities of Mendota, Coalinga, and Huron, and NAS Lemoore.

For solar projects in rural areas of Fresno County that include permanent on-site employees, the wastewater disposal needs are typically met by individual septic systems installed adjacent to Operations and Maintenance (O&M) buildings, and are designed, constructed, and operated in accordance with the Fresno County Plumbing Code and the design criteria of the Fresno County Local Area Management Program (LAMP) as approved by the State Water Resources Control Board (SWRCB) (Fresno County 2019a).

Storm Water Drainage

There are no structural storm drainage facilities within the Plan Area. The terrain of the Plan Area is virtually flat, with an average gradient of 0.4 percent. During normal rain events, stormwater on open land typically percolates into the soil, and runoff from paved roads drains to adjacent agricultural lands or earthen swales. During more intense or prolonged storm events, the ground becomes saturated and relatively small volumes of stormwater temporarily pond on the surface and gradually percolate into the ground, and some areas drain to adjacent canals and drainage ditches. Some of the existing large solar facilities in the Plan Area include stormwater basins to capture on-site runoff.

Electric Power

Pacific Gas and Electric Company (PG&E) is an investor-owned utility company that provides electrical service throughout Plan Area, including to power the agricultural groundwater wells, from its existing system of 12-kV distribution lines. Several PG&E high voltage transmission lines pass through the Plan Area, including two 230-kV lines and a 500-kV line running parallel to I-5, as well as several other 230-kV lines and medium-voltage

[1] All groundwater users receive a pro rata allocation of the Subbasin's sustainable yield based on the user's gross acreage within the Subbasin pursuant to Water Code section 10726.4(a)(2).

lines running through the interior of the Plan Area. PG&E operates two major regional substations in the Plan Area, including the Gates Substation on W. Jayne Avenue and the Panoche Substation on N. Panoche Road, as well as several smaller substations dispersed throughout the Plan Area.

Natural Gas and Crude Oil

The Plan Area is entirely within the service area of PG&E, which operates the following pipelines in the Plan Area: 1) A 33-42-inch diameter trunk pipeline running parallel to I-5 on the east, including two compressor stations; 2) several 12-26-inch diameter pipelines branching off the main pipeline to the east and northeast to Fresno and Mendota areas; 3) several 13-18-inch diameter pipelines branching off the main pipeline to serve the cities of Coalinga, Huron, Mendota and others in the Plan Area vicinity (PG&E 2025). A non-PG&E natural gas transmission pipeline, owned by the Energy Operations Management Corporation, branches off the main PG&E pipeline near W. Nebraska Avenue and heads north through the north-central portion of the Plan Area. A major crude oil pipeline runs through the western margin of the Plan Area along the base of the Diablo Range (US DOT 2024).

Telecommunications

The Project area is located within AT&T's service territory for land-based telephone service, and includes internet and TV connections. Comcast Xfinity provides cable, internet and phone service in the urbanized areas of Fresno County. Wireless telephone service is available from Verizon Wireless, AT&T, Sprint, and T-Mobile. Wireless internet is available from Unwired Broadband.

Solid Waste

Solid waste collection and disposal service in Fresno County is the responsibility of the Fresno County Resources Division. The County operates one active solid waste facility at the American Avenue Disposal Site, located on W. American Avenue approximately 6 miles east of Tranquillity. This facility is a Class III landfill that accepts all types of solid waste and recycling, including household hazardous waste, and construction and demolition material (CalRecycle 2024c). The American Avenue Landfill has a maximum permitted disposal rate of 2,200 tons per day, and as of January 2022 had a remaining capacity of approximately 17,970,000 cubic yards. It is estimated that the landfill will reach capacity in 2043 (Fresno County 2023b).

Commercial solid waste is collected by private contract with licensed haulers. Mid Valley Disposal (MVD) provides solid waste and recycling services in Fresno County. MVD operates a Materials Recovery Facility (MRF) & Transfer Station in Kerman, which accepts construction debris.

4.17.2. Regulatory Context

The following is an overview of the principal statutes, regulations, plans and programs related to utilities and service systems that may apply to the VCIP.

Federal

There are no federal laws, orders, regulations, or standards related to utilities and service systems that are applicable to the VCIP.

State

Senate Bills (SB) 610 (Water Supply Assessments)

Enacted in 2001, SB 610, codified as Water Code section 10910 et seq., requires detailed analysis of water supply availability for certain types of plans and projects as part of the CEQA review process. As more particularly described in Appendix F, the primary purpose of a WSA is to determine if there is sufficient water supply to meet the projected demands of a project under normal, single dry, and multiple dry water years during a 20-year projection. WSAs address the reasonably foreseeable impacts of supplying water to a project, particularly those on an existing public water system. Under SB 610, a "public water system" is a system that provides potable piped water to the public for human consumption and has 3,000 or more service connections (Wat. Code, §§ 10912(c), 10910(b).) As part of this analysis, SB 610 asks whether there is a current Urban Water Management Plan (UWMP) that accounts for a project's demand. A "urban water supplier" is a publicly or privately owned supplier that provides potable water for municipal purposes to more than 3,000 customers or supplies more than 3,000 AF annually. (Wat. Code, § 10617.)

The Plan Area is located within the boundaries of the District, which provides irrigation water to users within its jurisdiction. The District also delivers non-potable, untreated surface water to municipal and industrial (M&I) users. The M&I purposes include but are not limited to single family dwellings, farm housing, commercial operations, industrial operations, military, and state institutions. As such, the District is not a "public water system" under SB 610 because it does not provide piped water to the public for human consumption. (Wat. Code, § 10912(c).) There is no UWMP that accounts for the project's water demands. Because the District does not provide potable municipal water to more than 3,000 customers or supply more than 3,000 AFY of treated piped water, it is not an urban water supplier and is not required to prepare an UWMP. (Wat. Code, §§ 10617, 10620.)

Under SB 610, cities and counties must incorporate a WSA[2] into any CEQA document for the following projects:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.

[2] While the District is not a city or county, it prepared a WSA for the VCIP for informational purposes.

7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(Wat. Code, § 10912; see Cal. Code Regs., tit. 14 (CEQA Guidelines), § 15155.)

As provided in Appendix F, the average water demand by a 500 dwelling unit project in the vicinity of the proposed VCIP is 168 acre-feet per year (AFY). The VCIP's maximum water demand would be 2,227 AFY, which would be required during four years of peak construction and decline through the remainder of the construction period. The VCIP's maximum annual operational demand would be 514 AF, which would occur after all construction is completed around year 2039. As these demands would exceed the amount of water required by a 500 dwelling unit project, the VCIP meets the definition of a "project" for which a WSA is required. As such, a WSA was prepared as Appendix F of this PEIR, and its findings and conclusions are summarized under Impact UTS-2, later in this section.

Sustainable Groundwater Management Act

In September 2014, Governor Brown signed the Sustainable Groundwater Management Act (SGMA). The goal of the legislation is to, among other things, provide for the "sustainable management" of California's groundwater basins (i.e., the management and use of groundwater in a manner that can be maintained during SGMA's planning and implementation horizon without causing specified "undesirable results") and to "enhance local management of groundwater" (Wat. Code, §§ 10720.1, 10721(v)). SGMA requires a designated groundwater sustainability agency (GSA) to prepare a GSP for each high- or medium-priority basin (or subbasin), with adoption deadlines of 2020 or 2022 depending on the basin's priority. Critically overdrafted basins and subbasins are required to prepare and be managed under a GSP by January 31, 2020. (Wat. Code, § 10720.7(a)(1).)

As the primary water purveyor in the Westside Subbasin (Subbasin), the District is the designated GSA for the Subbasin. Fresno County serves as the GSA for the portions of the Subbasin that are within the County's jurisdictional boundaries, including the areas within the City of Huron's jurisdictional boundaries, but outside the boundaries of the District. The California Department of Water Resources (DWR) has designated the Subbasin as a critically overdrafted basin. The District, in cooperation with the County, prepared the "Westside Subbasin Groundwater Sustainability Plan" (the GSP), which the County and the District adopted on January 7 and January 8, 2020, respectively. The District adopted revisions to the Westside GSP on June 21, 2022. DWR approved the Westside GSP, as revised, on August 4, 2023. Pursuant to SGMA, the District prepares Annual Groundwater Status Reports that it provides to DWR and all groundwater pumpers. On December 17, 2024, the District approved its 2025 update to its GSP (2025 GSP Amendment), which was submitted to DWR on January 23, 2025 (DWR 2025a).

The purpose of the GSP is to characterize groundwater conditions in the Subbasin, evaluate and report on conditions of overdraft, establish sustainability goals and sustainability management criteria, and describe projects and management actions the GSA intends to implement to achieve sustainability by 2040 and thereafter within the GSP's planning and implementation horizon (i.e., to 2070).

California Water Code

Water Code section 13751 requires a "Report of Well Completion" to be filed with DWR within 60 days of well completion. New wells must comply with DWR's well standards as described in Water Resources Bulletins 74-81 and 74-90.

California Integrated Waste Management Act

Under the California Integrated Waste Management Act, local jurisdictions must submit solid waste plans to California's Department of Resources Recycling and Recovery (CalRecycle), and must demonstrate, over a five-year reporting cycle, that at least 15 years of landfill capacity remains available in the jurisdiction. The Act also set in place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen), part 11, title 24 of the California Code of Regulations (CCR), sets forth requirements for disposal and recycling of hazardous and universal wastes. Specific standards and requirements are included for the identification, collection, transport, disposal, and recycling of hazardous wastes. These include universal wastes, such as batteries, electronic devices, mercury-containing equipment, lamps, cathode ray tubes, and aerosol cans. Requirements are detailed for recycling, recovery, returning spent items to the manufacturer, or disposal at an appropriately permitted facility.

Photovoltaic Modules – Universal Waste Management Regulations

In 2015, SB 489 was enacted to add section 25259 to Health and Safety Code, Division 20, Chapter 6.5, Article 17, which authorizes the DTSC to adopt regulations to designate end-of-life photovoltaic modules that are identified as hazardous waste as a universal waste and subject those modules to universal waste management. In late 2020, the California Office of Administrative Law (OAL) approved regulations, effective January 1, 2021, for managing PV modules as universal waste. The adopted regulations include specific requirements for handling, transport, treatment, and disposal of discarded PV modules (CCR, tit. 22, §§ 66260.10 et seq.). This allows PV modules to be accepted by universal waste handlers for recycling and treatment (DTSC 2025a).

Utility Notification Requirements

Government Code section 4216 et seq. requires owners and operators of underground utilities to become members of, participate in, and share the costs of a regional notification center for excavation projects. Underground Service Alert North (USA North) covers northern and central California and is the notification center for Fresno County. Its purpose is to provide an effective damage prevention service that protects essential underground services and utilities. It receives planned excavation reports and transmits the information from these reports to all participating members with underground facilities at the location of excavation. The USA North members mark or stake their facilities, provide information, or give clearance to dig following the notifications (USA North 2020).

Westlands Water District

The District provides water services to landowners and water users in western Fresno and Kings Counties. These water services include the sustainable management and delivery of water supply, as well as the provision of ongoing education, advanced technology and innovative conservation methods.

A key component of the District's Water Management Plan is water conservation (WWD 2019a). This program consists of the following elements:

- Irrigation Guide for water requirements per crop
- Water Conservation and Management Handbook
- Workshops and meetings on water management information
- Technical assistance and conservation computer programs
- Meter repair and update program
- Groundwater monitoring
- Pump efficiency tests
- Conjunctive use of supplies
- Irrigation System Improvement Program
- Satellite imagery purchased about once every two weeks

The District serves as the GSA for the Subbasin pursuant to SGMA. It is the District's responsibility under SGMA to: prepare a GSP which characterizes groundwater conditions in the Subbasin, evaluate and report on conditions of overdraft, establish sustainability goals and sustainability management criteria, and describe projects and management actions the GSA intends to implement to achieve sustainability by 2040.

Fresno County

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024b) contains the following goals and policies related to utilities and service systems that may be relevant to implementation of the VCIP:

Public Facilities and Services Element

A. General Public Facilities and Services

Goal PF-A To ensure the timely development of public facilities and to maintain an adequate level of service to meet the needs of existing and future development.

Policy PF-A.2 **Facilities and Services**
The County shall ensure through the development review process that public facilities and services will be developed, operational, and available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the applicant can demonstrate that all necessary public facilities will be installed or adequately financed and maintained (through fees or other means).

C. Water Supply and Delivery

GOAL PF-C To ensure the availability of an adequate and safe water supply for domestic and agricultural consumption.

Policy PF-C.12 Limited Ground Water
In those areas identified as having severe groundwater level declines or limited groundwater availability, the County shall limit development to uses that do not have high water usage or that can be served by a surface water supply.

Policy PF-C.16 Water Supply Evaluation
The County shall, prior to consideration of any discretionary project related to land use, require a water supply evaluation be conducted. The evaluation shall include the following:

a. A determination that the water supply is adequate to meet the highest demand that could be permitted on the lands in question. If surface water is proposed, it must come from a reliable source and the supply must be made "firm" by water banking or other suitable arrangement. If groundwater is proposed, a hydrogeologic investigation may be required to confirm the availability of water in amounts necessary to meet project demand. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required.
b. If use of groundwater is proposed, a hydrogeologic investigation may be required. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required. Should the investigation determine that significant pumping-related physical impacts will extend beyond the boundary of the property in question, those impacts shall be mitigated.
c. A determination that the proposed water supply is sustainable or that there is an acceptable plan to achieve sustainability. The plan must be structured such that it is economically, environmentally, and technically feasible. In addition, its implementation must occur prior to long-term and/or irreversible physical impacts, or significant economic hardship, to surrounding water users.

Policy PF-C.23 Water Conservation Technologies
The County shall require that all new development within the county use water conservation technologies, methods, and practices as established by the County.

D. Wastewater Collection, Treatment, and Disposal

GOAL PF-D To ensure adequate wastewater collection and treatment and the safe disposal of wastewater.

Policy PF-D.6 On-site Sewage Disposal Systems
The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other

health hazards and where community sewer service is not available and cannot be provided.

E. Storm Drainage and Flood Control

GOAL PF-E To provide efficient, cost-effective, and environmentally-sound storm drainage and flood control facilities that protect both life and property and to divert and retain stormwater runoff for groundwater replenishment.

Policy PF-E.5 **Impacts to Flood Control Facilities**
The County shall only approve land use-related projects that will not render inoperative any existing canal, encroach upon natural channels, and/or restrict natural channels in such a way as to increase potential flooding damage.

Policy PF-E.6 **Drainage Facility Construction**
The County shall require that drainage facilities be installed concurrently with and as a condition of development activity to ensure the protection of the new improvements as well as existing development that might exist within the watershed.

Policy PF-E.9 **100-Year Flood Protection**
The County shall require new development to provide protection from the 100-year flood as a minimum.

Policy PF-E.11 **Natural Site Drainage Patterns**
The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.

Policy PF-E.14 **Retention-Recharge Basins**
The County shall encourage the use of retention-recharge basins for the conservation of water and the recharging of the groundwater supply.

Policy PF-E.16 **Minimal Sedimentation and Erosion**
The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.

Policy PF-E.20 **Storm Water Drainage Discharges**
The County shall require new development of facilities near rivers, creeks, reservoirs, or substantial aquifer recharge areas to mitigate any potential impacts of release of pollutants in flood waters, flowing rivers, streams, creeks, or reservoir waters.

Policy PF-E.21 **Best Management Practices**
The County shall require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and shall encourage the urban storm drainage systems and agricultural activities to use BMPs.

F. Landfills, Transfer Stations, and Solid Waste Processing Facilities

GOAL PF-F To ensure the safe and efficient disposal or recycling of solid waste generated in the county in an effort to protect the public health and safety.

Policy PF-F.1 **Solid Waste Source Reduction**
The County shall continue to promote maximum use of solid waste source reduction, reuse, recycling, composting, and environmentally-safe transformation of wastes.

Policy PF-F.5 **County Integrated Waste Management Plan**
The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.

Open Space and Conservation Element

A. Water Resources

GOAL OS-A To protect and enhance the water quality and quantity in Fresno County's streams, creeks, and groundwater basins.

Policy OS-A.18 **Groundwater Quality Protection**
The County shall protect groundwater resources from contamination and overdraft by pursuing the following efforts.

a. Identifying and controlling sources of potential contamination;
b. Protecting important groundwater recharge areas;
c. Encouraging water conservation efforts and supporting the use of surface water for urban and agricultural uses wherever feasible;
d. Encouraging the use of treated wastewater for groundwater recharge and other purposes (e.g., irrigation, landscaping, commercial, and non-domestic uses);
e. Supporting consumptive use where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area;
f. Considering areas where recharge potential is determined to be high for designation as open space; and
g. Developing conjunctive use of surface and groundwater.

Policy OS-A.23 **Wastewater Treatment Standards**
The County shall only approve new wastewater treatment facilities that will not result in degradation of surface water or groundwater. The County shall require treatment to tertiary or higher levels.

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Fresno County Solar Facility Guidelines

The Fresno County Solar Facility Guidelines (Fresno County 2017c) contain the following provision pertaining to utilities and service systems:

> Information shall be submitted that identifies the source of water for the subject parcel (surface water from irrigation district, individual well(s), conjunctive system). If the source of water is via district delivery, the applicant shall submit information documenting the allocations received from the irrigation district and the actual disposition of the water (i.e. utilized on-site or moved to other locations) for the last ten years. If an individual well system is used, provide production capacity of each well, water quality data and data regarding the existing water table depth[.]

The WSA prepared for the proposed VCIP is contained in Appendix F of this PEIR, and is summarized under Impact UTS-2 below.

Fresno County Local Agency Management Program (LAMP)

Pursuant to Water Code section 13291(b)(3), the Fresno County Local Agency Management Program (LAMP) was established in 2017 to regulate the design, installation, and operation of on-site wastewater treatment systems (OWTS) within the County. The program covers septic tank and leachfield systems for the treatment and disposal of wastewater where conveyance to public sanitary sewers is not available. The Fresno County Public Works and Planning Department is responsible for review and approval of proposed septic systems to ensure compliance with all applicable standards to avoid impacts to groundwater quality (Fresno County 2019a).

Fresno County Construction and Demolition Debris Recycling Program

The Fresno County Construction and Demolition (C&D) Debris Recycling Program is intended to implement the requirements of AB 939, as codified in the CALGreen Code, for achieving 65 percent reduction of C&D waste hauled to landfills. The program requires projects to submit a Waste Management Plan under which the applicant is to generate a waste log during construction and demolition. The reporting of C&D waste generation must include documentation of at least 65 percent diversion prior to issuance of Certificates of Occupancy for projects (Fresno County 2017a).

4.17.3. Environmental Impact Analysis

METHODOLOGY

This section evaluates potential impacts of VCIP implementation related to utilities and service systems based on a review of maps, plans, and published documents that may be relevant to the VCIP Plan Area, including: the General Plan and "General Plan Background Report" for Fresno County; reports and data from the SWRCB and its Regional Boards, CalRecycle, DTSC, and U.S. Environmental Protection Agency (EPA); plans, reports, and data from the District; and other published sources cited in Section *4.17.4. References*. The analysis also considers current policies and regulatory requirements that may apply to VCIP projects, including those

identified in *Section 4.17.2. Regulatory Context*, above. The evaluation of sufficiency of water supply to serve the VCIP is based on the WSA contained in Appendix F of this PEIR.

SIGNIFICANCE CRITERIA

Based on Appendix G of the state CEQA Guidelines, implementation of the VCIP would be considered to result in a potentially significant impact related to utilities and service systems if it would:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications, the construction or relocation of which could cause significant environmental effects.

b. Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.17.3.1. DIRECT AND INDIRECT EFFECTS

Impact UTS-1. Relocation or Construction of New or Expanded Utility Services

Implementation of the VCIP Energy Resource and Infrastructure Plans would not require or result in the relocation or construction of new or expanded facilities for water, wastewater treatment facilities or stormwater drainage, electric power, natural gas, or telecommunications, the construction or relocation of which could cause significant environmental effects; therefore, the impact would be *less-than-significant*. (*Less-than-Significant Impact*)

Water Treatment

Water used during the construction and decommissioning phases would generally come from groundwater within the District or water procured from other CVP or State Water Project contractors. This water would be used for dust control and soil conditioning. Construction water for potential VCIP projects on private lands would likely come from groundwater wells on the project sites or from its larger farm holding. Construction water for projects on District-owned lands would likely be purchased (via a District-approved groundwater transfer) from agricultural lands in the vicinity which are eligible for groundwater allocation, or from surplus

District surface supplies (if available), or purchased from other sources. All construction water would be conveyed to the potential project sites via the District's water distribution pipeline system. This water would be stored in mobile tanks, which would be removed upon completion of both construction and decommissioning. During construction and decommissioning, drinking water for workers would be provided by bottled water delivered by truck.

During project operations, water would be used for maintenance activities and panel cleaning. On District-owned lands, potential VCIP projects would be eligible to receive M&I surface water deliveries through the District's existing conveyance system to meet operational demands. For solar and energy storage facilities located on privately-owned lands, operational water supplies would be provided by the underlying landowner from its surface and/or groundwater allocations. If the District cannot provide the surface water supply from its CVP contract, operational water would be obtained from existing on-site agricultural wells or from surface water transferred into the District. This water would also be conveyed to each project site through the District's existing facilities.

During facility operations, potable water would be delivered monthly by vendors to refill on-site water storage tanks used to provide water for drinking, hand washing, and toilet flushing. Therefore, no new, expanded, or relocated water supply or treatment facilities would be required for VCIP implementation, and as such there would be *no impact* associated with the relocation or construction of such facilities. During operations, potable water for domestic uses would be delivered to the facility by a water delivery service. The typical 250 MW solar plus energy storage facility would include a water storage tank for potable water, which would provide for drinking, hand washing, and toilet flushing at the O&M building. The water tank would be refilled regularly at a rate of approximately 5,000 gallons per month (i.e., the capacity of a standard water tanker truck). The potable water would be delivered to the O&M building through water pipes connecting the on-site water tank to the building.

(See Impact UTS-2 below for a detailed discussion of water supply.)

Wastewater Treatment

During construction and decommissioning of the VCIP energy and infrastructure projects, the sanitary needs of workers would be provided by portable chemical toilets which would be serviced by a licensed contractor as needed. During project operations, the typical 250-MW solar and energy storage facility would include an O&M building with sanitary facilities for permanent operational staff and for workers who would regularly be on-site for routine inspection, maintenance, and repair tasks. These sanitary facilities would be connected to an adjacent septic tank and leachfield system. The substations, gen-tie lines and transmission lines would not involve permanent staff and would not require wastewater treatment for operations.

The design and construction of septic systems are regulated under the Fresno County LAMP, which sets forth design criteria and standards for their installation. It is expected that the typical solar facility/BESS would have 10 operational staff on-site per day, along with a daily average of five occasional maintenance workers, for a daily average of 15 workers in total. Based on a peak wastewater generation rate of 50 gallons per day (gpd) per person, the average peak daily volume of wastewater generated would be approximately 750 gallons. This is well below the 2,500 gpd threshold where Waste Discharge Requirement (WDRs) would be required for a small community system from the Regional Water Quality Control Board (RWQCB). The septic and leachfield systems at the VCIP facilities may be subject to the approval of the Fresno County Department of Public Works

and Planning, which would ensure compliance with all applicable standards to avoid impacts to groundwater quality (Fresno County 2019a). Therefore, the potential impacts associated with the on-site wastewater treatment systems for VCIP energy projects would be *less than significant*.

Stormwater Drainage

Most VCIP facilities would not require stormwater drainage facilities. Under current conditions, rainfall percolates into the soil with little or no runoff. The terrain of the Plan Area is virtually flat, with an average gradient of 0.4 percent, and implementation of the VCIP projects would not substantially modify existing site grades. The solar facilities would introduce very few structural elements with impervious surfaces that would impede direct percolation of rainwater into the soil. The equipment pads and small parking area would result in less than 1 percent impervious surface coverage of the site, with over 90 percent of the typical project site retained in vegetated cover and 9 percent devoted to permeable gravel driveways. During normal rain events, runoff from impervious surfaces would be absorbed by the adjacent vegetated ground and percolate into the soil. During more intense or prolonged storm events, the ground would become saturated and insubstantial volumes of stormwater may temporarily pond on the surface and gradually percolate into the soil, as occurs under existing conditions. Due to the virtually level ground conditions, the low levels of precipitation within the Plan Area (approximately 6 to 8 inches per year), and the very limited introduction of impervious surfaces to the site by the typical solar project, the potential for stormwater to be mobilized and concentrated in sustained runoff flows is unlikely to occur.

Some VCIP facilities, like stand-alone energy storage facilities and collection substations, may involve coverage of proportionally larger areas of their sites with impervious surfaces than discussed above for solar PV facilities. Depending on the circumstances of each potential project, site grading may be designed to direct increased stormwater runoff to on-site detention basins where the stormwater would percolate into the soil or evaporate.

The gen-tie and transmission lines would have very small footprints at the base of the towers, and thus would not generate increased runoff requiring stormwater drainage systems.

As discussed in Section *4.10. Hydrology and Water Quality*, Fresno County Ordinance Code chapter 17.64 (drainage of land) requires projects to provide for control of drainage, stormwater runoff, and prevention of erosion and sedimentation. As applicable, these requirements would be implemented during review of construction plans and specifications prior to issuance of grading and building permits. Grading and construction activities would also be subject to BMPs for erosion and sedimentation as specified in SWPPPs required for each project by the Regional Board. If subject to chapter 17.64, a project proponent must retain a qualified civil engineer to prepare a hydrology study which would determine potential flood depths at the site and make recommendations for avoiding or mitigating potential flooding impacts. As provided in Section *4.10 Hydrology and Water Quality*, it is anticipated that all inverter/transformer pads installed under VCIP projects would be located on raised foundation pads above the calculated flood elevations. Potential VCIP projects may also include recommendations for placement of detention basins along the project boundary to capture any overland stormwater flows and to provide flood storage for overbank flows from adjacent canals. Thus, any increase in storm flows would be accommodated by drainage infrastructure to be incorporated into the project. Therefore, the VCIP facilities would not require the construction of new or expanded stormwater drainage facilities beyond the boundaries of each VCIP project, and there would be *no impact* associated with the construction of such facilities.

Electric Power

The VCIP projects would consist of power generating facilities and supporting infrastructure. Electric service from the existing PG&E system would be required for certain project phases. During construction, the VCIP energy projects and collection substations would receive service power from the existing electrical distribution lines that run through the Plan Area. The gen-tie and transmission lines would not require incidental or auxiliary power supply, except as may be provided by portable generators for some aspects of construction. During project operations, the solar facility would have service power available from PG&E's local distribution system when the project is not powered by on-site generation. During decommissioning, the service connections to PG&E's system would remain in place until they are no longer needed. The impacts associated with installation and removal of electrical service connections to the VCIP projects would be *less than significant*.

Natural Gas

The VCIP energy and infrastructure projects would not require the use of natural gas for power generation, facility operations or other purposes. Since the solar project would not require the installation of new natural gas facilities, there would be *no impact* associated with the construction of such facilities.

Telecommunications

Telecommunications to the VCIP energy facilities and collection substations would likely be provided via fiber-optic cable. Alternatively, telecommunications may be conducted wirelessly, in which case a telecommunications tower up to 100 feet tall would be included at the O&M facility. The installation of fiber optic cable or a telecommunications tower would not result in significant environmental impacts due to their insubstantial nature and very limited potential effects on existing conditions. The VCIP gen-tie and transmission lines would not require communications facilities. Therefore, the impacts associated with the installation of telecommunications facilities for the VCIP facilities would be *less than significant*.

Mitigation Measures: **No mitigation is required.**

Impact UTS-2. Sufficient Water Supplies to Serve the Project

There are sufficient water supplies available to serve the implementation of the VCIP Energy Resource and Infrastructure Plans during normal, dry and multiple dry years during a 20-year projection, in addition to existing and reasonably foreseeable future uses; therefore, the impact would be *less-than-significant*. (*Less-than-Significant Impact*)

A WSA pursuant to SB 610 was prepared for the proposed VCIP, which is contained in Appendix F of this PEIR. The WSA concluded that a combination of available groundwater supplies from the Subbasin and the District's surface water supplies would be sufficient to meet projected water demands for the construction and

operation of VCIP projects over a 20- year planning horizon, in addition to the demand from existing and other planned future uses. No supply deficiencies are expected in normal, dry, and multiple dry years for operation of the VCIP energy and infrastructure projects (WRP 2025).

Construction Water Demand and Supply

Water Demand

The total water demand from construction of VCIP energy and infrastructure projects would be approximately 20,838 AF over approximately 136,000 acres, or an average of 0.153 AF per acre (see Table 2 in GSA in Appendix F of this PEIR).

It is estimated that the full buildout of the VCIP Energy Resource Plan would require a total of 20,400 AF of groundwater for construction during the 10-year buildout period. Between years 2029 through 2032, construction demands would peak at 2,227 AFY, with approximately 14,771 acres of construction during each of these peak years. During the grading and construction for solar and energy storage projects, water would be regularly applied to exposed soils and internal access driveways for dust suppression. During earthwork, water would also be required in soil conditioning for optimum moisture content. As discussed in Chapter *2. Project Description*, it is estimated that a typical 250-MW solar project (with 250-MW battery storage facility) would require a total of 240 AF of water (at 0.15 AF per acre)[3] over an approximately 1,600-acre site during its one-year construction period. This volume of groundwater use represents 25 percent of (i.e., four times less than) the 0.6 AF per acre per year allocation established by the GSP to achieve sustainable groundwater management and ensure pumping is within the long-term sustainable yield by 2040 through 2070. This allocation is designed to ensure pumping can continue during all water year types from 2030 through 2070. Thus, because the groundwater demands associated with VCIP construction would be significantly lower than the allocation established by the GSP, this groundwater supply would be available during all water year types for a 20-year projection.

As described in Chapter *2. Project Description*, the VCIP infrastructure (collection substations, gen-tie lines, and connecting transmission lines) would involve the temporary disturbance of about 2,920 acres. Assuming the water usage rate would be similar to construction of the VCIP solar and energy storage facilities, or 0.15 AF per acre, the total water demand for infrastructure construction would be approximately 438 AF over a 10-year construction period.

Bottled water would be provided to the construction workers for consumption. Water is not needed for sanitary needs during construction; portable chemical toilets would be provided and serviced as needed by a private contractor.

Water Supply

Construction water would generally come from groundwater within the District or water procured from other CVP or State Water Project contractors. For the construction of solar energy generation and infrastructure projects on both private and District-owned lands, groundwater in the Subbasin is considered available and reliable under normal water years, a single dry water year, and multiple dry years, as shown in Table 8 of Appendix F of this PEIR.

For VCIP development on privately-owned lands, the water supplies for construction would be obtained from agricultural wells on the project site or nearby. Potential VCIP projects located on privately owned lands would be located on lands that are registered for a groundwater allocation pursuant to the GSP and the District's Rules and Regulations. Based on the long-term groundwater pumping limit of 0.6 AF/acre per year (AFY/acre) established under the GSP, the overall

[3] Based on actual water volume consumed during construction of three utility-scale solar projects in Kings County with a combined generating capacity of 650 MW. Average construction water consumption for the three projects was 0.09 AF/ac. The demand factor is based on the highest consumption of 0.15 AF/ac for the Aquamarine Solar Facility during 2021 (a very dry year)(Biller 2024-2025).

pumping limit on 64,000 acres of solar facilities on private lands would be 38,400 AFY, which would be more than sufficient to provide for the total construction water demands projects on those lands. For comparison, construction water demands for VCIP implementation would peak at 2,227 AFY; this is below the pumping limitation of 8,863 AFY calculated based on the 0.6 AFY groundwater allocation on 14,771 acres of construction or decommissioning during each of these peak years.

Construction water for projects on District-owned lands would likely be purchased (via a District-approved groundwater transfer) from agricultural lands in the vicinity which are eligible for groundwater allocation, or from surplus District surface supplies (if available), or purchased from other sources. As more particularly described in Appendix F, pursuant to Article 1 of the District's Rules and Regulations, projects on District-owned land may purchase groundwater credits from private landowners and extract that water from wells located on District-owned land or transfer the groundwater via a pipeline to a project located on District-owned land. Transferred groundwater credits may be extracted from District-owned land, including from abandoned wells, or transferred to District-owned lands from private wells. Thus, unused groundwater allocations (or carryover credits) from privately owned lands within the DFAs may be transferred to District-owned lands. However, given the broad distribution of District-owned lands throughout the Plan Area, this groundwater supply could come from anywhere in the District, but most likely would come from lands adjacent to or near the District-owned lands in northern and eastern portions of the Plan Area. Thus, while District-owned lands could also purchase water from outside the District and have it delivered to the project site via the District's water distribution system in some years, groundwater would be available to meet all construction demands on these lands.

In summary, as discussed above in Section *4.17.2. Regulatory Context*, the GSP for the Subbasin has established a long-term limit on groundwater pumping at 0.6 AFY per acre. The GSP and the District's Rules and Regulations also allow groundwater transfers to projects on District-owned lands. Given that construction water demand represents a one-time use of water, to be applied for less than one year at each location, the overall construction demand is expressed as 0.153 AF per acre. Thus, for projects solely dependent on groundwater, in the construction year that groundwater is used at any given location, the demand of 0.153 AF per acre would be well within the GSP allocation of 0.6 AF per acre per year. Therefore, sufficient groundwater is available to supply construction water demands for full VCIP implementation during all water year types, and the impact of VCIP construction upon available water supplies would be *less than significant*.

Operational Water Demand and Supply

Water Demand

During operation of each solar facility, non-potable water would be required for activities such as panel cleaning, watering sheep, washing or rinsing equipment, and other operational uses. As described in Chapter *2. Project Description*, the combined water usage from all operational activities is estimated to be 6.05 AF per year over a typical 1,600-acre project site, or 0.004 AF per acre per year, or 0.64 AF per quarter-section (160 acres). Implementation of all solar/BESS facilities under the proposed VCIP would result in cumulative operational water demands of 514 AF. For context, the average rate of applied water for agricultural irrigation within the District is approximately 2.6 AFY per acre (or 416 AFY per quarter section).

Potable water for domestic uses would be delivered to the facility by a water delivery service. The typical 250 MW solar plus energy storage facility would include a water storage tank for potable water, which would provide for drinking, hand washing, and toilet flushing at the O&M building. The water tank would be refilled regularly at a rate of approximately 5,000 gallons per month (i.e., the capacity of a standard water tanker truck), for a total of approximately 16 AFY for full VCIP implementation. The potable water would be provided by a commercial supplier who would purchase it from a municipal water source outside the Subbasin. Given the small quantities of potable water that would be required and

multiple water delivery services within the vicinity of the Plan Area, there are sufficient supplies to meet all potable water demands.

Water Supply

Depending on land ownership, it is anticipated that operational water would be obtained from a combination of existing agricultural wells in the Plan Area, surface water provided by the District for projects on District-owned and private land, and supplemental surface supplies procured by the District and private landowners.

For potential VCIP projects on existing District-owned lands, the District would provide operational supplies with M&I surface water deliveries through its existing system of lateral pipelines. These lands are eligible for allocation or delivery of water under Reclamation law and any applicable District Regulation as described in *Article 2, Regulations for the Allocation and Use of Agricultural Water within Westlands Water District*, as revised September 2023, and *Article 19, Regulations Regarding the Application for and Use of Municipal and Industrial Water within Westlands Water District*. Pursuant to Article 19, solar PV facilities on District-owned or reconveyed lands are eligible to receive up to 5.0 AFY per quarter-section for operational uses. As noted above, the operational water usage rate at a typical 250-MW solar and energy storage facility is estimated to be 0.64 AF per quarter-section per year, which is well within the District's maximum annual allowance of 5.0 AFY per quarter-section (i.e., on District-owned land). During years of extreme shortage of surface water supplies, the District would continue to provide M&I supplies to solar and energy storage facilities on District-owned lands through its health and safety allocation from USBR. Given the very low operational water demand rate of 0.004 AFY per acre, the District would provide operational water to facilities on District-owned land even under curtailed supply conditions. Further, project proponents may also purchase groundwater credits from other landowners for use on District-owned lands. As illustrated in Appendix F, Table 6, the District and users within its service area have augmented available CVP supplies with other surface water sources during each year since 1988, particularly during dry years. For example, in 2021, despite no initial allocation from the CVP, the District and its water users secured 173,000 AF of surface water from the CVP and an additional 44,000 AF of surface water from other non-CVP contract sources for irrigation during the 2021 water year. Due to the established market for these purchases and their longstanding availability during all water year types, it is anticipated that these additional sources will continue to be available, which bolsters water supply reliability. As such, sufficient water supplies are available to supply these operational water demands associated with VCIP implementation, and the impact of such operations upon available water supplies would be less than significant.

For potential VCIP projects on privately owned lands, it is anticipated that operational water would be obtained from a combination of existing agricultural wells in the Plan Area, surface water provided by the District, and supplemental surface water supplies procured by the District and/or private landowners. Solar development resulting from privately-owned land participating in the "Continued Benefits to Modified Agricultural Land" are not eligible to submit a M&I Water Application pursuant to Article 19 and would obtain any surface water from the allocations to the underlying private landowners, which would be determined on a case-by-case basis (WWD 2023a). If the District cannot provide the surface water supply from its CVP contract, operational surface water would be obtained from supplemental surface water supplies procured by the District and/or private landowners, as described above and in Appendix F. If needed, the 0.6 AFY per acre GSP allocation for all privately owned lands within the proposed DFAs would be more than sufficient to meet all operational demands. Given the availability of sufficient water supplies for operations on potential VCIP projects on private lands, the impact of such operations upon available water supplies would be less than significant.

Potable water for domestic uses would be delivered to the facility by a water delivery service. The typical 250 MW solar plus energy storage facility would include a water storage tank for potable water which would provide for drinking, hand washing, and toilet flushing at the O&M building. The water tank would be refilled regularly at a rate of approximately 5,000 gallons per month (the capacity of a standard water tanker truck),

for a total of approximately 16 AFY for full VCIP implementation. Given the small quantities of potable water that would be required and multiple water delivery services within the vicinity of the Plan Area, there are sufficient supplies to meet all potable water demands and the impact of supplying this water upon available supplies would be less than significant.

In sum, for the reasons provided above, sufficient water supplies are available to supply operational water demands for full implementation of the VCIP, and the impact of VCIP operations upon available water supplies would be *less than significant*.

Decommissioning Water Demand and Supply

Decommissioning water would be used for the same purposes as during construction and would be available through the sources identified regarding construction. All decommissioning water would generally come from groundwater within the District.

Untreated groundwater would be required during decommissioning of each solar and energy storage facility, although the volume of water required is expected to be less than the volume required during the construction phase. Since vegetative cover would be retained on each site during decommissioning, there would be very little exposed soil that would require watering for dust suppression. Similarly, water would not be required for soil conditioning during grading (*cf.* construction, which requires prescribed moisture content for compacted soils). The VCIP infrastructure facilities (collection substations, connecting transmission line) would not be decommissioned, but the gen-tie lines would be. The source of water during decommissioning is expected to be from the existing agricultural wells located in the vicinity of each facility, although portion may come from surface water supply from the District.

The total groundwater used during decommissioning is expected to be substantially less than the estimated 240 AF required during construction of a typical 250-MW solar and energy storage project located on an approximately 1,600-acre site. However, total water demand for energy facility decommissioning is conservatively estimated to be the same as construction demand, or approximately 20,400 AF. Gen-tie decommissioning would use an additional 232 AF, for a total of 20,632 AF for decommissioning. This would represent an average volume of about 0.152 AF per acre. This quantity is substantially less than the 0.6 AFY per acre allocation established by the GSP to achieve sustainable groundwater management and ensure pumping is within the long-term sustainable yield. Therefore, the limited water demands during decommissioning would be consistent with and promote sustainable groundwater management of the Subbasin. The groundwater pumped during decommissioning would not substantially decrease groundwater supplies or contribute to the lowering of the local groundwater table. Therefore, sufficient groundwater is available to supply the full demands related to VCIP project decommissioning, and the impact of VCIP decommissioning upon available water supplies would be *less than significant*.

Summary

Construction of all 21,000 MW of the VCIP energy and infrastructure projects would require a total of 20,838 AF of water over an approximately 10-year period. Decommissioning would have a total water demand of 20,632 AF over approximately an additional 10-year period in the future. The combined total water demand for construction and decommissioning would be approximately 41,470 AF over a combined 20-year period. For comparison, the irrigation demand on 64,000 acres of the irrigable (privately-owned) land within the DFAs (noting that the 72,000 acres of District-owned land in VCIP is not irrigable) would require a total of 166,400AFY, or 3,328,000 AF over a 20 year period (at the District average irrigation rate of 2.6 AFY per acre). Thus, the total water demand for VCIP construction and decommissioning over a 20-year period—would be equivalent to approximately 25 percent of one year's worth of

agricultural irrigation on the VCIP development land in one year. Construction water demands for VCIP implementation would peak at 2,227 AFY; this is below the pumping limitation of 8,863 AFY calculated based on the 0.6 AFY groundwater allocation on 14,771 acres of construction or decommissioning during each of these peak years. As described above, groundwater would generally be used for construction water on both private and District-owned lands pursuant to groundwater allocations or District-approved transfers, although surface water may also be available in some years.

Operation and maintenance of VCIP solar and energy facilities would require about 0.004 AFY per acre (0.64 AFY per quarter-section per year) of water, for a total of 514 AF per year for all VCIP facilities upon completion. For potential VCIP projects on District owned lands, these demands are well within the District's maximum annual allowance of 5.0 AFY per quarter-section for solar projects pursuant to Article 19 of the District's Rules and Regulations. For potential VCIP projects on privately owned lands, the groundwater allocation of 0.6 AFY would be more than sufficient to provide for the maximum operational water demands. Additionally, if the District cannot provide the surface water supply from its CVP contract to potential VCIP projects on privately owned lands, operational surface water would be obtained from supplemental surface water supplies procured by the District and/or private landowners, as described above and in Appendix F.

In conclusion, the groundwater and surface water supplies available for construction, operation, and decommissioning of VCIP facilities are sufficient to meet the needs of the VCIP implementation. The use of these supplies would be consistent with the GSP and the District's Rules and Regulations. Therefore, the impact of the implementation of the VCIP Energy Resource and Infrastructure Plans upon available water supplies would be *less than significant*.

Reasonably Foreseeable Future Uses

Other planned uses in the Subbasin consist almost entirely of other solar PV generation and energy storage facilities in Kings and Fresno Counties. As of July 2025, a total of 51 other solar and energy storage projects have been approved or are pending approval in the Subbasin portions of the two counties. Of these, 39 solar and energy storage projects have been completed, another 10 solar and energy storage projects have been approved, and two projects are pending approval by the counties.[4] It is estimated that the unconstructed projects would consume a total of approximately 2,156 AF of water during construction. For five of these projects, this estimate is based on information available from public documents; for the remaining seven projects where no public documents contain water demand estimates, construction water demands were estimated based on a factor of 0.15 AFY/ac.

Based on review of available environmental documents for foreseeable solar and energy storage projects in the Subbasin, construction water for the solar and energy storage projects would generally be obtained from local groundwater sources within the Subbasin, but surface water will be available in some years (Fresno County 2021b, 2023d, 2024f). Groundwater would be obtained pursuant to groundwater allocations or transfers. As noted above, although some surface supplies may be available from the District in some years for construction, this is not guaranteed and is not considered reliable for purposes of water supply planning. Similarly, some projects may purchase supplemental surface water supplies from outside the District for construction, but these volumes vary from year to year and cannot be predicted. Based on the GSP, the expected construction water demand of 0.15 AF per acre would not exceed 0.6 AFY per acre allocation and would be consistent with the Subbasin's long-term sustainable yield. Due to their similarities to the potential

[4] This does not include four solar/BESS projects (2 approved + 2 pending) located within the VCIP DFAs, since the water demands for those projects have been accounted for in the water supply analysis for the VCIP.

VCIP projects, the operational water demands of these other projects would likely be similar to those associated with VCIP solar and energy storage facilities (i.e., approximately 0.004 AFY per acre).

As discussed, operational water for the other (i.e., non-VCIP) solar and energy storage projects would be available from a combination of surface water and groundwater sources, depending on the facts applicable to each project, such as whether it is located on privately owned or District-owned land. As provided above, for projects on District-owned lands, sufficient operational M&I supplies would be available pursuant to Article 19 of the District's Rules and Regulations. For solar and energy storage facilities located on privately-owned lands, operational water supplies would be provided by the underlying landowner from its surface and/or groundwater allocations. If the District cannot provide the surface water supply from its CVP contract, operational water would be obtained from existing on-site agricultural wells or from surface water transferred into the District. For these projects on privately owned lands, the ratio of surface vs groundwater supply would depend on negotiations with the underlying landowner in each project case. Since this ratio cannot be predicted, it is conservatively assumed that all operational water supplies for energy projects on private lands would be obtained from groundwater, which would be available during all water year types. These operational water demands would be well below the 0.6 AFY per acre allocation and therefore consistent with the Subbasin's sustainable yield.

In addition to solar and energy storage projects, six other projects are pending approval in the Subbasin. These include three pistachio processing plants, two highway commercial developments, and one utility substation (Manning Substation). The Kamm Avenue pistachio plant will utilize 209 AFY of untreated M&I water provided by the District, and will not utilize groundwater (Fresno County 2021a). The Stamoules Pistachio plant would extract 955.5 AFY of groundwater pursuant to agreement with the District, which will ensure groundwater pumping complies with the allocations established in the GSP for the Subbasin (Fresno County 2023e). No water supply information is available on the Turk Station Pistachio Plan (CUP 3649); however, groundwater use would be subject to an agreement with the District which would ensure groundwater pumping complies with the allocations established by the GSP. The highway commercial project at I-5/SR-198 9 (CUP 3761) is proposed to receive 9.7 AFY of untreated M&I water from the District's surface water deliveries. The agricultural commercial center at SR-198/SR-269 (CUP 3797) would receive an unknown volume of untreated M&I water from the District's surface water deliveries (Fresno County 2025d). The construction of the Manning Substation would require 61.4 AF, which would be provided by M&I water from the District or groundwater. The substation would require no water supply for operations (CPUC 2025).

In addition to the reasonably foreseeable development discussed above, the water supply sources for the rural communities of Cantua Creek and Three Rocks/El Porvenir are planned to convert from surface water provided by the District to groundwater pumped from newly constructed wells in these communities. There is a concern that the VCIP solar and energy storage development in the vicinity of the new community wells may result in further overdraft of the aquifer causing these new wells to go dry. However, this outcome is not reasonably foreseeable for the following reasons. First, if properly constructed, the wells would be screened below the 2015 groundwater elevation, which is the "minimum threshold level" established in the District's GSP. The Fresno County Department of Public Works, as operator for the Cantua Creek and Three Rocks/El Porvenir County Service Areas (CSAs), would be required to submit the well plans to the District, as the Groundwater Sustainability Agency (GSA), which would determine if the plans comply with the Groundwater Sustainability Plan (GSP). Since the wells would be required to be constructed in accordance with the GSP, with District oversight, there would be no substantial risk of the new wells going dry. Second, under the GSP,

beginning in 2030 all groundwater pumping in the District will be limited to 0.6 AF per acre to maintain sustainable groundwater levels (construction of potential VCIP projects in the Cantua Creek and Three Rocks area would be planned to begin in 2031). Third, solar and energy storage facilities would have water demands of 0.15 AFY per acre during construction and 0.004 AFY per acre during long term operations, both of which are well below the maximum allowable 0.6 AFY per acre pumping volume under the GSP. Fourth, all agricultural wells in the District are equipped with meters to track actual pumping rates, with penalties enforced if the limit is exceeded. Fifth, solar and energy storage facilities will have access to surface water and might use this supply source in lieu of groundwater. Therefore, the District anticipates compliance with the pumping limits and does not foresee a potential decline in groundwater levels below the minimum threshold level set forth in the GSP. Therefore, the risk that the two planned community wells to serve Cantua Creek and Three Rocks, or any other properly constructed wells in the District, would go dry is insubstantial.

In conclusion, based on the above analysis and Appendix F, there are sufficient water supplies available to serve implementation of the VCIP Energy Resource and Infrastructure Plans during normal, dry and multiple dry years during a 20-year projection, in addition to existing and reasonably foreseeable future uses. Therefore, any potential impacts related to water supply would be *less than significant*.

Mitigation Measures: No mitigation is required.

Impact UTS-3. Wastewater Treatment and Disposal

The VCIP solar and energy storage facilities would be served by individual septic systems, which would be located, designed, constructed, operated, and maintained in accordance with Fresno County and Regional Water Quality Control Board requirements and standards, such that potential impacts to wastewater treatment capacity would be less than significant. (*Less-than-Significant Impact*)

As discussed in Section *4.17.1. Environmental Setting*, two unincorporated communities (Cantua Creek and Three Rocks/El Porvenir) within the VCIP Plan Area are served by community wastewater collection and treatment systems. The communities of O'Neill Ranch/Westside and Five Points are served by individual septic systems, as are the individual rural dwellings, ranches, commercial centers, and agricultural processing facilities in the Plan Area. The adjacent and nearby communities with larger wastewater collection and treatment systems include the cities of Mendota, Coalinga, Huron, and Lemoore, and NAS Lemoore.

As discussed under Impact UTS-1 above, the wastewater generated by individual solar and energy storage projects within the Plan Area would be conveyed to on-site septic systems for on-site treatment and disposal. The VCIP infrastructure facilities (collection substation, gen-tie lines, and collector transmission line) would not be staffed and would not require wastewater collection and treatment service. The septic systems at the solar and energy storage facilities would be designed in accordance with design criteria and standards established by the County's LAMP requirements, which have been approved by the RWQCB, and would be subject to the approval of the Fresno County Department of Public Works and Planning, which would ensure compliance with all applicable standards in order to avoid any adverse impacts to groundwater quality. Since the wastewater disposal requirements of the VCIP solar and energy storage projects would be adequately served by dedicated

on-site septic systems, they would not be served by a community wastewater treatment provider. Therefore, the implementation of the VCIP Energy Resource and Infrastructure Plans would have *a less than significant* impact on wastewater treatment capacity.

Mitigation Measures: No mitigation is required.

Impact UTS-4. Solid Waste and Landfill Capacity

The VCIP energy and infrastructure projects would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste goals. (*Less-than-Significant Impact*)

The development of VCIP energy and infrastructure projects would generate solid waste during their construction, operational, and decommissioning phases. The solid waste impacts of all phases of VCIP implementation are discussed below. The following discussion is focused on non-hazardous solid waste only. Hazardous waste disposal, including disposal of damaged or defective solar modules is addressed in Section *4.9. Hazards and Hazardous Materials*.

Construction Phase

During construction of the VCIP energy and infrastructure projects, the waste generated would primarily consist of non-hazardous waste materials such as packing containers and materials, waste lumber, wood pallets, scrap metal, glass and paper. Since site clearing would involve mulching or plowing under crop remnants, it is anticipated that minimal green waste would be generated. Based on construction waste generation rate of 10 cubic yards (cy) per MW for similar solar PV/BESS projects, the typical 250 MW solar + 250 MW energy storage project under the VCIP would generate a total of 2,500 cy of construction waste for disposal (Fresno County 2021c). It is anticipated that 65 percent of this construction waste would be recycled as required under the CALGreen Code (CBSC 2024). Much of the construction waste materials would be reusable (e.g., wood pallets and packing crates), or recyclable (e.g., scrap metal, paper, glass), and doing so has been shown to be cost effective (CalRecycle 2024b). The construction of all potential VCIP facilities (i.e., 21,000 MW of solar plus energy storage facilities) would generate a total of 210,000 cy of construction waste, of which 136,500 cy (i.e., 65 percent) would be recycled. The remaining construction waste to be landfilled would be 73,500 cy, or approximately 23.7 cy per day, assuming 10 years of disposal and 310 disposal days per year. This equates to 5.7 tons per day, based on a conversion factor of 0.24 tons per cy of construction waste (FDEP 2017). Assuming all the non-recyclable construction waste would be hauled to American Avenue Landfill, the 5.7 tons of daily construction waste generated by VCIP projects would represent about 0.3 percent of the average daily permitted solid waste disposal at the landfill (2,200 tons per day)[5]. Additionally, the total 73,500 cy of non-recyclable construction waste generated during the entire VCIP construction period would represent 0.4 percent of the approximately 17.97 million cy of remaining capacity of the American Avenue Disposal Site (American Avenue Landfill or landfill). Both the daily disposal rate and the total construction

[5] Average daily permitted disposal is 2,200 tons per day, with a peak permitted disposal of 3,600 tons per day.

waste generated by VCIP projects would represent insubstantial increases in solid waste accepted at the American Avenue Landfill and therefore would not exceed the landfill's capacity. Additionally, Fresno County's budget reports illustrate that the County's adopted budgets for the years of 2022-2023 and 2023-2024 appropriated over $38 million for the expansion of the American Avenue Landfill (Fresno County 2022, 2023f). The recommended budget for 2024-2025 proposes to appropriate over $12 million of additional funds to finance the landfill's expansion. The budgets for each of these fiscal years "assumes operating the disposal site with tonnages averaging 2,200 tons per day" (Fresno County 2022, 2023f, 2024a.) Thus, the County's proactive landfill expansion efforts will ensure that the landfill will be able to reliably operate at its maximum daily capacity and may foreseeably extend its operating life due to increased capacity. For these reasons, the solid waste generated by the potential VCIP projects will not exceed the capacity of the American Avenue Landfill or impair its solid waste management.

The construction of the VCIP infrastructure projects (collection substations, gen-tie lines, connecting transmission lines) would generate small amounts of solid waste, which would mainly consist of scrap materials and debris. Waste materials would be salvaged for reuse or recycled to the extent practicable. The remaining construction waste materials would be disposed of at the American Avenue Landfill. The small amounts of solid waste generated by construction of the VCIP infrastructure would have minimal effects on the landfill's capacity.

Operational Phase

During operation of the VCIP solar and energy storage facilities, the non-hazardous waste generated would include typical refuse generated by workers and small office operations such as scrap metal and machine parts, broken or defective electrical components, oily rags, packing material from deliveries, paper, cardboard, plastic, empty containers, and miscellaneous solid waste. Based on the operational waste generation rate of 1 cy per week for similar solar PV plus storage projects, the typical 250 MW solar + 250 MW energy storage project under VCIP would generate a total of approximately 52 cy of solid waste (0.21 cy per MW) for disposal at a Class III landfill per year (Fresno County 2021c). This assumes 50 percent of the generated solid waste has been diverted through recycling, and also that 1 cy of solid waste from solar facilities is equivalent to 1 ton of solid waste with minimal compaction.

At full buildout of the 21,000 MW of VCIP solar and energy storage facilities, the total operational solid waste generation would be 4,410 cy (or tons) per year, or 14.2 cy (or tons) per day, assuming 310 disposal days per year, which represents about 0.65 percent of the average daily permitted disposal rate of 2,200 cy at the American Avenue Disposal Site. The solid waste generated at the VCIP energy facilities would represent a small increase in daily and annual solid waste accepted at the American Avenue Landfill and would therefore not exceed its capacity or impair its solid waste management.

For purposes of this PEIR, it is assumed that the VCIP solar and energy storage facilities would have an average useful life of 35 years. The total volume of solid waste generated for disposal by facility operations over this period is estimated to be approximately 176,400 cy, which would represent 0.1 percent of the remaining capacity at the American Avenue Landfill. The VCIP infrastructure facilities would not generate substantial amounts of solid waste during their operating years. Thus, the solid waste generated by the operation of VCIP energy and infrastructure facilities would not appreciably shorten the operating life of the American Avenue Landfill.

Decommissioning Phase

At the end of their useful lives, the VCIP solar and energy storage facilities would be deconstructed in accordance with their approved decommissioning plans. Under the plans, the equipment and fixtures, such as solar modules and racking, and storage batteries, would be recycled and reused to the extent practicable. Some materials may be returned to the manufacturer for reuse or otherwise reused on the secondary market. Waste materials that are not salvaged for reuse would be hauled to the American Avenue Landfill, where non-recyclables would be landfilled. Assuming that the volume of landfilled solid waste from decommissioning would be similar to the solid waste disposed during construction, the approximately 73,500 cy to be disposed would represent 0.4 percent of the approximately 17.97 million cy of remaining capacity of the American Avenue Landfill.

Overall VCIP Solid Waste Disposal

The total volume of non-recyclable solid waste generated by the construction, operation, and decommissioning of the VCIP projects is estimated to be approximately 323,400 cy. This represents 1.8 percent of the 17.97 million cy remaining capacity of the American Avenue Landfill. Thus, the total solid waste generated by VCIP projects during their lifetimes would represent a small portion of the remaining disposal capacity at the American Avenue Landfill.

As noted in Section *4.17.1. Environmental Setting*, it is estimated that the American Avenue Landfill will reach capacity in 2043. As such, the landfill would have sufficient capacity to receive solid waste generated during buildout of the VCIP facilities which are planned to be completed by 2039. However, the American Avenue Landfill would not be available to serve VCIP facilities during their entire operating lives which would extend well beyond 2043, and would not be available to receive VCIP decommissioning waste several decades in the future. However, to comply with the California Integrated Waste Management Act, discussed in Section *4.17.2. Regulatory Context*, Fresno County will be required by state law to continue to demonstrate, over a five-year reporting cycle, that it has at least 15 years of remaining landfill capacity available in the County. Given this statutory requirement, it is expected that the County will have demonstrated that it has sufficient remaining landfill capacity to serve continued VCIP operations and decommissioning well before the American Avenue Landfill has reached capacity. As discussed above, the County's recent budget allocations for the expansion of the American Avenue Landfill demonstrate the County's proactive efforts to ensure the expansion of the landfill so that it will be able to reliably operate at its maximum daily capacity and may foreseeably extend its operating life due to increased capacity. For these reasons, the solid waste generated by the potential VCIP projects will not exceed the American Avenue Landfill

Regarding solid waste collection service, the VCIP facility operators would contract with a commercial waste collection service which would haul the waste to the Midvalley transfer station near Kerman for sorting and recycling prior to disposal of non-recyclable solid waste at the American Avenue Landfill. It is expected that the increased service demands from the solar and energy storage facilities would be met through incremental increases in staff and equipment, which would be funded through fees for service.

In summary, the solid waste generated during the construction, operations, and decommissioning phases of VCIP energy and infrastructure projects would not exceed landfill disposal capacity in the County. The salvage and recycling practices implemented during construction, operation, and decommissioning would reduce the amount of solid waste that would be landfilled. As discussed under Impact UTS-5 below, the VCIP projects

would comply with all solid waste reduction requirements and would not impair their attainment. Therefore, the impact of VCIP implementation in terms of solid waste disposal would be *less than significant*.

Mitigation Measures: No mitigation is required.

Impact UTS-5. Compliance with Solid Waste Laws and Regulations

The energy and infrastructure projects developed under the VCIP would comply with applicable laws and regulations related to the management and reduction of solid waste. (*Less-than-Significant Impact*)

Implementation of the VCIP energy and infrastructure projects would be subject to laws, regulations, and policies pertaining to solid waste, source reduction, and recycling as described in Section *4.17.2. Regulatory Context*. In accordance with AB 939 and the CALGreen Code, a C&D Waste Management Plan would be prepared for the VCIP projects, which would ensure that 65 percent of all construction waste is recycled (Fresno County 2024c). Solid waste generated during project decommissioning would be addressed in the decommissioning plan required by Fresno County for each project. To minimize disposal at landfills, the decommissioning plans would require that all project components be reused or reclaimed to the extent practicable, with the remaining materials being recycled or sold for scrap.

The VCIP solar and energy storage projects would generate an estimated total of 323,400 cy of non-recyclable solid waste during their construction, operations, and decommissioning phases. As discussed under Impact UTS-4 above, there is expected to be sufficient landfill capacity to accept all anticipated solid waste generated by VCIP projects. Project waste would be disposed of consistent with applicable federal, state, and local recycling, reduction, and waste requirements and policies. Therefore, the implementation of the VCIP Energy Resource and Infrastructure Plans would have *no impact* in terms of compliance with applicable laws and regulations related to the management and reduction of solid waste.

Mitigation Measures: No mitigation is required.

4.17.3.2. TRANSMISSION CORRIDORS OUTSIDE THE VCIP

The transmission corridors for delivery of solar generation from potential VCIP projects to urban electricity markets in northern and southern California have been identified at a conceptual level in this PEIR to allow a general discussion of environmental impacts associated with transmission line development in these corridors for informational purposes. These transmission delivery corridors extend far beyond the District's boundaries and are not part of the proposed VCIP. Planning and approval of these outside transmission lines are under the jurisdiction of the state and federal energy regulatory agencies, public utilities, and cities and counties traversed

by the transmission corridors . The following discussion provides an overview of potential impacts of the outside transmission lines with respect to utilities and service systems.

Water Supply

During construction of the outside transmission lines, small volumes of non-potable water would be required for dust control. As noted in Table 2.6-1, the outside transmission projects would result in the disturbance of approximately 4,295 acres at the tower sites, the conductor pulling sites, and the construction staging areas. At a demand rate of 0.15 AF per acre, the total water supply required for construction of 348 miles of transmission corridor would be approximately 644 AF. This is equivalent to the annual irrigation requirements for about 250 acres of land in agricultural production. The construction water would be obtained from various sources such agricultural wells and municipal water systems and trucked to the work sites for application. Sufficient water supplies are expected to be available to meet the relatively low construction water demands at any given location along the transmission corridors. During operation of the transmission lines, no water would be required. In summary, it is anticipated there would be sufficient water supplies to meet the demands of outside transmission lines during construction and operation, in addition to existing and projected demands, and there would be no need for new or expanded water supply facilities.

Wastewater Treatment

During construction, the sanitary needs of workers on the outside transmission lines would be provided by mobile portable chemical toilets. The operation of the outside transmission lines would have no permanent staff and thus would not require wastewater collection or treatment. Therefore, the outside transmission lines would have no effect on wastewater treatment capacity. In summary, the outside transmission lines would not require wastewater treatment during construction or operation, and there would be no need for new or expanded wastewater treatment facilities.

Solid Waste

The construction of the outside transmission lines would generate small amounts of solid waste, which would mainly consist of scrap materials and debris. Waste materials would be salvaged for reuse or recycled to the extent practicable. The remaining construction waste materials would be disposed of at local landfill facilities along the transmission routes. The operation of the outside transmission lines would not generate substantial amounts of solid waste. The small amounts of solid waste generated by the outside transmission lines would have no discernable effects on the capacity of local landfill facilities. The construction and operation of the outside transmission lines would be undertaken in compliance with applicable laws and regulations related to the management and reduction of solid waste.

Stormwater Drainage, Electric Power, Natural Gas, and Telecommunications Systems

The outside transmission lines would have very small footprints at the base of the towers, and thus would not generate increased runoff requiring stormwater drainage systems.

During construction, the outside transmission lines would not require incidental or auxiliary power supply, except as may be provided by portable generators for some aspects of construction. No power supply would be required to operate the transmission lines.

The outside transmission lines would not require the use of natural gas for any purpose during construction or operation.

The outside transmission lines would not require communications facilities during construction or operation.

In summary, the outside transmission projects would not require or result in the relocation or construction of new or expanded facilities for stormwater drainage, electric power, natural gas, or telecommunications.

4.17.3.3. CUMULATIVE IMPACTS

The methodology for conducting the cumulative impact analysis is described in Section *4.0.5. Cumulative Impacts*. The analysis considers whether the impacts of two or more past, present, or reasonably foreseeable future projects, including the proposed VCIP, would combine to result in a cumulatively significant impact.

Regarding water supply, most of the cumulative projects in the Subbasin consist of other solar PV generation and energy storage facilities in Kings and Fresno Counties (non-solar projects are discussed below). As of July 2025, a total of 51 other solar and energy storage projects have been approved or are pending approval in the Subbasin portions of the two counties.[6] Of these, 39 solar and energy storage projects have been completed, another 10 projects have been approved, and an additional two projects are pending approval by the two counties. It is estimated that the 12 unconstructed solar/BESS projects would consume a total of approximately 2,156 AF of water during construction. For five of these projects, this estimate is based on information available from public documents; for the remaining seven projects where no public documents contain water demand estimates, construction water demands were estimated based on a factor of 0.15 AFY/acre (see explanation in footnote 3 above for the basis for this factor).

In addition to solar and energy storage projects, five other industrial and commercial projects are approved or pending approval in the Subbasin. These include three pistachio processing plants and two highway commercial developments. There is no information in available public documents regarding construction water use for these projects. As such, the standard construction water factor of 0.15 AF/acre was applied to the combined acreage of these projects (885 acres) to reach an estimated 133 AF of construction water demand. Also proposed within the subbasin is the Manning Substation project, which would require water supply of 61 AF for construction (CPUC 2025d). The total water supply required for construction of the non-solar/BESS within the Subbasin would be 194 AF.

The total construction water demand from the unconstructed cumulative projects would be the sum of VCIP projects (20,838 AF), non-VCIP solar and energy projects (2,156 AF), and other non-VCIP projects in the Subbasin (194 AF), for a cumulative total of 23,188 AF, over a cumulative land area of 147,019 acres. This represents a cumulative pumping rate of 0.158 AF/acre which is substantially below the long-term groundwater allocation of 0.6 AFY/acre for the Subbasin.

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[6] The total does not include four solar/BESS projects (2 approved + 2 pending) located within the VCIP DFAs, since the water demands for those projects have been accounted for in the water supply analysis for the VCIP.

Based on review of available environmental documents for foreseeable solar and energy storage projects in the Subbasin, construction water for the solar and energy storage projects would generally be obtained from local groundwater sources within the Subbasin, but surface water would be available from the District in some years. Although the source of construction water for most approved and pending non-energy projects has not been publicly disclosed, it is assumed that groundwater would be the source of construction water for these projects and would be available during all water year types for the reasons described above in Appendix F. The overall use of groundwater for construction of all approved and pending cumulative projects at a cumulative rate of 0.158 AFY/acre would be consistent with the Subbasin's long-term sustainable yield of 0.6 AFY/acre.

Operational water supplies for each solar project would mainly be used for panel washing. Operational water demands for VCIP solar and energy storage projects are estimated to be approximately 0.004 AFY per acre. As discussed, it is anticipated that the source operational water for the VCIP solar and energy storage projects on District-owned would be M&I CVP contract water supplies from the District as provided under Article 19 the District's Rules and Regulations. Groundwater supplies would also be available through District-approved transfers. For potential VCIP projects located on privately-owned lands, operational water supplies would be provided by the underlying landowner from its surface and/or groundwater allocations. If the District cannot provide the surface water supply from its CVP contract, operational water would be obtained from existing on-site agricultural wells or from surface water transferred into the District. Since the specific mix of groundwater and surface water supply for each project cannot be predicted, it is conservatively assumed that all operational water supplies for energy projects on private lands would be obtained from groundwater. Based on the 64,000 acres of private lands in the VCIP DFAs, the total groundwater demand for project operations would be 256 AFY. These operational water demands would be well below the 39,000 AFY allocation (at 0.6 AFY per acre) for those 64,000 acres of privately owned land and therefore would be consistent with the estimated Subbasin's sustainable yield.

Of the 11 approved and pending solar and energy storage projects in the Subbasin that are not part of the proposed VCIP, three projects are on current or former District-owned lands and would utilize the same operational supplies as potential VCIP projects located on District-owned lands as described above. The remaining eight projects are on private lands and would utilize a combination of surface and groundwater depending on arrangements with the underlying landowners. As provided above and in Appendix F, there are sufficient groundwater supplies to meet the operational demands of these eight projects. Estimates of operational water use were available for two of the projects and these were much lower than 0.004 AFY/acre. To be conservative, it was assumed that all eight projects on private lands would have operational water demands of 0.004 AFY/acre over a cumulative total land area of 4,914 acres, for a cumulative operational water demand of 20 AFY.

As discussed above in Impact UTS-2, under "Reasonably Foreseeable Future Uses," other non-VCIP projects would rely on a groundwater or surface water for operations depending on the circumstances of each case. The six non-VCIP/non-energy projects that are approved or pending approval in the Subbasin include three pistachio processing plants, two highway commercial developments, and one utility substation (Manning Substation). One pistachio plant will utilize only surface water provided by the District. The other two plants (on a combined land area of 493 acres) will utilize groundwater pursuant to agreements with the District, which will ensure groundwater pumping complies with the allocations established in the GSP. The total groundwater use by the pistachio plants is estimated to be 1,212 AFY. The two highway commercial projects will receive M&I water from

the District's surface water deliveries and thus would not affect the Subbasin. The Manning Substation would require no water supply for operations.

The total operational groundwater demand from the cumulative projects would be the sum of VCIP projects (256 AFY), non-VCIP solar and energy storage projects (20 AFY), and other non-VCIP projects in the Subbasin (1,212 AFY), for a cumulative total of 1,488 AFY, over a cumulative land area of 147,019 acres. This represents a cumulative pumping rate of 0.01 AFY/acre which is substantially below the long-term groundwater allocation of 0.6 AFY/acre.

In summary, for cumulative projects that would rely on groundwater for operational needs, the collective water demands would be substantially below the GSA's long-term groundwater allocation of 0.6 AFY per acre and would therefore promote sustainable groundwater management. Thus, the cumulative projects would not deplete groundwater supplies, interfere with groundwater recharge, or conflict with or obstruct implementation of the GSP. Therefore, the *cumulative impact to water supply would be less than significant*, and the *contribution from VCIP energy and infrastructure projects would not be cumulatively considerable*.

Notably, cumulative projects in the City of Lemoore are in a different groundwater subbasin (the Tulare Lake Subbasin) and therefore those water demands would not combine with water demands within the Subbasin, and thus would not contribute to any cumulative water supply impact associated with the VCIP (DWR 2022).

With respect to wastewater treatment, most of the cumulative projects, including the VCIP solar and energy storage projects, would include septic and leachfield systems for on-site disposal and treatment of domestic wastewater. These wastewater facilities would be subject to Fresno and Kings Counties' design and engineering requirements for septic systems, which would be tailored to each project's soil and groundwater conditions. None of the cumulative projects in unincorporated areas of Fresno and Kings Counties would connect to an existing wastewater treatment system. The cumulative projects within the City of Lemoore have all been approved for development and the Lemoore wastewater treatment facility has sufficient capacity to accommodate the wastewater generated by these projects. Therefore, the *cumulative impacts with respect to wastewater treatment would be less than significant*, and the *contribution from VCIP energy and infrastructure projects would not be cumulatively considerable*.

With respect to stormwater drainage, neither the VCIP solar and energy storage projects nor any of the cumulative projects in the unincorporated areas of Fresno and Kings Counties would include or require the construction or expansion of stormwater drainage facilities beyond very limited grading for internal surface drainage control. The cumulative projects in the City of Lemoore include storm drains that would connect to the City's storm drainage system. These storm drainage improvements are subject to environmental and engineering design review by the City of Lemoore, which will ensure that the improvements would not result in significant environmental impacts. Therefore, *no cumulative impacts would result from the construction or expansion of storm drainage systems*, and the implementation of the VCIP Energy Resource and Infrastructure Plans would make *no contribution* to any such cumulative impacts.

Regarding solid waste, there would be sufficient capacity at local landfill facilities to accommodate the solid waste generated by VCIP energy and infrastructure projects during the construction, operations, and decommissioning phases. As discussed under Impact UTS-4, it is estimated that the total lifetime generation of non-recyclable solid waste by VCIP projects would be equivalent to 3.3 percent of the remaining capacity of

the American Avenue Landfill. It is roughly estimated that the other cumulative projects in Fresno County would generate lifetime solid waste volumes equivalent to approximately 1.0 percent of the remaining landfill capacity in Fresno County. While the cumulative projects in Kings County would utilize the Waste Management Landfill in Kettleman Hills, it is estimated that the cumulative projects in Kings County, including Lemoore, would generate the equivalent of approximately 0.2 percent of the remaining capacity at that landfill facility. Therefore, the cumulative projects, including the VCIP energy and infrastructure projects, would not generate solid waste exceeding local landfill capacity. All solid waste generated by the cumulative projects would be recycled, treated, and disposed of in compliance with federal, state, and local laws. As such, there would be no cumulative impact in terms of compliance with applicable laws and regulations related to the management and reduction of solid waste. In summary, the cumulative impact with respect to solid waste disposal and landfill capacity would be *less than significant*, and the *contribution from VCIP energy and infrastructure projects would not be cumulatively considerable*.

Regarding other utilities, the construction, operation, and decommissioning of the VCIP energy and infrastructure projects would utilize no natural gas and minimal electric power. The installation of telecommunications systems at the solar and energy storage sites would have little or no impact. Therefore, the cumulative impact with respect to natural gas and electric power would be *less than significant*, and the *contribution from potential VCIP energy and infrastructure projects would not be cumulatively considerable*.

The outside transmission lines would have little or no impact on utilities and service systems, as discussed under Section 4.17.3.2., above. As such, the contribution to cumulative impacts would not be cumulatively considerable, and the cumulative impact associated with the outside transmission lines would be *less than significant*.

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