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3.15 Water Resources

This section describes the potential affects the construction and operation of the Project may have on water resources at and in the vicinity of the Project site. The information presented is based on a site-specific drainage analysis, water supply assessment (WSA), and readily available resources provided online. This evaluation of water resources includes the following elements:

- Section 3.15.1 describes the existing environment that could be affected, including drainage features, groundwater, water quality, and flooding;
- Section 3.15.2 provides an overview of the regulatory setting related to water resources;
- Section 3.15.3 identifies potential environmental impacts that may result from Project construction, operation, maintenance, and decommissioning;
- Section 3.15.4 discusses cumulative effects;
- Section 3.15.5 identifies mitigation measures that should be considered during Project construction, operation, maintenance, and decommissioning;
- Section 3.15.6 presents laws, ordinances, regulations, and standards (LORS) applicable to water resources;
- Section 3.15.7 identifies regulatory agency contacts and describes permits required for the Project related to water resources; and
- Section 3.15.8 provides references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical documents, included as appendices to this EIR:

1. Appendix 2A – Project Design Layout and Elevations, prepared by Coffman Engineers, July 2024
2. Appendix 3.4A – Geotechnical Considerations Report, prepared by Terracon, December 2023
3. Appendix 3.15A– Hydrology/Water Quality Report, prepared by Dudek, July 2024
4. Appendix 3.15B – Water Supply Assessment (WSA), prepared by Dudek, July 2024

3.15.1 Affected Environment

This subsection describes existing climate, drainage features, groundwater, water quality, water supply, and flooding potential at the Project site and surrounding region.

3.15.1.1 Climate

The Project area has a Mediterranean semi-arid climate with cool, moist winters and hot and dry summers. December and January are the coolest months, averaging around 47° Fahrenheit, and July is the warmest month, averaging 76.4° Fahrenheit (Appendix 3.15A, Hydrology/Water Quality Report).

Rainfall depths for various storm durations and recurrence intervals at the Project site were obtained using National Oceanic and Atmospheric Administration (NOAA) Atlas 14 precipitation estimates. These depths are provided in Table 3.15-1, Rainfall Depths.

Table 3.15-1. Rainfall Depths

Duration	Precipitation (inches)			
	Average Recurrence Interval (years)			
	5	10	25	100
1-hour	0.44	0.53	0.65	0.87
3-hour	0.77	0.90	1.10	1.44
6-hour	1.04	1.22	1.48	1.93
24-hour	1.87	2.23	2.74	3.57

Source: Appendix 3.15A – Hydrology/Water Quality Report.

According to the PRISM Climate Group annual precipitation dataset, which uses average monthly and annual conditions over the most recent three full decades (1991–2020), the Project site gets an average of 10 inches of precipitation annually, most of which falls between the months of November through March. According to the Alameda County Flood Control & Water Conservation District isohyetal map, the mean annual precipitation at the Project site was approximately 12.5 inches in 2011 (Appendix 3.15A).

3.15.1.2 Drainage Features

The Project site is within the jurisdictional boundary of the California Regional Water Quality Control Board (RWQCB) Central Valley Region (Region 5). Specifically, the Project falls within the North Diablo Range Hydrologic Unit (Hydrologic Unit Number 543.00) of the San Joaquin Hydrologic Basin Planning Area (Figure 3.15-1, RWQCB Hydrologic Setting). These watersheds are used to identify beneficial uses and water quality objectives in the San Joaquin River Basin, which covers 15,580 square miles and includes the entire area drained by the San Joaquin River (Appendix 3.15A).

The U.S. Geological Service (USGS) Watershed Boundary Dataset indicates the Project site is located in the southwestern portion of the San Joaquin Delta watershed (Figure 3.15-2, USGS Hydrologic Setting). The watershed is identified by a Hydrologic Unit Code (HUC) 8 designation, which signifies the scale of the watershed. The San Joaquin Delta watershed begins in the elevated topography west of the site and flows in an easterly direction toward the San Joaquin River, which drains the watershed. On a smaller scale, the Project site is within the Old River (HUC-10) and Lower Old River (HUC-12) watersheds, which are drained by the Old River, a tributary to the San Joaquin River (Appendix 3.15A).

The National Hydrography Dataset (NHD) is maintained by the USGS for the purpose of portraying surface waters on a national scale. The NHD is maintained at a broad nationwide level to represent features, such as rivers, streams, canals, lakes, ponds, coastlines, dams, and stream gages However, based on the NHD, in combination with the USGS 7.5-Minute Midway Quadrangle (Figure 2-1, Regional Map) and Google Earth, a north-south trending, intermittent “stream/river” named Patterson Run traverses east of the proposed BESS site, within the proposed gen-tie line (Figure 3.15-3, Local Drainage Features).

3.15.1.3 Groundwater

3.15.1.3.1 Groundwater Basin Description

Tracy Subbasin

The proposed gen-tie alignment and a small eastern portion of the proposed BESS site overlie the Tracy Subbasin of the San Joaquin Valley Groundwater Basin (California Department of Water Resources [DWR] Basin No. 5-22.15) (Figure 3.15-4, Groundwater Basins and Water Agency Boundaries). The Tracy Subbasin is defined by the areal extent of unconsolidated to semi-consolidated sedimentary deposits that are bounded by the Diablo Range on the west; the Mokelumne and San Joaquin Rivers on the north; the San Joaquin River to the east; and the San Joaquin-Stanislaus County line on the south. The Tracy Subbasin is located adjacent to the Eastern San Joaquin Subbasin on the east and the Delta-Mendota Subbasin on the south. All of the above mentioned subbasins are located within the larger San Joaquin Valley Groundwater Basin. The Tracy Subbasin is drained by the San Joaquin River and one of its major westside tributaries: Corral Hollow Creek. This basin is composed of continental deposits of Late Tertiary to Quaternary age, including the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium. The cumulative thickness of these deposits increases from a few hundred feet near the Coast Range foothills on the west to about 3,000 feet along the eastern margin of the basin (California DWR 2006).

The 238,429-acre Tracy Subbasin includes approximately 3,905 wells, of which approximately 96 are water supply wells. Groundwater accounts for approximately 3% of the basin's water supply for the approximate 114,000 people living in the basin. In 2014, the Sustainable Groundwater Management Act (SGMA) was passed, which created a basin prioritization system that ranks groundwater basins as high, medium, low, or very low priority. The DWR has designated the Tracy Subbasin as a medium priority basin, based on declining groundwater levels and salt intrusion. Based on this determination, the relevant Groundwater Sustainability Agencies (GSAs) for the basin, consisting of a consortium of GSAs, submitted a Groundwater Sustainability Plan (GSP) for the basin in January 2022. The GSP was approved by DWR in January 2024 (Groundwater Exchange 2024; California DWR 2024).

Livermore Groundwater Basin

The local water purveyor for the Project site, the Zone 7 Water Agency (Zone 7), extracts previously injected groundwater from the Livermore Valley Groundwater Basin (DWR Basin No. 2-10), which covers approximately 109 square miles in Alameda and Contra Costa Counties and is located approximately 4 miles southwest of the Project site, at the closest point (Figure 3.15-4). The basin is bounded by the Pleasanton Ridge to the west, the Altamont Hills to the east, the Livermore Upland to the south, and the Orinda Upland to the north. Water bearing formations in the basin include valley-fill materials, the Livermore Formation, and the Tassajara Formation. The valley-fill material is up to 400 feet thick and consists of stream channel deposits, alluvium, alluvial fan deposits, and terrace deposits. These deposits are composed of unconsolidated sand, gravel, silt, and clay. The Livermore Formation is up to 4,000 feet thick and consists of unconsolidated to semi-consolidated gravel, sand, silt, and clay. The Tassajara Formation occurs in the central part of the Basin at depths ranging from 200 to 750 feet and is composed of sandstone, siltstone, shale, conglomerate, and limestone (Appendix 3.15B – Water Supply Assessment).

The Livermore Valley Groundwater Basin is not subject to a court adjudication. The DWR has designated the Livermore Valley Groundwater Basin as a medium priority basin with respect to SGMA. Based on this determination, Zone 7, in its role as the GSA for the basin, was required to prepare a GSP for the basin by 2022. Zone 7 submitted

their 2017 Groundwater Management Program Annual Report to DWR as an alternative to GSP preparation and it was approved by DWR in 2019 (Appendix 3.15B).

3.15.1.3.2 Groundwater Wells

Tracy Subbasin

Nearby groundwater well information from the Tracy Subbasin was pulled from various data sources: California State Water Resources Control Board (SWRCB) Groundwater Ambient Monitoring and Assessment Program (GAMA), the USGS National Water Information System (NWIS), and DWR's SGMA Data Viewer Wells. According to these data sources, there is only one well (State Well No. 02S04E31B001M) within 0.5 mile of the Project boundary and no wells within the Project site itself (Figure 3.15-5, Groundwater Wells within 0.5 Miles of Project Site). Groundwater levels were last measured in State Well No. 02S04E31B001M on March 17, 1960, when the depth to groundwater was 21 feet below the ground surface, at an elevation of 381.54 feet (Appendix 3.15B).

Livermore Groundwater Basin

The majority of the Livermore Valley Groundwater Basin lies within the Zone 7 service area, which partially relies on supplies from this groundwater basin. The majority of the supply wells are present within the Main Basin Management Area of the basin, which includes the Upper Aquifer and the Lower Aquifer. The Main Basin is composed of four subbasins: Castle, Bernal, Amador, and Mocho II. Zone 7 considers the Main Basin of the Livermore Valley Groundwater Basin a water storage facility and is not a component of long-term supply for Zone 7. Zone 7 utilizes the Main Basin as a storage facility via recharging the Basin with surface water supplies (State Water Project [SWP] water or locally-stored runoff from the Arroyo Valle watershed) and extracting only the volume of water that has been recharged. Zone 7 uses groundwater banking agreements with agencies located in Kern County (Semitropic Water Storage District and Cawelo Water District) to store excess water available from the SWP during wet periods and then recovers it for delivery when SWP allotment is curtailed by droughts or disruptions. Zone 7 is allowed to store 78,000 acre-feet (AF) and 120,000 AF in the Semitropic and Cawelo groundwater banks, respectively (Appendix 3.15B).

Groundwater levels are measured frequently within the Main Basin and are compared to historic lows to calculate storage availability. According to the Zone 7 2022 Water Year Annual Report, water levels decreased by as much as 15 feet in the Upper Aquifer and 45 feet in the Lower Aquifer within portions of the Main Basin, from Fall 2021 to Fall 2022. In general, groundwater elevations in the western (Bernal Subarea) and eastern (Mocho II Subarea) portions of the Main Basin remained well above historic lows (up to about 140 feet). However, there were some areas in the Amador Subarea where water levels dropped up to 45 feet below historic lows (Zone 7 Water Agency 2023; Appendix 3.15B).

3.15.1.2 Water Quality

3.15.1.2.1 Surface Water Quality

Beneficial Uses

California Water Code Section 13050(f) describes the beneficial uses of surface waters and groundwaters that may be designated by the SWRCB and associated RWQCBs. To comply with the California Water Code and the federal Clean Water Act (CWA), surface waters within the same Hydrologic Unit Number of the Project site have been

assigned beneficial uses in the Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region (i.e., RWQCB Central Valley Basin Plan). These beneficial uses include municipal/domestic supply, agricultural supply (i.e., irrigation, stock watering), industrial process supply, hydropower generation, water contact/recreation, other non-contact water recreation, warm freshwater habitat, cold freshwater habitat, spawning/reproduction/early development (cold), and wildlife habitat (Appendix 3.15A).

Water Quality Objectives

The Porter-Cologne Water Quality Control Act defines water quality objectives as "…the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." Section 3.1 of the RWQCB Central Valley Basin Plan established water quality objectives that apply to all surface waters in the San Joaquin River Basin. These objectives apply to categories shown in Table 3.15-2, San Joaquin River Basin Water Quality Objective Categories.

Table 3.15-2. San Joaquin River Basin Water Quality Objective Categories

Bacteria	Pesticides
Biostimulatory substances	Radioactivity
Chemical constituents	Salinity
Cryptosporidium and giardia	Sediment
Color	Settleable material
Dissolved oxygen	Suspended material
Floating material	Tastes and odors
Mercury	Temperature
Methylmercury	Toxicity
Oil and grease	Turbidity
pH	—

Source: Appendix 3.15A – Hydrology/Water Quality Report.

Impaired Water Bodies and Total Maximum Daily Loads

The California RWQCBs make critical water quality decisions for their designated regions, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions. Federal regulations require that the Total Maximum Daily Loads (TMDLs), at a minimum, account for contributions from point sources (federally permitted discharges) and contributions from nonpoint sources. TMDLs are established at the level necessary to implement the applicable water quality standards. In California, the SWRCB has interpreted state law (Porter-Cologne Water Quality Control Act, California Water Code Sections 13000 et. seq.) to require that implementation be addressed when TMDLs are incorporated into water quality control plans (Basin Plans). The Porter-Cologne Act requires each RWQCB formulate and adopt Basin Plans for all areas within its region. It also requires that a program of implementation be developed that describes how water quality standards will be attained. TMDLs can be developed as a component of the program of implementation, thus triggering the need to describe the implementation features, or alternatively as a water quality standard. When the TMDL is established as a standard, the program of implementation must be designed to implement the TMDL.

As described in Section 3.15.1.2, Drainage Features, runoff from the Project site discharges toward the Old River, which is listed as an impaired water body according to the 2020 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report), published by the SWRCB. To comply with the CWA, water quality objectives must be met to maintain listed 303(d) primary pollutants at target levels. Figure 3.15-6, Impaired Waterbodies, and Table 3.15-3, 2020 303(d) List of Water Quality Segments, present the listed 303(d) pollutants and associated TMDLs for the Old River and downstream receiving waters.

Table 3.15-3. 2020 303(d) List of Water Quality Segments

Receiving Water Bodies	Listed 303(d) Pollutants	TMDL(s)
1. Old River (San Joaquin River to Delta Mendota Canal; in Delta Waterways, southern portion) 2. Delta Waterways (southern portion) 3. Delta Waterways (central portion) 4. Delta Waterways (western portion) 5. Sacramento San Joaquin Delta 6. Suisun Bay 7. Carquinez Strait 8. San Pablo Bay 9. San Francisco Bay, Central	▪ Arsenic ▪ Chlordane ▪ Chlorpyrifos ▪ DDT (Dichlorodiphenyltrichloroethane) ▪ Diazinon ▪ Dieldrin ▪ Dioxin compounds (including 2,3,7,8-TCDD) ▪ Electrical Conductivity ▪ Furan Compounds ▪ Group A Pesticides ▪ Invasive Species ▪ Low Dissolved Oxygen ▪ Mercury ▪ PAHs (Polycyclic Aromatic Hydrocarbons ▪ PCBs (Polychlorinated biphenyls) ▪ PCBs (Polychlorinated biphenyls) (dioxin-like) ▪ Selenium ▪ Total DDT (sum of 4,4'- and 2,4'- isomers of DDT, DDE, and DDD) ▪ Total Dissolved Solids ▪ Toxicity ▪ Trash	▪ Chlorpyrifos ▪ Low Dissolved Oxygen ▪ Diazinon ▪ Mercury ▪ PCBs (Polychlorinated biphenyls) ▪ PCBs (Polychlorinated biphenyls) (dioxin-like) ▪ Selenium

Source: Appendix 3.15A – Hydrology/Water Quality Report.

Downstream receiving waters include waterbodies in the San Joaquin River Basin. The receiving water body beneficial uses, water quality impairments, and TMDLs were identified by using the RWQCB Central Valley Basin Plan and the U.S. Environmental Protection Agency Water Quality Assessment and TMDL Reports (Appendix 3.15A).

3.15.1.2.2 Groundwater Quality

Groundwater quality is highly variable throughout the Livermore Valley Groundwater Basin. The northern portion of the basin is dominated by sodium-bicarbonate type water; the western portion of the basin being dominated by magnesium-sodium-bicarbonate type water; and the eastern portion of the basin being dominated by magnesium-bicarbonate type water. Total dissolved solids (TDS) in the basin ranges from 300 milligrams/liter (mg/L) to 550 mg/L, with an average TDS of 450 mg/L. Groundwater impairments in the Livermore Valley

Groundwater Basin include areas of elevated boron concentrations. Boron is likely sourced from marine sediments adjacent to the basin and is generally highest in shallow wells (Appendix 3.15B).

3.15.1.4 Flooding Potential

Federal Emergency Management Agency (FEMA) Flood insurance Rate Maps identify flood zones and areas that are susceptible to 100-year and 500-year floods. Figure 3.15-7, FEMA Flood Zones, shows that the Project site is outside of any mapped FEMA flood zone, indicating the area is of minimal flood hazard (FEMA 2023). In addition, the Project site is not located within a potential dam breach inundation area (Alameda County 2021).

3.15.2 Regulatory Setting

LORS related to water resources were reviewed for applicability to the Project. These are detailed in Section 3.15.6, Laws, Ordinances, Regulations, and Standards.

3.15.3 Impact Analysis

The following sections present the potential effects on water resources from construction, operation, maintenance, and decommissioning of the proposed Project.

3.15.3.1 Methodology

The impact analysis is based on a site-specific hydrology/water quality report, WSA, engineering drawings, and readily available resources provided online. Potential direct and indirect Project impacts related to water resources were evaluated against the CEQA significance criteria and are discussed below. The impact analysis evaluates potential Project impacts during Project construction, operation, and decommissioning.

3.15.3.2 Impact Evaluation Criteria

According to Appendix G of the California Environmental Quality Act statutes, a project would have a significant environmental impact in terms of water resources if it would do the following:

- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  a. Result in substantial erosion or siltation on- or off-site;
  b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
  c. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and/or
  d. Impede or redirect flood flows;

- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.15.3.3 Impact Evaluation

Impact 3.15-1 Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality?

Construction and Decommissioning

Less-than-Significant Impact. Project grading would include 588,018 cubic yards of cut, 344,900 cubic yards of fill, and 243,118 cubic yards of soil export. As discussed in Section 3.11, Soils, Project grading, construction, and decommissioning may increase soil erosion from precipitation and wind. Soil erosion may increase the amount of sediment received by downstream water bodies. The magnitude of construction impacts related to soil erosion depends on the soil erodibility, construction methods, construction schedule, and proximity of construction activities to nearby sensitive receptors, such as downstream water bodies (refer to Appendix 3.15A, Section 3.2.3, Loss Rates, which described soil characteristics at the Project site. The use of heavy equipment during construction and decommissioning of the Project would also potentially result in soil compaction. Compacting the soil would result in increased density and would reduce the soil's ability to absorb precipitation. Therefore, soil compaction may result in increased surface water run-off, erosion, and sedimentation. In addition, incidental spill of petroleum products and hazardous substances could result during grading, construction, and decommissioning. Materials would include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliatives, herbicides, and welding materials/supplies. Uncontrolled spills of these substances could similarly impact downstream water bodies.

The Applicant would be required to apply for coverage under a National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order WQ 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit). This requirement was developed to ensure that stormwater is managed, and erosion and incidental spills are controlled on construction sites. The Construction General Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which requires implementation of Best Management Practices (BMPs) to control stormwater run-on and runoff from construction work sites. BMPs may include, but may not be limited to, physical barriers to prevent erosion and sedimentation, construction of stormwater detention basins to control runoff and reduce potential sedimentation, limitations on work periods during storm events, and protection of stockpiled materials, which would substantially reduce or prevent erosion from occurring during construction. Furthermore, prior to issuing the CWA Section 401 Certification, the CVRWQCB would require the Project to demonstrate that placing fill material within the ordinary high water mark of Patterson Run would not violate any state water quality standards.

The California Energy Commission (CEC) would also require the Applicant to implement a drainage, erosion, and sediment control plan (DESCP) to reduce the impact of run-off during construction, operation, maintenance, and decommissioning. As illustrated in Appendix 2A, Project Design Layout and Elevations, erosion control facilities to be shown on the final grading plan would control and contain erosion-induced silt deposits and provide for the safe discharge of silt free stormwater into existing and proposed storm drain facilities after rough grading has been completed. These erosion control facilities would be operable prior to October 1 of any year grading operations have

resulted in areas unprotected from erosion. All erosion control measures would be maintained until disturbed areas are stabilized. Grading would be completed in conformance with the Alameda County Grading Ordinance unless otherwise approved and are in compliance with the Project-specific geotechnical report (Appendix 3.4A, Geotechnical Considerations Report). BMPs required by the Project-specific SWPPP and DESCP would be properly implemented and maintained to control water quality of stormwater runoff. Implementation of the Project-specific SWPPP and DESCP would minimize potential for sedimentation of downstream water bodies. Therefore, with adherence to regulatory requirements and conditions of CWA Section 401 Certification, as well as implementation of the SWPPP and DESCP, the Project would not degrade water quality or conflict with or obstruct implementation of a water quality control plan. Impacts related to erosion, soil compaction, and incidental spills would be less than significant.

Operations

Less-than-Significant Impact. As discussed in Section 3.11, Soils, operation and maintenance activities are not anticipated to cause soil erosion. As described above, the Applicant would be required to comply with measures included in the DESCP to minimize soil erosion, pending stabilization of soils following mass grading.

Limited amounts of hazardous materials would be stored or used on the site during construction and operations, including diesel fuel, gasoline, and motor oil for vehicles; mineral oil to be sealed within the transformers; and lead-acid-based batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during operation of the Project. A spill prevention control and countermeasures plan would be developed for site construction, operations, and decommissioning. In addition, a hazardous materials business plan (reference location of HMBP in the application) has been prepared, which would include all hazardous materials used or stored on site exceeding threshold volumes and appropriate procedures to be implemented in the event of an accidental spill. During Project operation, material safety data sheets for all applicable materials present at the site would be made readily available to on-site personnel.

Development associated with the BESS Facility, including the Project substation, operations and maintenance building, laydown yards, stormwater detention areas, and access roads, would occur on approximately 70 acres of an approximately 232-acre parcel, resulting in an increase in impervious surfaces and increased stormwater runoff. In accordance with the Alameda County Stormwater Technical Guidance Manual (Alameda County Flood Control & Water Conservation District 2021), because the Project would result in greater than 10,000 square feet of new impervious surfaces, the Project is considered a Regulated Project. Construction of Low Impact Development (LID) features are required for Regulated Projects.

The Project would include stormwater detention and LID features, constructed in compliance with the Stormwater Technical Guidance Manual, to minimize off-site stormwater runoff velocities and minimize off-site water quality impacts. Preliminary LID calculations are conservatively based on 10% of the total impervious area. The Stormwater Technical Guidance Manual requires a 4% method, which is based on rainfall and soil infiltration rates. Post-construction runoff rate would be 5 cubic feet per second, resulting in no requirements for a separate stormwater runoff detention plan (per the Stormwater Technical Guidance Manual). The LID features would consist of bioretention basins consisting of permeable gravel with a perforated underdrain pipe, overlain by a permeable bioretention soil mix. A riser outlet structure would allow for overflow of excessive stormwater flows. Ten stormwater outlets would be constructed around the perimeter of the facility. These outlets would include rip-rap to further reduce (in addition to the bioretention basins) off-site stormwater flow velocities. Stormwater treatment and storage sizing would be designed to hold the anticipated runoff from a 24-hour, 25-year storm event and a 24-hour, 100-year storm event, in compliance with Stormwater Technical Guidance Manual regulations. In the event

stormwater basins reach capacity, stormwater would be discharged from the detention basins via storm drainpipes and sheet flow at rates no greater than pre-development conditions following natural drainage patterns. Minimal off-site stormwater flow velocities would prevent off-site erosive scour of sediments, which in turn would prevent siltation of downstream water bodies, off-site flooding, and off-site exceedance of stormwater drainage facilities.

A stormwater drainage outfall utilizing a new 15-inch corrugated metal pipe would be constructed from one or more of the detention basins located in the southwest portion of the site to the inlet of a new or existing culvert on the north side of Patterson Pass Road. These energy dissipators would similarly prevent off-site erosion and sedimentation.

In summary, with implementation of the DESCP, spill prevention control and countermeasures plan, hazardous materials business plan, LID features, and compliance with conditions in the CWA Section 401 Certification the Project would not degrade water quality or conflict with or obstruct implementation of a water quality control plan. Drainage and water quality impacts would be less than significant.

Impact 3.15-2 Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact. Based on a water demand of 0.88 acre-feet (AF) of water per acre, the Project construction water demand would be about 49.1 AF. Grading and dust suppression during the first phases of the Project are anticipated to consume the majority of water demand. During construction, it is anticipated that water would be delivered to the Project site either by truck from the city limits of Livermore to the west, or from a water purveyor located within the Tracy Subbasin to the east. Although no permanent sanitary facilities would be constructed at the site, water demand for the operation and maintenance phase of the Project is anticipated to be 1 acre-foot per year (AFY), as a conservative estimate for three employees. Water demand for the decommissioning phase would be similar to construction water demand and would be provided from a local water purveyor.

As also discussed in Section 3.15.5.2, State LORS, Senate Bills 610 and 221 (SB 610/221) require a WSA for large development projects, which includes demonstrating sufficient water supplies for a 20-year period, under normal, single-dry, and multiple-dry year scenarios. Under SB 610, a WSA must be furnished to local governments for inclusion in any environmental documents for projects subject to the California Environmental Quality Act (California DWR 2003). The 20-year timeframe allows for the consideration of various factors that could impact water availability, such as population growth, climate change, and changes in water use patterns. The 20-year timeframe aligns with other water management planning efforts, such as SGMA, which requires GSAs to achieve groundwater sustainability within 20 years from adoption. In addition, the 20-year projection is consistent with the Zone 7 2020 Urban Water Management Plan (UWMP), which is a foundational document for compliance with SB 610/221 in fulfilling the specific requirements of the two statutes.

As discussed in Section 3.15.1.3, Groundwater, the Project is located within the service area for Zone 7, which is a water wholesaler and primarily sells water to water retailers, including California Water Service, the City of Pleasanton, City of Livermore, and the Dublin San Ramon Services District. Groundwater is one of the main sources of water supply for the Zone 7's distribution system and the public water supplier owns and operates ten municipal wells within the Livermore Valley Groundwater Basin. However, Zone 7 considers the Main Basin of the Livermore Valley Groundwater Basin a water storage facility and is not a component of long-term supply for Zone 7. Rather, Zone 7 utilizes the Main Basin as a storage facility via recharging the basin with surface water supplies (SWP water or locally-stored runoff from the Arroyo Valle watershed) and extracting only the volume of water that has been

recharged. Zone 7 uses groundwater banking agreements with agencies located in Kern County (Semitropic Water Storage District and Cawelo Water District) to store excess water available from the SWP during wet periods and then recovers it for delivery when SWP allotment is curtailed by droughts or disruptions. Zone 7 contracts with the California DWR for SWP water. Zone 7 is allowed to store 78,000 AF and 120,000 AF in the Semitropic and Cawelo groundwater banks, respectively (Appendix 3.15B). Because the Main Basin of the Livermore Valley Groundwater Basin would only be used as a water storage facility via recharging the basin with surface water supplies and extracting only the volume of water that has been recharged, the Project would not substantially decrease groundwater supplies. Impacts would be less than significant.

The Project site does not overlie a groundwater basin, as designated by the California DWR. Only one well (State Well No. 02S04E31B001M) is located within 0.5 mile of the Project boundary and no wells are located within the Project site itself (Figure 3.15-5, Groundwater Wells within 0.5 Mile of Project Site), indicating that groundwater is very limited in the Project area. Runoff from the Project site would not be diverted to a storm drain. Rather stormwater runoff would flow off-site into unpaved pervious areas and infiltrate into the subsurface. In addition, the Project site is located in a rural area that is predominantly unpaved and pervious to infiltration of precipitation. As a result, the Project would not substantially interfere with groundwater recharge. Impacts would be less than significant.

Impact 3.15-3 Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

a. Result in substantial erosion or siltation on- or off-site;
b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
c. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and/or
d. Impede or redirect flood flows?

Less-than-Significant Impact. As discussed for Impact 3.15-1, development associated with the BESS facility would occur on approximately 70 acres of an approximately 232-acre parcel, resulting in an increase in impervious surfaces. As detailed in Appendix 2A, the Project would include stormwater detention and LID features, constructed in compliance with the Stormwater Technical Guidance Manual, to minimize off-site stormwater runoff velocities. Based on a 100-year storm event, preliminary post-construction runoff rates exceed 5 cubic feet per second for several drainage management areas (DMAs). Per the Alameda County Hydrology & Hydraulics Manual, projects that exceed 5 cfs for the 100-year event shall be designed so the post-development peak runoff does not exceed pre-development peak runoff for the 5-, 15-, 25-, and 100-year recurrence interval storm events using a 24-hour design storm. A summary of the hydrology calculations are detailed in Appendix 2A, on Sheet C-2.0. The LID features would consist of bioretention and stormwater detention basins, including riser outlet structures, which would allow for overflow of excessive stormwater flows. With the exception of the southwest Project boundary, nine stormwater outlets would be constructed around the perimeter of the facility. These outlets would include rip-rap to further reduce off-site stormwater flow velocities to prevent erosion downstream of the pipe outlet. A stormwater drainage outfall utilizing a new 15-inch corrugated metal pipe would be constructed from one or more of the detention basins located in the southwest portion of the site to the inlet of a new or existing culvert on the north side of Patterson Pass Road. Approximately 10 cubic yards of clean rip-rap would be placed as an energy dissipator at the outfall to

discharge clean stormwater at or below current rates at the elevation of the ordinary high-water mark of the existing drainage on the south side of Patterson Pass Road. These energy dissipators would similarly minimize off-site stormwater flow velocities and prevent off-site erosion and sedimentation.

In addition, the Project site is not located within a FEMA-designated 100-year floodplain or potential dam failure inundation area. Therefore, Project construction would not impede or redirect flood flows or risk release of pollutants due to Project inundation. Impacts would be less than significant.

Impact 3.15-4 In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

No Impact. As discussed for Impact 3.15-3, the Project site is not located within a FEMA-designated 100-year floodplain or potential dam failure inundation area. In addition, the Project site is not located in proximity to the Pacific Ocean or adjacent to an enclosed body of water and is therefore not susceptible to inundation by tsunami or seiche. As a result, the Project would not risk release of pollutants due to Project inundation. No impacts would occur.

Impact 3.15-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction and Decommissioning

Less-than-Significant Impact. The Project would be required to comply with the Construction Stormwater General Permit requiring preparation and implementation of a SWPPP to control runoff from construction work sites. The SWPPP must include BMPs to address reduce erosion and sedimentation potential, or the deposition of mud, debris, or construction-related pollutants into nearby water bodies. The Project would also require CWA Section 401 Certification from the CVRWQCB, which would require the Project to demonstrate that it would not result in a violation of state water quality standards. Therefore, the Project would not conflict with or obstruct implementation of the RWQCB Central Valley Basin Plan and impacts from construction and decommissioning would be less than significant.

Operations

The Project is subject to the requirements of the RWQCB Central Valley Basin Plan. Compliance with the Basin Plan is ensured through waste discharge requirements for all surface water discharges, including stormwater. The LID features would consist of bioretention and stormwater detention basins, including riser outlet structures, which would allow for overflow of excessive stormwater flows. With the exception of the southwest Project boundary, nine stormwater outlets would be constructed around the perimeter of the facility. These outlets would include rip-rap to further reduce off-site stormwater flow velocities to prevent erosion downstream of the pipe outlet. As a result, the Project would not degrade water quality and would ensure that the Project is consistent with the Basin Plan's water quality objectives. Impacts would be less than significant.

3.15.4 Cumulative Effects

The cumulative projects detailed in Chapter 3, Environmental Analysis, Table 3-1, Cumulative Projects, have the potential to result in cumulative impacts to water resources when considered together with the Project.

Drainage and Water Quality

Risks related to drainage and water quality can be cumulative in nature because runoff from any given site comingles with runoff from downstream project sites. Cumulative projects were chosen based on projects located within the same watershed as the Project, which is the Old River watershed. Other projects include residential, commercial, and industrial development. The majority of the cumulative projects would involve both construction and operational activities. The PG&E Tesla Substation, located immediately east of the Project site, would be the primary potential driver of cumulative drainage and water quality impacts.

Although construction and decommissioning activities have the potential to result in erosion and incidental spills of petroleum products and hazardous substances on the Project site, adherence to the construction SWPPP, DESCP (Appendix 2A), CWA Section 401 Certification, and County of Alameda grading requirements would mitigate erosion and incidental spills of hazardous substances related impacts to less-than-significant levels. Other cumulative scenario projects would be required to adhere to similar requirements, thereby minimizing cumulative scenario water quality impacts. Specifically, all planned projects in the vicinity of the proposed Project would be subject to environmental review and would be required to conform to the Alameda County grading ordinance and Construction General Permit, thus minimizing cumulative construction related impacts.

With respect to operations, increased runoff at cumulative project sites would similarly be subject to requirements of the Alameda County Stormwater Technical Guidance Manual, which would minimize post-construction stormwater quality impacts and stormwater runoff velocities, thus eliminating the potential for cumulative flooding and erosive scour of sediments. Therefore, with compliance with local regulations and implementation of stormwater management measures, the Project would not cause or contribute to a cumulatively significant impact to hydrology and water quality.

Groundwater Supply

Cumulative impacts to groundwater supply could occur if Project activities would contribute to overdraft conditions in the Livermore Valley Groundwater Basin. However, Zone 7 utilizes the Main Basin of the Livermore Valley Groundwater Basin as a storage facility via recharging the basin with surface water and extracting only the volume of water that has been recharged. Zone 7 uses groundwater banking agreements with agencies located in Kern County (Semitropic Water Storage District and Cawelo Water District) to store excess water available from the SWP during wet periods and then recovers it for delivery when SWP allotment is curtailed by droughts or disruptions. In addition, this groundwater basin is managed in accordance with a 2017 Groundwater Management Program, which was approved by the California DWR in 2019 as an alternative to a SGMA related GSA. Other related projects utilizing the Livermore Valley Groundwater Basin as a source of water supply would similarly be subject to the requirements of the Groundwater Management Plan and Zone 7 groundwater banking agreements. As a result, the proposed Project, in combination with related cumulative projects, would not cause or contribute to a cumulatively significant impact to groundwater supply.

3.15.5 Mitigation Measures

No mitigation measures are required as no significant impacts would occur.

3.15.6 Laws, Ordinances, Regulations, and Standards

LORS applicable to water resources are discussed in this subsection and are summarized in Table 3.15-4.

Table 3.15-4. LORS Applicable to Water Resources

Jurisdiction	LORS	Applicability	Opt-In Application Reference	Project Conformity
Federal	CWA/Water Pollution Control Act. 1972, amended by Water Quality Act of 1987 P.L. 100-4	Regulates stormwater and non-stormwater discharges from construction and industrial activities	Impact 3.15-1 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit. Impacts to Patterson Run would require a CWA Section 404 Nationwide Permit and CWA Section 401 Certification.
State	California Environmental Quality Act (CEQA)	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible.	Throughout this Opt-In Application	California Energy Commission (CEC), per the CEC's Opt-In Application process.
State	Porter-Cologne Water Quality Control Act	Regulates discharges of waste to state waters and land	Impact 3.15-1 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit. CWA Section 401 Certification would be required prior to the U.S. Army Corps of Engineers issuing a CWA Section 404 NWP.
State	Division of Water Quality, Construction General Permit, SWPPP	Requirements for Application for General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order WQ 2022-0057-DWQ, NPDES No. CAS000002	Impact 3.15-1 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit, which includes implementation of a SWPPP.
State	RWQCB Central Valley Basin Plan	Regulates discharges of waste to water and land	Impact 3.15-1 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit.

Table 3.15-4. LORS Applicable to Water Resources

Jurisdiction	LORS	Applicability	Opt-In Application Reference	Project Conformity
State	RWQCB San Francisco Bay Region Basin Plan	Regulates discharges of waste to water and land	Impact 3.11-1	Project grading and construction would be completed in compliance with the NPDES Construction General Permit, which would fulfill Basin Plan water quality objectives with respect to erosion and water quality.
Local	Alameda County Stormwater Technical Guidance Manual	Stormwater guidelines designed to minimize off-site stormwater runoff velocities and minimize off-site water quality impacts	Impact 3.15-1 Impact 3.15-3 Impact 3.15-5	Project operations would be completed in compliance with the Technical Guidance Manual through installation of bioretention basins and velocity inhibiting rip-rap at drainage outlets.
Local	Alameda County General Plan, Conservation Element: Goal III-A-Water Resources	Goals and policies to ensure high quality water supplies, avoidance of groundwater overdraft, prevention of flooding, prevention of stormwater pollution, and avoidance of soil erosion	Impact 3.15-1 Impact 3.15-2 Impact 3.15-3 Impact 3.15-4 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit. Project operations would be completed in compliance with the Alameda County Technical Guidance Manual through installation of bioretention basins and velocity inhibiting rip-rap at drainage outlets.
Local	East County Area Plan, Environmental Health and Safety Element Water Quality	Goals and policies related to protecting and enhancing surface and groundwater quality	Impact 3.15-1 Impact 3.15-5	Project grading and construction would be completed in compliance with the NPDES Construction General Permit and the Alameda County Stormwater Technical Guidance Manual. These measures would fulfill East County Area Environmental Health and Safety Element Water Quality goals and policies.

3.15.6.1 Federal LORS

Clean Water Act

The following are potentially applicable sections of the CWA (33 USC 1251-13176).

Section 303 and 305 - Total Maximum Daily Load Program

The State of California adopts water quality standards to protect beneficial uses of state waters as required by the CWA 303 TMDL Program and the State's Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act). CWA 303(d) established the TMDL process to guide the application of State water quality standards (see the discussion of State water quality standards below). To identify candidate water bodies for TMDL analysis, a list of water quality–limited streams is generated. Such streams are considered to be impaired by the presence of pollutants, including sediments, and to have no additional capacity for these pollutants.

In addition to the impaired water body list required by CWA Section 303(d), CWA Section 305(b) requires states to develop a report that assesses statewide surface water quality. Both CWA requirements are addressed through the development of a 303(d)/305(b) Integrated Report, which provides both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB's statewide 2020/2022 California Integrated Report was based on Integrated Reports from each of the nine RWQCBs. After approval of the Section 303(d) list portion of the California Integrated Report by the SWRCB, the complete 2020 and 2022 California Integrated Report was approved by the U.S. Environmental Protection Agency (USEPA) on January 19, 2022.

Section 401- Water Quality Certification

CWA Section 401 requires that an applicant obtain a water quality certification (or waiver) for pursuing a federal permit to conduct any activity that may result in a discharge of a pollutant to a regulated water body. Water quality certifications are issued by the RWQCBs in California and the Central Valley RWQCB is responsible for issuing certifications in the Project area. Under the CWA, the State (as implemented by the relevant RWQCB) must issue or waive a CWA Section 401 water quality certification for a Project to be permitted under CWA Section 404. Water quality certification requires the evaluation of water quality considerations associated with dredging or the placement of fill into waters of the United States. Construction of the proposed Project would require a CWA 401 certification for the Project if CWA Section 404 requirements are triggered.

Section 402- National Pollutant Discharge Elimination System Program

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (CWA Section 402). The 1987 amendments to the CWA created a new section of the CWA that is devoted to stormwater permitting (CWA 402[p]). The EPA has granted the State of California primacy in administering and enforcing the provisions of CWA and the NPDES permit program. The NPDES permit program is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

Section 404- Permits for Fill Placement in Waters and Wetlands

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. Project proponents must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States before proceeding with a proposed activity. Before any actions are implemented that may affect surface waters, a delineation of jurisdictional waters of the United States must be completed, following USACE protocols, to determine whether the study area contains wetlands or other waters of the United States that qualify for CWA protection. These areas include the following.

- Sections within the ordinary high-water mark of a stream, including non-perennial streams with a defined bed and bank and any stream channel that conveys natural runoff, even if it has been realigned.
- Seasonal and perennial wetlands, including coastal wetlands.

Section 404 permits may be issued for only the least environmentally damaging practical alternative (i.e., authorization of a proposed discharge is prohibited if there is a practical alternative that would have fewer significant effects and lacks other significant consequences). Section 404 would apply if Project construction was proposed within waters of the United States.

The SWRCB issues both general and individual permits for certain activities. Although implemented at the state and local level, relevant general and individual NPDES permits are discussed below.

Construction Activities

Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to file a notice of intent to obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. WQ 2022-0057-DWQ) (Construction General Permit). Construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the preparation and implementation of a SWPPP, which must be completed before construction begins. The SWPPP should contain a site map that shows the construction site perimeter; existing and proposed buildings, lots, roadways, and stormwater collection and discharge points; general topography both before and after construction; and drainage patterns across the Project site. The SWPPP must list the BMPs that the discharger will use to manage stormwater runoff and describe the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a monitoring program for pollutants that are not visible to be implemented if there is a failure of BMPs, and a pH and turbidity monitoring program if the site discharges to a water body listed on the 303(d) list for sediment. The Construction General Permit describes the elements that must be contained in a SWPPP.

3.15.6.2 State LORS

California Environmental Quality Act

CEQA requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible. Appendix G of the CEQA Guidelines includes criteria for evaluating potential impacts related to soils.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and associated RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

Department of Water Quality, Stormwater Construction General Permit

The five-member SWRCB allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine RWQCBs in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters. Effective September 1, 2023, Construction Stormwater General Permit Order 2022-0057-DWQ, also known as the Construction General Permit, supersedes SWRCB Order No. 2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ. The order requires that, prior to beginning any construction activity, the permit applicant obtain coverage under the CGP by preparing and submitting to the SWRCB a Permit Registration Document that includes a Notice of Intent, SWPPP, and other compliance related documents required by the Construction General Permit. Regulating many stormwater discharges under one general permit greatly reduces the administrative burden associated with permitting individual stormwater discharges. Construction activities subject to the NPDES Construction General Permit include clearing, grading, and disturbances to the ground (e.g., stockpiling or excavating), which result in soil disturbances of at least 1 or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface.

Regional Water Quality Control Board, Central Valley Region Basin Plan

The RWQCB Water Quality Control Plan for the Central Valley Region, including the Sacramento River Basin and San Joaquin River Basin (Basin Plan), is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan (California Water Code Sections 13240–13244 and Section 13050[j]) (Central Valley RWQCB 2019).

Senate Bills 610 and 221

Senate Bills 610 (Chapter 643, Statutes of 2001) and Senate Bill 221 (Chapter 642, Statutes of 2001) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to the California Environmental Quality Act. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

3.15.6.3 Local LORS

Alameda County Clean Water Program

The Department of Environmental Health developed a formal agreement with the Public Works Agency to implement the industrial and commercial component of the Alameda Countywide Clean Water Program for unincorporated Alameda County. The program includes inspection of facilities for compliance with the CWA regulations, outreach and education of BMPs to business owners, inspections for enforcement action, and creation and maintenance of a database of businesses in Alameda County unincorporated area for the Clean Water Program. This program also addresses items addressed above under Construction Activities in the federal subsection.

Alameda County Municipal Code

Chapter 15.36, Grading Erosion and Sediment, of the Alameda County Municipal Code includes regulations for work on private property within the unincorporated area of the County in order to safeguard life, limb, health, property, and public welfare; to protect creeks, watercourses, and other drainage facilities from illicit discharges of surface runoff generated in or draining through the permit work area; and to ensure that the construction and eventual use of a graded site is in accordance with the County General Plan, East County Area Plan, and all applicable County ordinances.

Alameda County Flood Control & Water Conservation District

The Alameda County Flood Control & Water Conservation District (District) provides flood protection for Alameda County residents and businesses. The District plans, designs, constructs, and maintains flood control projects such as natural creeks, channels, levees, pump stations, dams, and reservoirs. In 2016, the District updated the Hydrology & Hydraulics Manual, which serves as a guide for minimum design requirements and provides a hydrologic model for all of Alameda County. The District is also charged with administering the Clean Water Program for unincorporated areas of Alameda County, the 14 cities of Alameda County, the District, and the Zone 7 Water Agency. The District provides administrative and contracting services for the Alameda Countywide Clean Water Program to help comply with federal and State requirements to improve water quality and better manage urban stormwater and runoff. Eastern Alameda County, including the Project site, is located within Zone 7 of the District.

Alameda County General Plan, Conservation Element

Conservation Element Goal III-A-Water Resources includes goals and policies to ensure high quality water supplies, avoidance of groundwater overdraft, prevention of flooding, prevention of stormwater pollution, and avoidance of soil erosion, including the following:

Goal: To ensure and maintain a continuing supply of high water quality for the citizens of Alameda County.

Objectives:

1. To ensure sufficient water supplies of high quality for all beneficial uses.
2. To conserve groundwater resources and prevent overdraft of existing groundwater supplies.
3. To define areas of periodic flooding and reduce loss through the application of sound land use planning.
4. To reduce man-caused stream and groundwater pollution and general resource degeneration through cumulative impacts on surface and groundwater systems.
5. To maintain all water resources in their highest quality.
6. To educate government, business, and citizens to assist in the conservation of water and energy and minimize pollution.
7. Through sound design of drainage systems throughout the County and by regulation of land use, erosion of soil caused by water could be controlled.
8. To achieve coordination of state, regional, and local water management agencies and policies throughout the County.

Alameda County General Plan, Safety Element

The Safety Element includes Goal 3 related to flooding, including the following:

Goal: To reduce hazards related to flooding and inundation.

Policies:

P2. Surface runoff from new development shall be controlled by on-site measures including, but not limited to structural controls and restrictions regarding changes in topography, removal of vegetation, creation of impervious surfaces, and periods of construction, such that the need for off-site flood and drainage control improvements is minimized and such that runoff from development will not result in downstream flood hazards.

East County Area Plan, Public Services and Facilities Element

The Public Services and Facilities Element includes the following:

Water

Goal: To provide an adequate, reliable, efficient, safe, and cost-effective water supply to the residents, businesses, institutions, and agricultural uses in East County.

Policy 253. The County shall approve new development only upon verification that an adequate, long-term, sustainable, clearly identified water supply will be provided to serve the development, including in times of drought.

Storm Drainage and Flood Control

Goal: To provide efficient, cost-effective, and environmentally sound storm drainage and flood control facilities.

Policy 280. The County shall regulate new development on a case-by-case basis to ensure that, when appropriate, project storm drainage facilities shall be designed so that peak rate flow of storm water from new development will not exceed the rate of runoff from the site in its undeveloped state.

Policy 282. The County shall encourage use of natural or nonstructural storm water drainage systems to preserve and enhance the natural features of a site.

East County Area Plan, Environmental Health and Safety Element

The Environmental Health and Safety Element includes the following:

Water Quality

Goal: To protect and enhance surface and groundwater quality.

Policy 306. The County shall protect surface and groundwater resources by:

- preserving areas with prime percolation capabilities and minimizing placement of potential sources of pollution in such areas;
- minimizing sedimentation and erosion through control of grading, quarrying, cutting of trees, removal of vegetation, placement of roads and bridges, use of off-road vehicles, and animal-related disturbance of the soil;
- not allowing the development of septic systems, automobile dismantlers, waste disposal facilities, industries utilizing toxic chemicals, and other potentially polluting substances in creek-side, reservoir, or high groundwater table areas when polluting substances could come in contact with flood waters, permanently or seasonally high groundwaters, flowing stream or creek waters, or reservoir waters; and

Implementation Programs

Program 108. The County shall implement all federal, state and locally imposed statutes, regulations, and orders that apply to storm water quality. Examples of these include, but are not limited to:

- State of California NPDES General Permit for Storm Water Discharges (General Industrial Permit, Construction General Permit) and amendments thereto;
- Letters issued by the RWQCB under the California Porter-Cologne Water Quality Act.

3.15.7 Agency Contacts, Permits, and Permit Schedule

Applicable permits and agency contacts for soils are shown in Table 3.15-5. Building and grading permits from Alameda County would be superseded by CEC approval of the Project under the opt-in program.

Table 3.15-5. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
Alameda County Public Works Agency*	Alameda County Public Works Agency 399 Elmhurst Street, Room 141 Hayward, California 94544 510.567.5868	Building and Grading Permits
NPDES Permit	San Francisco Bay Regional Water Quality Control Board 1515 Clay Street, Suite 1400 Oakland, California 94612 510.622.2300	Surface water compliance
CWA Section 404 Nationwide Permit	U.S. Army Corps of Engineers, Sacramento District 1325 J St Sacramento, California 95814-2922	Placement of fill material within the ordinary high water mark of Patterson Run.
CWA Section 401 Water Quality Certification	Central Valley Regional Water Quality Control Board	CVRWQCB must certify that the action being authorized by the U.S. Army Corps of Engineers will not violate any state water quality standards.

Notes:
* Building and grading permits from the Alameda County Public Works Agency would be superseded by CEC approval of the Project under the opt-in program.

3.15.8 References

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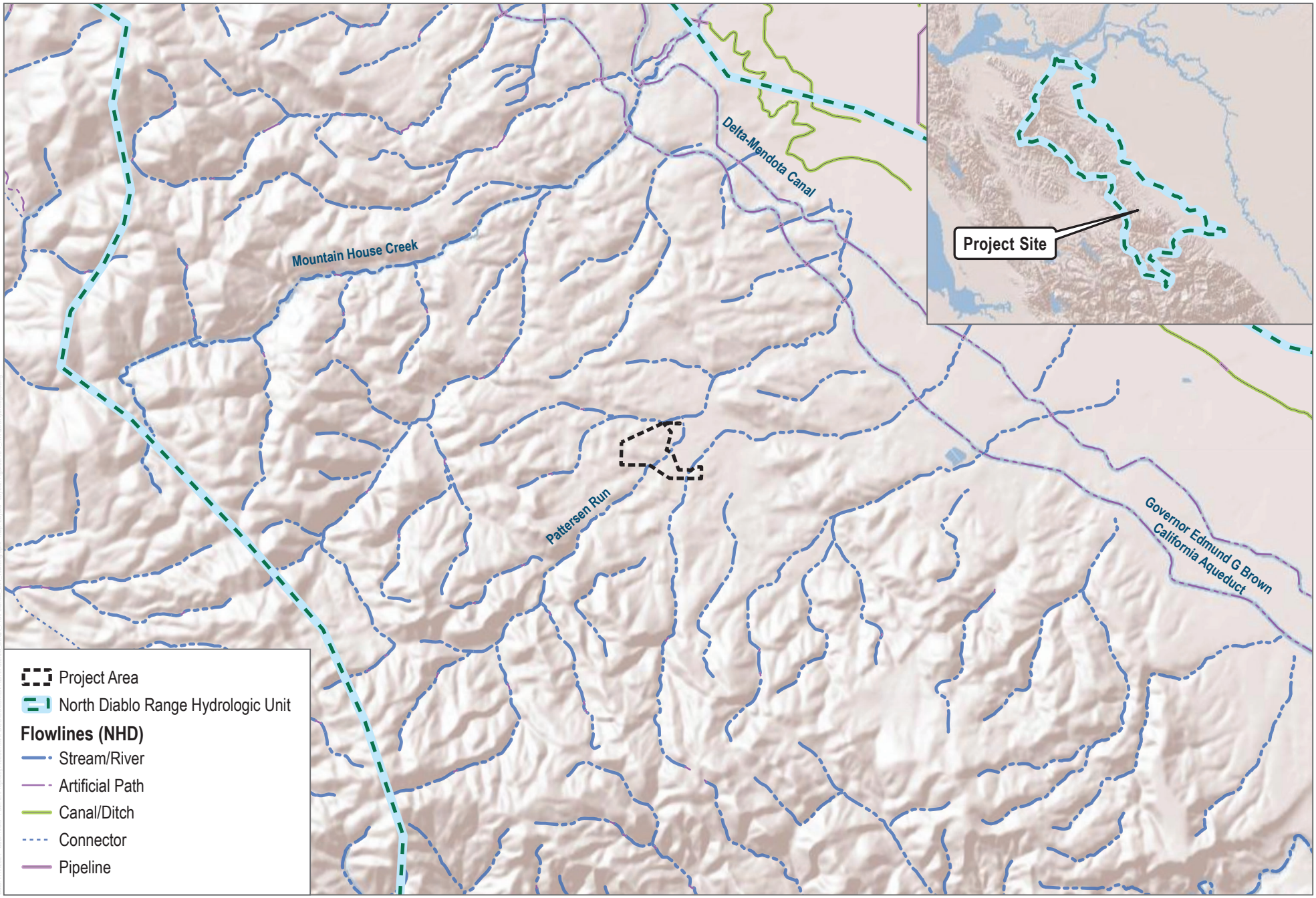

SOURCE: Esri World Terrain; SWRQCB

DUDEK

0 0.5 1 Miles

FIGURE 3.15-1

RWQCB Hydrologic Setting

Potentia-Viridi BESS Project

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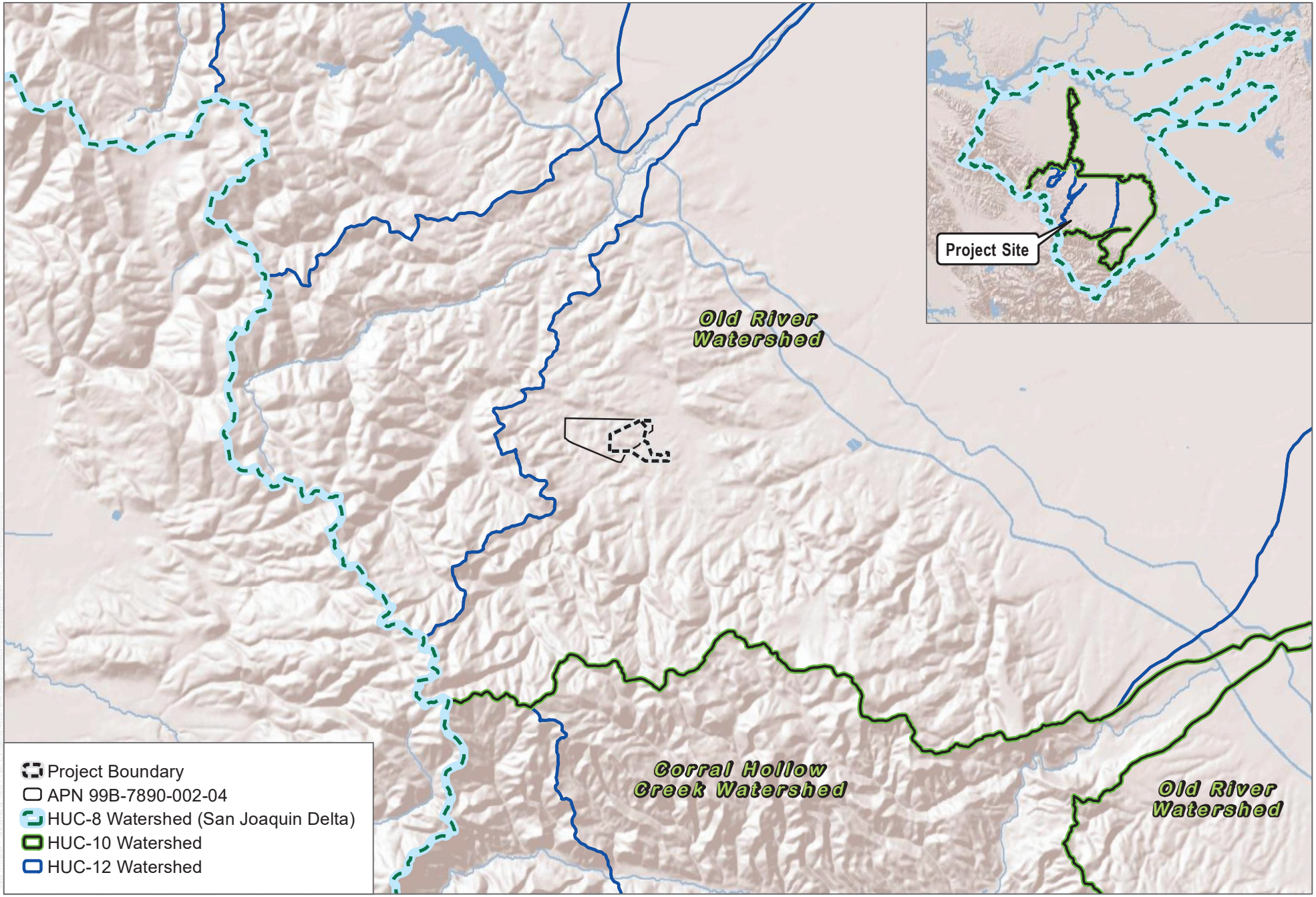

SOURCE: Esri World Imagery Basemap; SWRQCB

DUDEK

0 0.5 1 Miles

FIGURE 3.15-2

USGS Hydrologic Setting

Potentia-Viridi BESS Project

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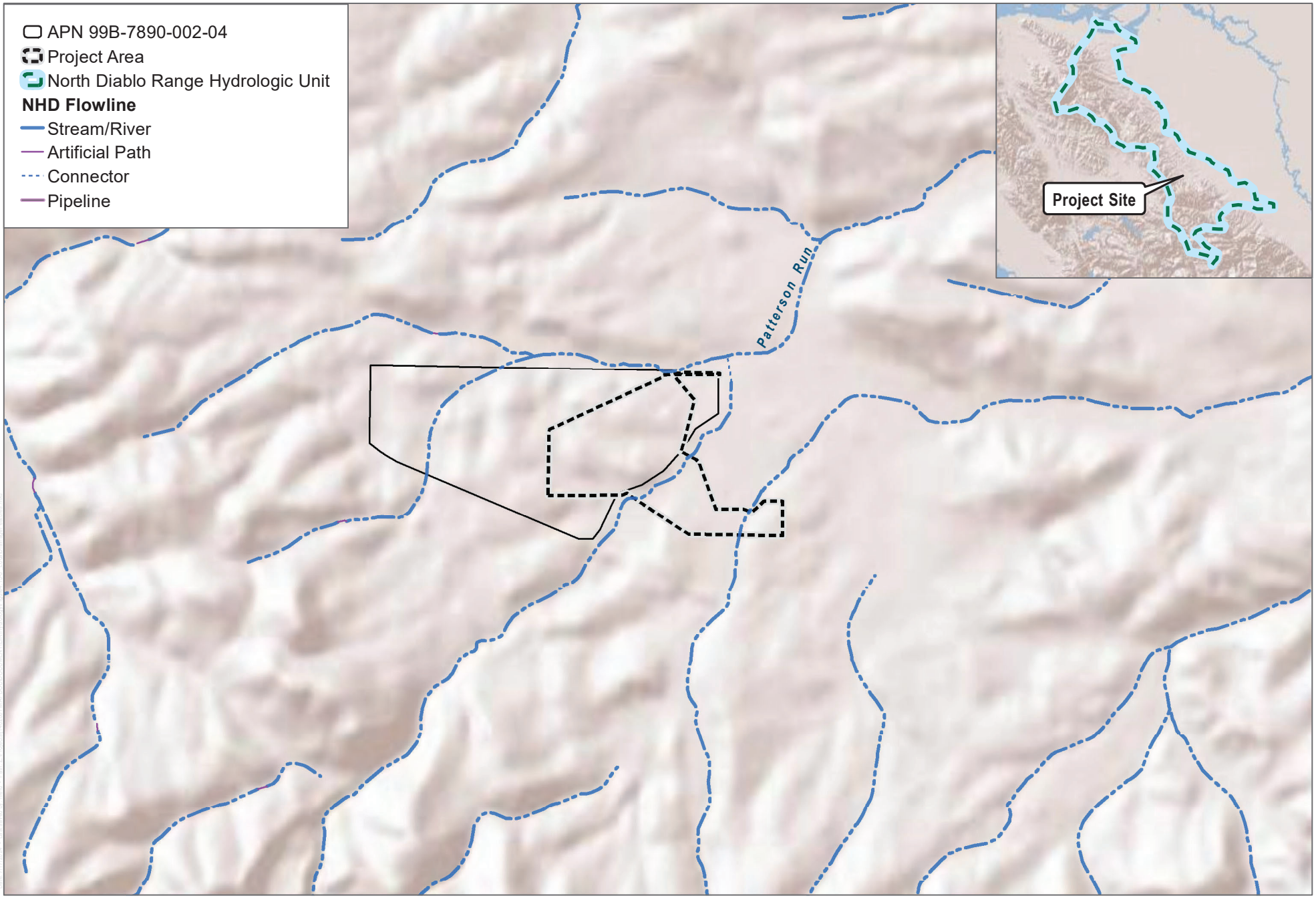

SOURCE: Esri World Imagery Basemap; SWRQCB

DUDEK

0 1,000 2,000 Feet

FIGURE 3.15-3

Local Drainage Features

Potentia-Viridi BESS Project

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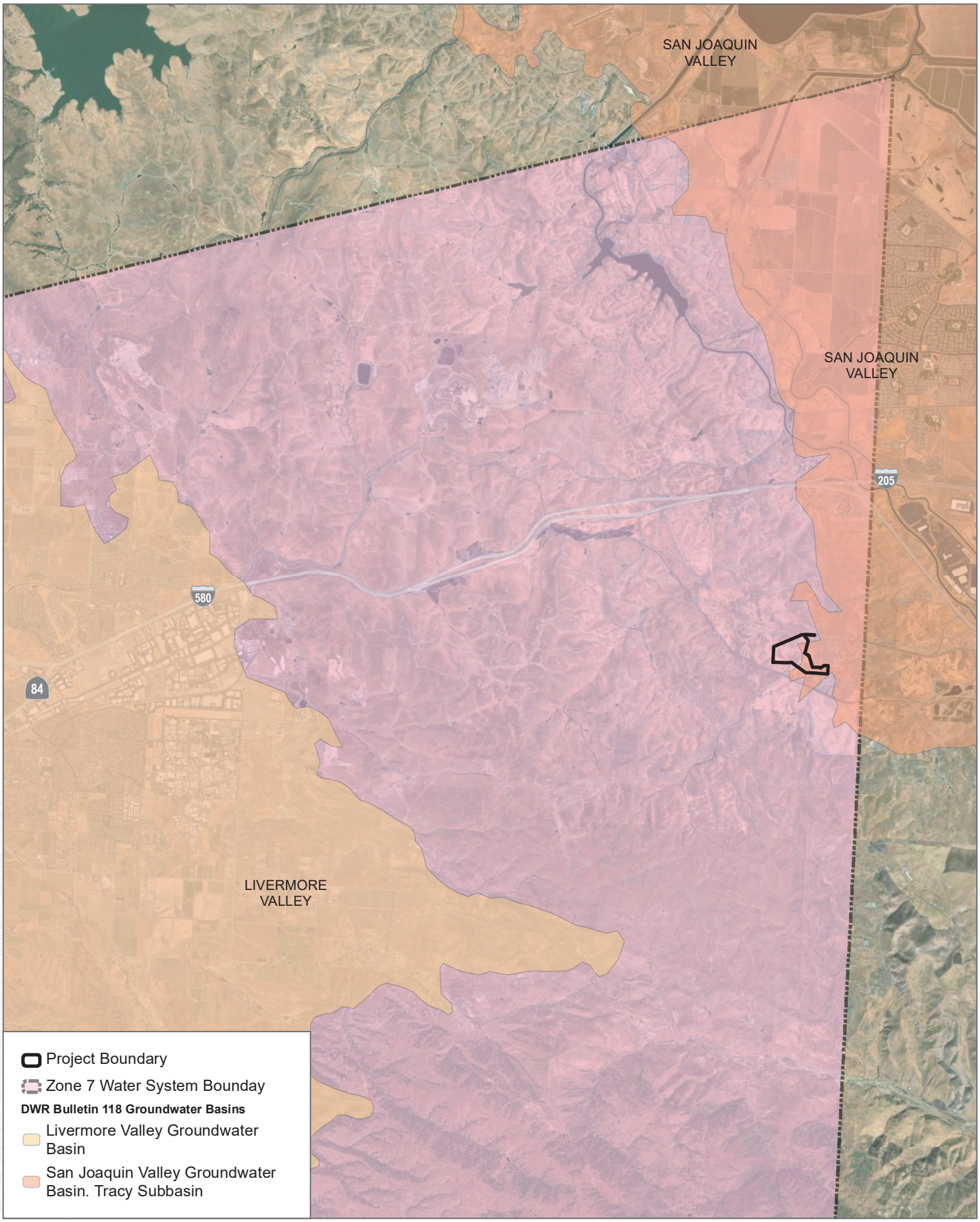

SOURCE: ESRI; SWRCB

DUDEK

0 4,550 9,100 Feet

FIGURE 3.15-4

Groundwater Basins and Water Agency Boundaries

Potentia-Viridi BESS Project

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Project Boundary

0.5 Mile Buffer

NWIS Mapper Wells

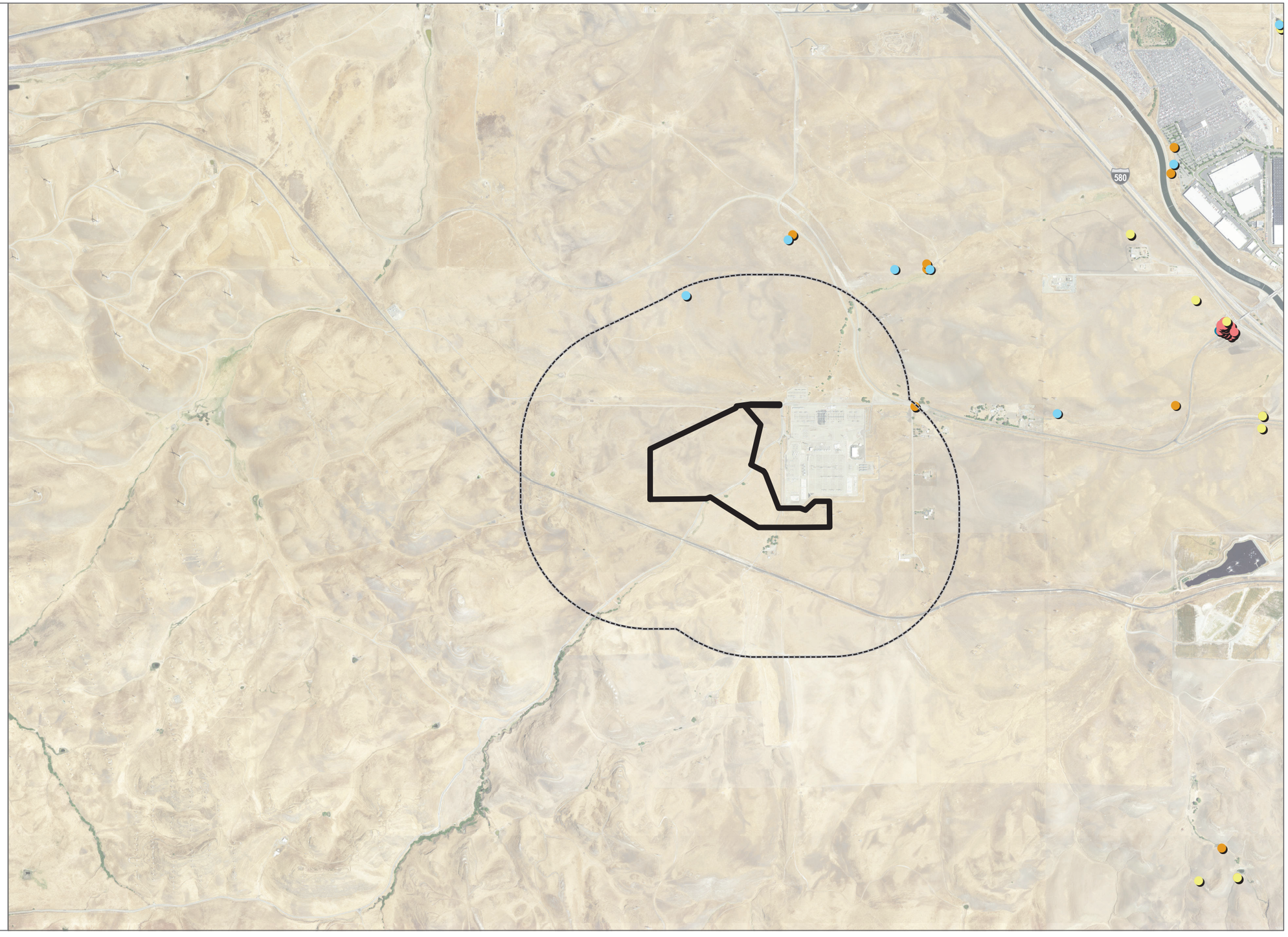
SGMA Data Viewer Wells

GAMA Wells

Monitoring

Municipal

Water Supply, Other



SOURCE: ESRI; DWR, USGS, SWRCB

DUDEK

0 950 1,900 Feet

FIGURE 3.15-5

Groundwater Wells within 0.5 Miles of Project Site

Potentia-Viridi BESS Project

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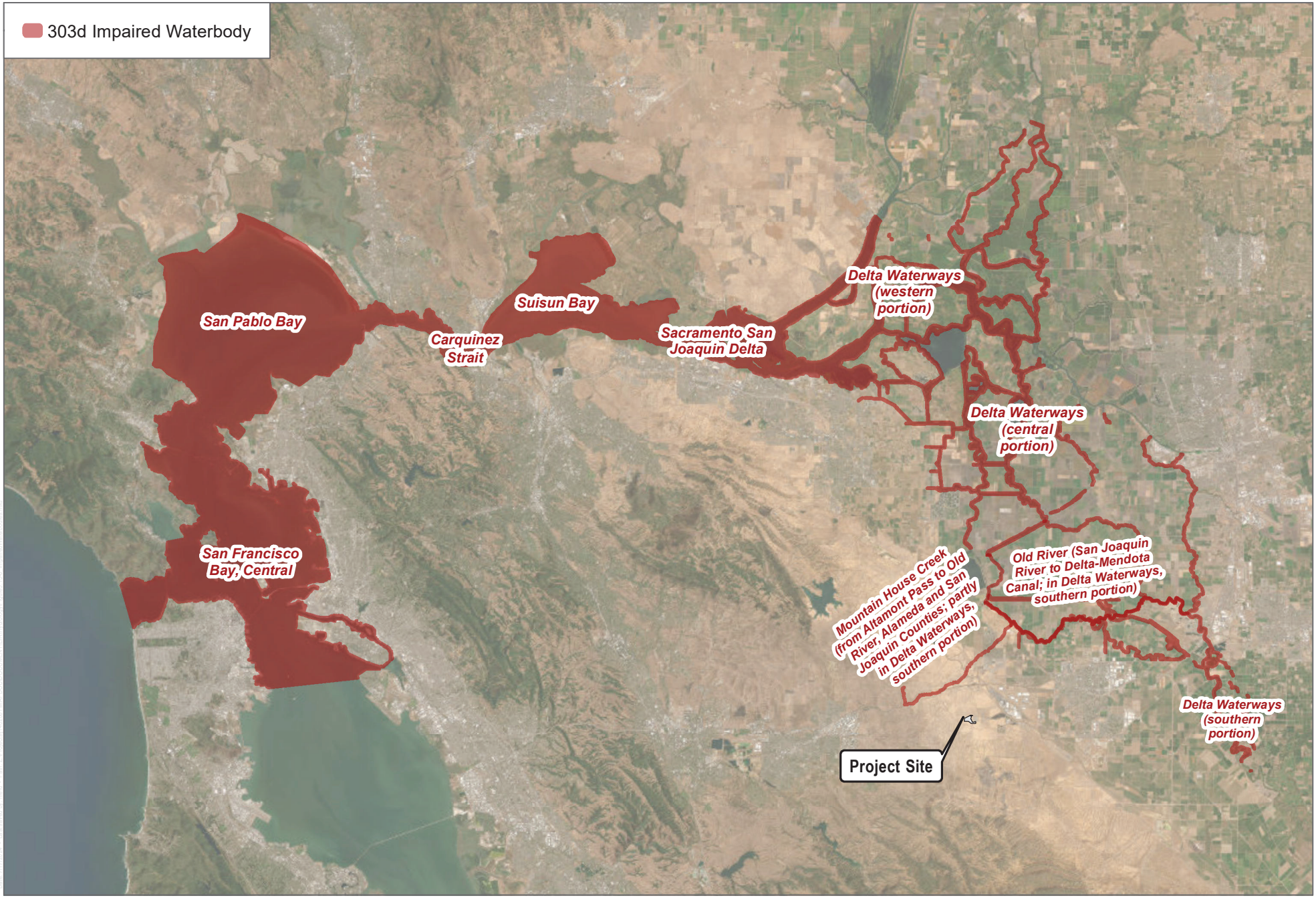

SOURCE: Esri World Imagery Basemap; SWRQCB

DUDEK

0 3.5 7 Miles

FIGURE 3.15-6

Impaired Waterbodies

Potentia-Viridi BESS Project

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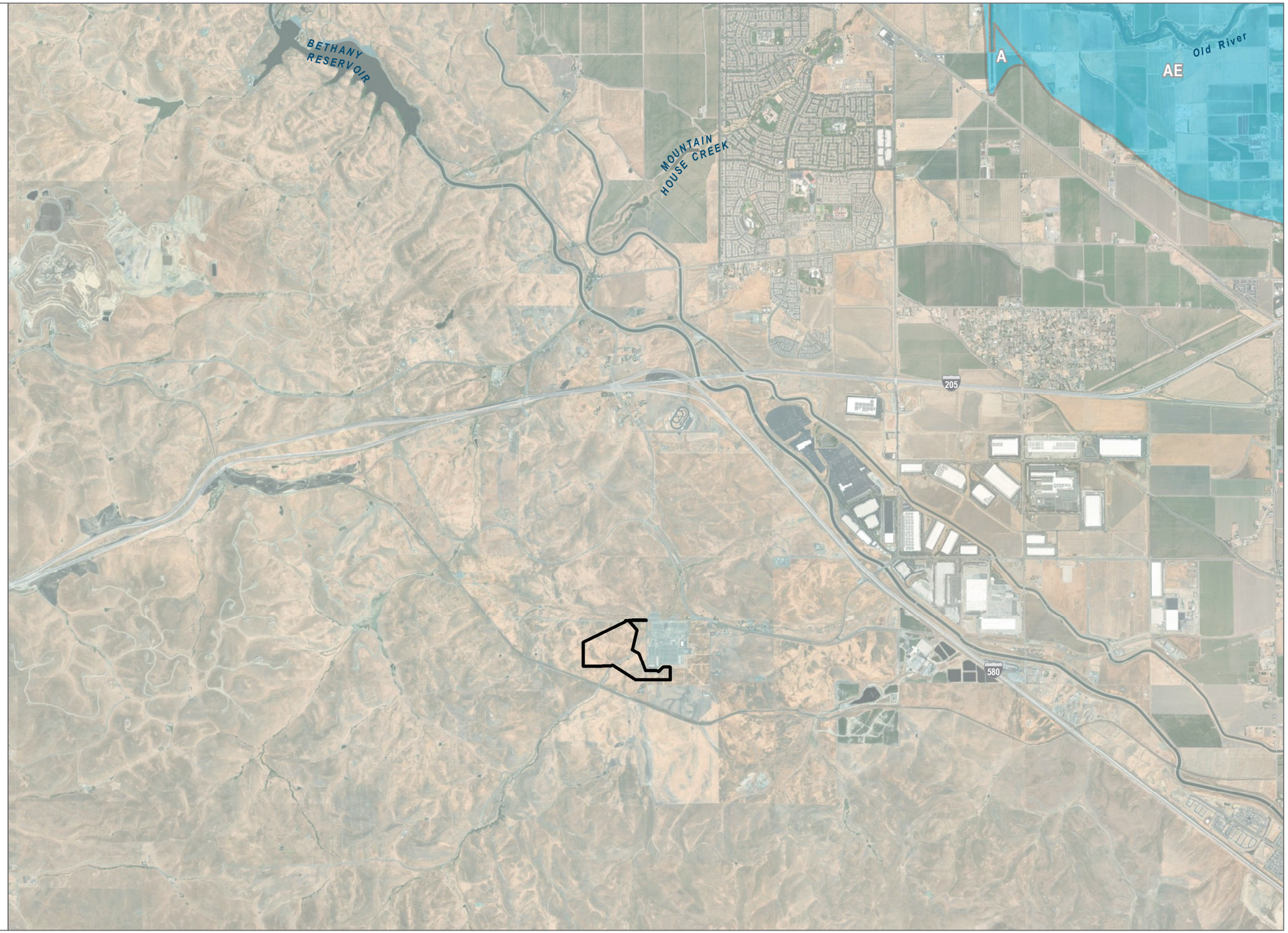
Project Boudary

FEMA Flood Hazard Areas

100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.

ZONE A: No Base Flood Elevations determined.

ZONE AE: Base Flood Elevations determined.



SOURCE: ESRI; DWR; FEMA

DUDEK

0 2,000 4,000 Feet

FIGURE 3.15-7

FEMA Flood Zones

Potentia-Viridi BESS Project

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