DOCKETED	
Docket Number:	26-OPT-01
Project Title:	Vaca Dixon Power Center Project
TN #:	268155
Document Title:	Section 5-8_Public Health_VDPC
Description:	This section discusses activities that could potentially affect public health as they relate to the construction and operation of the Project. This section relies on information from the Air Quality and Greenhouse Gas Emissions Study prepared for the Project (Appendix R). The Air Quality and Greenhouse Gas Emissions Study includes a Health Risk Assessment (HRA), which assesses potential effects and public exposure associated with airborne emissions from the Project. The HRA was conducted following the guidelines established by the California Office of Environmental Health Hazard Assessment (OEHHA) and the California Air Resources Board (CARB).
Filer:	Grace Myers
Organization:	Rincon Consultants, Inc.
Submitter Role:	Applicant Consultant
Submission Date:	1/6/2026 1:00:44 PM
Docketed Date:	1/16/2026

5.8 Public Health

This section discusses activities that could potentially affect public health as they relate to the construction and operation of the Vaca Dixon Power Center Project (Project). This section relies on information from the Air Quality and Greenhouse Gas Emissions Study prepared for the Project (Rincon 2025; Appendix R). The Air Quality and Greenhouse Gas Emissions Study includes a Health Risk Assessment (HRA), which assesses potential effects and public exposure associated with airborne emissions from the Project. The HRA was conducted following the guidelines established by the California Office of Environmental Health Hazard Assessment (OEHHA) and the California Air Resources Board (CARB). Section 5.8.1 describes the existing environmental setting. Section 5.8.2 provides an overview of the regulatory setting related to public health. Section 5.8.3 identifies potential impacts that may result from Project construction and operation (including maintenance), as well as mitigation measures that should be considered during Project construction and operation. Section 5.8.4 discusses cumulative impacts. Section 5.8.5 presents laws, ordinances, regulations, and standards (LORS) applicable to public health. Section 5.8.6 identifies regulatory agency contacts and Section 5.8.7 describes permits required for the Project related to public health. Section 5.8.8 provides references for this section.

Combustion byproducts with established California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS), including nitrogen oxides (NO_X), carbon monoxide (CO), and fine particulate matter (PM_{10}/$PM_{2.5}$) are addressed in Section 5.7, *Air Quality*. However, some discussion of the potential health risks associated with these substances is presented in this section. Human health risks associated with the potential accidental release of stored acutely hazardous materials, if applicable, are discussed in Section 5.9, *Hazardous Materials Handling*.

5.8.1 Environmental Setting

The following subsections provide an overview of the existing environmental setting for public health in the Project vicinity. The proposed Vaca Dixon Power Center Project includes battery energy storage system (BESS) facilities located in the City of Vacaville in Solano County, California. The proposed Project also includes electrical interconnection facilities (gen-ties) on unincorporated land in Solano County. The BESS facilities and the gen-tie facilities are all within the Sacramento Valley Air Basin (SVAB) and under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD). The SVAB encompasses eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo counties, the westernmost portion of Placer County, and the northeastern half of Solano County. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The intervening terrain is relatively flat. The combined BESS components footprint encompasses approximately 10 acres on APN 0133-060-060. The proposed Vaca Dixon 57 megawatt-hour (MWh) BESS component is located on approximately 4.25 acres in the southern portion of the BESS Project Area. The proposed Arges 400 MWh BESS component is located on approximately 5.75 acres in the northern portion of the BESS Project Area.

The Project also includes transmission intertie (gen-tie) lines that would cross over in unincorporated Solano County across Interstate 80 (I-80) to the north and connect to the existing Pacific Gas & Electric (PG&E) Vaca-Dixon Substation, facilitating interconnection of the BESS components to the regional transmission grid.

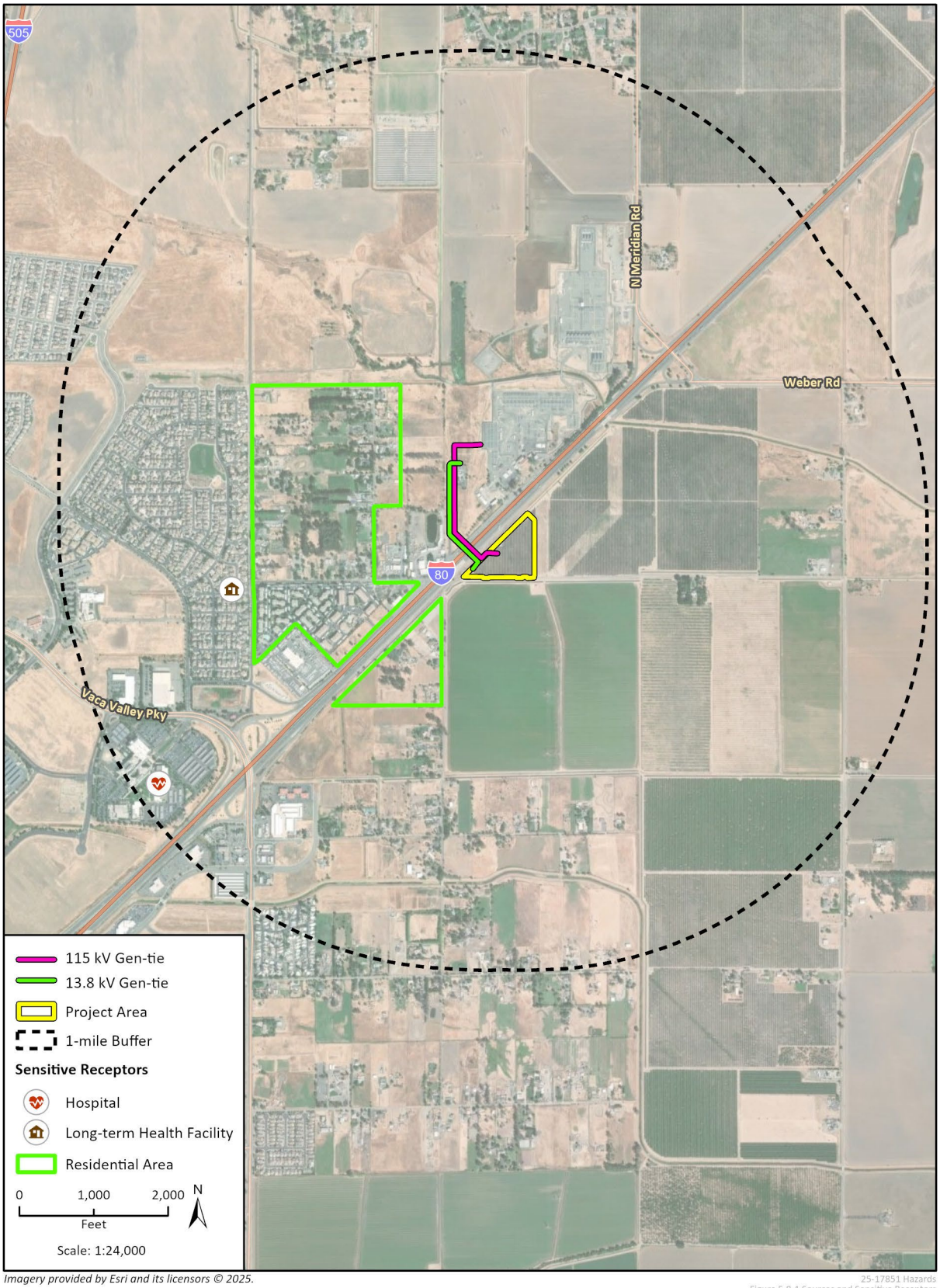
5.8.1.1 Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include preexisting health problems, proximity to emissions sources, or duration of exposure to air pollutants. Title 20, California Code of Regulations, Section 1704, Appendix B) defines a sensitive receptor as infants and children, the elderly, and the chronically ill, and any other member of the general population who is more susceptible to the effects of the exposure than the population at large. Schools, hospitals, and convalescent homes are considered relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods, with greater associated exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system. Ambient air quality standards were established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. Standards are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The closest sensitive receptors to the BESS Project Area are residential receptors located approximately 750 feet southwest of the Project BESS facilities. The closest sensitive receptors to the gen-tie lines are residential receptors located approximately 750 feet west of the Project gen-tie lines. CARB's Air Quality and Land Use Handbook: a Community Health Perspective recommends a buffer zone of up to 1,000 feet between various pollutant sources and sensitive receptors. Sensitive receptors identified in the analysis are included in Figure 5.8-1.

Characterization of Risks from Toxic Air Contaminants

Toxic Air Contaminants (TAC) are a diverse group of airborne substances that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (approximately 1/70th the diameter of a human hair) and thus is a subset of particulates less than 2.5 microns in diameter $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (CARB 2022). Ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include asthma, respiratory symptoms, and decreased lung function (CARB 2022).

Figure 5.8-1 Sources and Sensitive Receptors



Imagery provided by Esri and its licensors © 2025.

25-17851 Hazards
Figure 5.8-1 Sources and Sensitive Receptors

CO Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and state eight-hour standard of 9.0 ppm (SJVAPCD 2022).

5.8.1.2 Health Studies

The Solano County Department of Public Health has not published health studies specific to potentially affected populations within six miles of the Project Site related to the health effects of TACs or respiratory illnesses, cancers or related diseases (Solano County Public Health 2025). This six-mile radius represents the geographic scope used for evaluating potential localized public health impacts, as it includes nearby sensitive receptors and communities that could experience potential health impacts as a result of Project specific emissions.

Health Risk Assessment

Health Risk Assessment Methodology

Health impacts associated with TACs are generally from long-term exposure. Typical sources of TACs include industrial processes such as petroleum refining operations, commercial operations such as gasoline stations and dry cleaners, and diesel exhaust. Health impacts from TAC emissions during the operational phase of the Project could result from the use of on-site diesel equipment during Project operation. In addition, the use of large-scale off-road diesel equipment during Project construction may result in a short-term increase of TAC emissions. DPM would be the TAC emitted in the largest quantity during construction and is the primary contaminant of concern for the Project. Thus, health risks were assessed as they relate to DPM exposure.

The significance of health risk impacts is based on the magnitude of excess health risk relative to an established threshold. Health effects from carcinogenic air toxins usually are described in terms of cancer risk. Non-carcinogenic hazards include chronic and acute effects. Acute effects are due to short-term exposure, while chronic effects are due to long-term exposure to a substance. For chronic and acute risks, the hazard index is calculated as the summation of the hazard quotients for all chemicals to which an individual would be exposed. The California Energy Commission (CEC) defines acute and chronic exposure as follows (Title 20, California Code of Regulations, Section 1704, Appendix B):

- An acute exposure is one which occurs over a time period of less than or equal to one (1) hour.
- A chronic exposure is one which is greater than twelve (12) percent of a lifetime of seventy (70) years.

CARB's Air Quality and Land Use Handbook: A Community Health Perspective (April 2005) recommends against siting sensitive receptors within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. While these siting distances are not particular to construction activities, the primary source of TAC emissions from both freeways and construction equipment is DPM. Therefore, for projects within 1,000 feet of sensitive receptors a refined health risk would be conducted. The nearest sensitive receptors to the BESS Project Area are the residential receptors located approximately 750 feet southwest of the site. The nearest sensitive

receptors to the gen-tie Project Site are the residential receptors located approximately 750 west of the site. As such, health risks were assessed quantitatively. Dispersion modeling parameters and the receptor grid were consistent with those used for the ambient air quality analysis (AAQA).

Generation of DPM from construction projects typically occurs in a single area for a short period of time. Construction of the Project would occur over the span of approximately 2 years. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual (MEI). The risks estimated for an MEI are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Project. Thus, the duration of proposed construction activities (i.e., 24 months over 2 years) is approximately seven percent of the total exposure period used for 30-year health risk calculations.

In addition, the Project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these requirements would minimize emissions of TACs during construction.

A localized analysis following the YSAQMD's modeling guidance documents was conducted to assess the potential impacts of construction activities. Operational activities are not included in the analysis because there are no anticipated stationary sources of emissions; there would be a very limited number of operational mobile sources such as during periodic battery augmentation events, and other building-related emissions are expected to be minimal or indirect (i.e., produced off-site). Any potential operational ambient air quality impacts would be much less in magnitude than those from construction.

Daily and annual emissions burdens were estimated for the duration of the construction period based on provided construction schedule, number of pieces of construction equipment, horsepower rating of construction equipment, utilization of construction equipment, engine exhaust certifications, and construction activities as modeled. Refined air dispersion modeling of the daily emissions was conducted using AMS/EPA Regulatory Model (AERMOD) to show the Project's maximum localized impacts from pollutants are below the ambient air quality standards. Emissions in AERMOD were set to 1 gram per second (g/sec) and emissions were scaled in a stand-alone spreadsheet to account for actual Project emissions. The exception was for NO_2 modeling, which implemented AERMOD's Tier 2 NO_X/NO_2 conversion algorithms; actual Project emissions were input into a separate model run.

Only the maximum localized pollutant levels related to on-site construction and operational activities were estimated and verified through AERMOD modeling. Emissions from construction equipment were modeled as poly-area sources and mobile source trips as line volume sources to simulate construction activities. The largest quantities of emissions during construction would occur during the overlapping phases of site preparation and grading for the Vaca Dixon 57 MWh and Arges 400 MWh BESS components. These emissions were used for the AAQA.

To account for the impact of localized pollutants in combination with pollution from other sources, the modeled results were added to the background level as recommended by USEPA. Unique

background levels are based on the specific details of the applicable standards and based on nearby air monitoring data. The resulting pollutant concentrations (modeled result and background) were then compared to the applicable NAAQS and CAAQS. Receptor and modeling locations are shown in Figure 5.8-1.

Refer to Section 5.7, *Air Quality,* for the methodology used for calculating bulk emissions from Project construction and operation.

Health Risk Assessment Assumptions and Results

Construction of the Project would occur for approximately 24 months between 2027 and 2029. Construction of the Project would require use of heavy-duty construction equipment and diesel trucks that would emit DPM.

The estimated construction health risk is quantified in Table 5.8-1. A comprehensive list of the input data and output results of the construction Health Risk Assessment (HRA) can be viewed in Appendix D of the Air Quality and Greenhouse Gas Emissions Study (Rincon 2025; Appendix R). The highest source of carbon monoxide exposure occurs during construction. The entire SVAB is in conformance with the CAAQS and NAAQS for carbon monoxide, and most air quality monitoring stations no longer report carbon monoxide levels. Additionally, the greatest potential for TAC emissions would be during construction and decommissioning, which may result in a short-term increase of TAC emissions. The Project would be consistent with the applicable YSAQMD requirements and control strategies intended to reduce emissions from construction equipment and activities. As shown in Table 5.8-1, potential health risks would be below YSAQMD significance thresholds.

Table 5.8-1 Construction Health Risk Assessment

Scenario	Excess Cancer Risk (per million)	Chronic Health Risk[1, 2]
Residences Risk	1.4	0.0015
YSAQMD Significance Threshold	>10	>1
Threshold Exceeded?	No	No

[1] Noncancer health impacts are determined by dividing the airborne concentration at the receptor by the appropriate Reference Exposure Level (REL) for that substance. A REL is defined as the concentration at which no adverse noncancer health effects are anticipated. Because noncancer health impacts are assessed as the ratio of airborne concentration versus the REL, the resulting hazard index is unitless.

[2] There is no acute reference exposure level for diesel exhaust to calculate acute health risk. Furthermore, except for unusual circumstances of high exposure, Office of Environmental Health Hazard Assessment does not recommend acute analysis for DPM.

Source: Rincon Consultants 2025. For health risk calculations, see Appendix A of the Air Quality and Greenhouse Gas Emissions Study (Appendix R).

5.8.2 Regulatory Setting

Federal, state, and local LORS related to public health were reviewed for applicability to the Project. These are detailed in Section 5.8.5, below.

5.8.3 Impact Analysis

The following subsections discuss the potential direct and indirect impacts related to public health from construction, operation (including maintenance), and decommissioning of the Project based on the findings of the Air Quality and Greenhouse Gas Emissions Study (Rincon 2025; Appendix R).

5.8.3.1 Methodology

The YSAQMD has established thresholds for health effects from carcinogenic and non-carcinogenic air toxins. The YSAQMD recommends a carcinogenic (cancer) risk threshold of 10 in a million. The Chronic Hazard Index (HIC) is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. No short-term, acute relative exposure values are established and regulated for DPM; therefore, acute exposure is not addressed in the HRA.

5.8.3.2 Impact Evaluation Criteria

The potential for impacts to public health and their uses were evaluated using the criteria described in the California Environmental Quality Act (CEQA) Environmental Checklist (Appendix G of the CEQA Guidelines). For the purposes of this public health analysis, a significant impact would occur if it would do the following:

- Expose sensitive receptors to substantial pollutant concentrations.

Impact PH-1

Threshold:	Would the Project expose sensitive receptors to substantial pollutant concentrations?

The following impact analysis discusses how the Project would expose sensitive receptors to substantial pollutant concentrations, including TACs and CO hotspots. Please see Section 5.7, *Air Quality*, for a full discussion of potential impacts related to this impact evaluation criterion.

Toxic Air Contaminants

Construction and Decommissioning

Less than Significant Impact. The greatest potential for TAC emissions during construction and decommissioning would be from heavy equipment operations that generate DPM emissions. Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the Project would occur for approximately 24 months between 2027 and 2029. As cancer risk is a long-term analysis, impacts from construction of the Vaca Dixon 57 MWh and Arges 400 MWh BESS components of the Project are analyzed together.

The Project would be consistent with the applicable YSAQMD requirements and control strategies intended to reduce emissions from construction equipment and activities. The Project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. However, sensitive receptors are located approximately 750 feet southwest of the BESS Project Area across the bordering roadways, and 750 west of the gen-tie lines, and therefore have the potential to be exposed to TAC emissions from construction.

The maximum daily PM_{10} emissions from DPM would range from less than 0.01 to 0.07 lbs/day of exhaust, with the maximum emissions occurring during the site preparation and grading activities for the Arges 400 MWh BESS component. These activities would last for approximately 72 days. DPM emissions would decrease for the remaining construction period because construction activities such as building construction and paving would require less intensive construction

equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than one percent of the total 30-year exposure period for health risk calculation.

The estimated construction health risk is quantified in Table 5.8-1. As shown in the table, potential health risk would be below YSAQMD significance thresholds. Therefore, Project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Operation

Less than Significant Impact. Health impacts associated with TACs are generally associated with long-term exposure. Due to the minimal emissions expected on-site from routine maintenance and periodic battery augmentation and off-site from several employees commuting to the Project Site several times per week, there are no meaningful sources of TACs for the operating phase of the Project and therefore no reason to expect health impacts related to TACs.

CO Hotspots

Construction and Operation

Less than Significant Impact. A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and state eight-hour standard of 9.0 ppm (SJVAPCD 2022).

As previously stated, the entire SVAB is in conformance with the CAAQS and NAAQS for carbon monoxide, and most air quality monitoring stations no longer report carbon monoxide levels in the YSAQMD jurisdiction. Additionally, CARB no longer reports CO concentrations anywhere in California. The highest source of carbon monoxide exposure occurs during construction. The maximum daily carbon monoxide emissions during Project construction would be approximately 1.46 tons per year during potential overlap between the construction periods for the Vaca Dixon 57 MWh and Arges 400 MWh BESS components

(Rincon 2025; Appendix R). These emissions would not exceed CAAQS or NAAQS standards. Operational emissions of CO would be less than one ton per year and would also not result in an exceedance of the CAAQS or NAAQS standards (Rincon 2025; Appendix R). The Project would not create new hotspots or contribute substantially to existing hotspots. Additionally, as discussed further under Impact AQ-2 in Section 5.7, *Air Quality*, CO emissions during decommissioning, construction, and operation for the Project would not exceed ambient air quality standards. Therefore, the Project would not expose sensitive receptors to substantial CO concentrations, and localized air quality impacts related to CO hotspots would be less than significant.

5.8.4 Cumulative Impacts

Substantial pollutant concentrations such as TACs and CO hotspots are considered a localized issue. In general, TAC concentrations are typically highest near the emissions sources and decline with increased distance. CARB recommends distances that should be incorporated when siting new sources or sensitive receptors near a source of TACs. This generally ranges from 500 to 1,000 feet depending on the source category (CARB 2005). Therefore, the geographic scope for the cumulative

public health impact analysis includes projects within 1,000 feet of the closest sensitive receptors to the BESS Project Area which are the residential receptors located approximately 750 feet to the southwest, as well as the residential receptors located approximately 750 feet to the west of the gen-tie lines.

As shown in Figure 5-1 in Section 5, *Environmental Analysis*, cumulative project 43 is in proximity to the residential receptors approximately 750 feet to the west and therefore cumulative impacts related to TAC and CO exposure could occur at the residential receptors due to cumulative development. Therefore, cumulative impacts related to public health risks associated with TAC and CO exposure are potentially significant. As described in Impact PH-1, the Project's TAC emissions would not exceed YSAQMD significance thresholds for construction health risk assessment, and the Project would not release substantial TAC emission during operation. Additionally, the Project would not create new CO hotspots or contribute substantially to existing CO hotspots. Accordingly, the Project would not have a cumulatively considerable contribution to cumulative public health risks associated with TAC and CO exposure.

5.8.5 Laws, Ordinances, Regulations, and Standards

The relevant federal, State, and local LORS that affect public health and apply to the Project are presented in this section. As discussed above, the Project Site is within both the City of Vacaville and unincorporated Solano County. The LORS that may apply to the Project related to public health are summarized in Table 5.8-2. For further laws, ordinances, regulations and standards that pertain to air quality, please refer to section 5.7, *Air Quality*, for further information.

5.8.5.1 Federal LORS

Federal Clean Air Act

The federal Clean Air Act (CAA) establishes ambient air quality standards and establishes regulatory authorities designed to attain those standards. As required by the CAA, the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. As required by the federal CAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the standards have been achieved. In some cases, an area's status is unable to be determined, in which case the area is designated "unclassified." The air quality in an attainment area meets or is better than the NAAQS. A non-attainment area has air quality that is worse than the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS.

5.8.5.2 State LORS

California Clean Air Act

The California Clean Air Act (CCAA) establishes state ambient air quality standards and establishes regulatory authorities designed to attain those standards. Under the CCAA, California has adopted the CAAQS, which are more stringent than the NAAQS for certain pollutants and averaging periods. Air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the standards have been achieved. In some cases, an area's status is unable to be determined, in which case the area is designated "unclassified." The air quality in an attainment area meets or is better than the CAAQS. A non-attainment area has air quality that is worse than the CAAQS.

Table 5.8-2 LORS Applicable to Public Health

Jurisdiction	LORS	Applicability	Opt-In Application Reference	Project Conformity
Federal	Federal Clean Air Act	Establishes federal ambient air quality standards.	Impact PH-1; Section 5.7, *Air Quality*	The Project would implement mitigation to ensure the Project's air pollutant emissions would not contribute to federal nonattainment status of criteria pollutants in the SVAB.
State	California Clean Air Act	Establishes state ambient air quality standards.	Impact PH-1; Section 5.7, *Air Quality*	The Project would implement mitigation to ensure the Project's air pollutant emissions would not contribute to state nonattainment status of criteria pollutants in the SVAB.
State	California Code of Regulations Title 13, Section 2449	Sets fleet average standards to reduce NO_x, DPM, and other criteria pollutant emissions generated from the use of off-road diesel-fueled vehicles.	Throughout this Opt-In Application; Section 5.8.5	Equipment used during Project construction would be compliant with the fleet average standards set by California Code of Regulations Title 13, Section 2449.
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	The Project would comply with CEQA, as required by the California Energy Commission's Opt-In Application process.
Local	Yolo Solano Air Quality Management District Rules and Air Quality Management Plan	Regulates air pollutant emission throughout the Sacramento Valley Air Basin	Impact PH-1; Section 5.7, *Air Quality*	The Project would comply with YSAQMD rules and regulations
Local	Solano County General Plan: HS. I-60	Require implementation of BMPs to reduce emissions from construction projects	Throughout this Opt-In Application; Section 5.8.5	The Project will implement required BMPs to reduce construction emissions.
Local	City of Vacaville Municipal Code – Health and Safety Title 8	Establishes framework for addressing public health hazards, including emissions and air quality impacts, through enforcement of public health and safety standards.	Throughout this Opt-In Application; Section 5.8.5	The Project will implement required BMPs to reduce construction emissions. Any potential operational ambient air quality impacts would be much less in magnitude than those from construction.

California Code of Regulations Title 13, Section 2449

Title 13, Section 2449 of the California Code of Regulations, titled "Regulation for In-Use Off-Road Diesel-Fueled Fleets" was adopted by CARB in July 2007. The purpose of this regulation is to reduce NO_x, DPM, and other criteria pollutant emissions generated from the use of off-road diesel-fueled vehicles by meeting NO_x and PM fleet average standards. This regulation applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles, and includes vehicles that are rented or leased.

California Environmental Quality Act

The 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 public health.

5.8.5.3 Local LORS

Yolo-Solano Air Quality Management District

The Project Site is located within the jurisdiction of the YSAQMD, which regulates air pollutant emissions throughout the Yolo-Solano Air Basin. The YSAQMD enforces regulations and administers permits governing stationary sources. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. In the absence of CEC jurisdiction, the following regional rules and regulations are related to the Project:

Rule 2.3 (Ringelmann Chart): The purpose of this rule is to limit the emissions of visible air contaminants to the atmosphere.

Rule 2.5 (Nuisance): A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

Rule 2.11 (Particulate Matter Concentration): The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard.

Rule 2.14 (Architectural Coatings): To limit the quantity of volatile organic compounds (VOC) in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the Yolo-Solano Air Quality Management District (District). This rule establishes VOC content limits for a variety of architectural coatings, including 50 grams per liter for flat coatings, 100 grams per liter for nonflat and traffic marking coatings, and 150 grams per liter for nonflat-high gloss coatings.

Rule 2.28 (Cutbacks and Emulsified Asphalt Paving Material): Cutback and emulsified asphalt application shall be conducted in accordance with District Rule 2.28.

PERP. Portable equipment greater than 50 horsepower, other than vehicles, must be registered with either the ARB Portable Equipment Registration Program (PERP).

Solano County General Plan

Solano County's General Plan, updated in 2024, lists several air quality and climate change policies as part of its Public Health and Safety Element. The following policies are applicable to the Project (County of Solano 2024):

HS.P-53: Ensure County policies, programs, projects, and investments consider the potential effects of climate change on Solano County's human and natural systems and include project, program, or site-specific adaptation and resilience strategies as appropriate.

HS.P-85: Support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emissions and improve air quality.

HS.P-86: Minimize health impacts from sources of toxic air contaminants, both stationary (e.g., refineries, manufacturing plants) as well as mobile sources (e.g., freeways, rail yards, commercial trucking operations).

HS.P-87: Promote consistency and cooperation in air quality planning efforts.

HS.P-89: Promote greenhouse gas emission reductions by supporting carbon efficient farming methods (e.g., methane capture systems, no-till farming, crop rotation, cover cropping, residue farming); installation of renewable energy technologies; protection of grasslands, open space, and farmlands from conversion to other uses; and encouraging development of energy-efficient structures.

HS.I-58: Require that when development proposals introduce new significant sources of toxic air pollutants, they prepare a health risk assessment as required under the Air Toxics "Hot Spots" Act (Assembly Bill 2588, 1987) and based on the results of the assessment, establish appropriate land use buffer zones around those areas posing substantial health risks.

HS.I-60: Require the implementation of best management practices to reduce air pollutant emissions associated with the construction of all development and infrastructure projects.

City of Vacaville Municipal Code

City of Vacaville's Municipal Code, passed in 2025, includes the following policy applicable to the Project (City of Vacaville 2025):

Title 8 – Health and Safety: Provides the legal framework for addressing public nuisances and health hazards, including emissions and air quality impacts, through enforcement of public health and safety standards.

5.8.6 Agencies and Agency Contact

Table 5.8-3 provides contact information for agencies involved with Public Health.

Table 5.8-3 Agency Contacts for Public Health

Issue	Agency	Contact
Public exposure to air pollutants	EPA Region 9	Martha Guzman Aceves, Regional Administrator EPA Region 9 75 Hawthorne Street San Francisco, California 94105 (415) 947-8000
Public exposure to air pollutants	California Air Resources Board	LinYing Li 1001 I Street, 19th Floor Sacramento, California 95814 (916) 322 1721
Public exposure to air pollutants	Yolo Solano Air Quality Management District	Briella Schaeffer Jamros Public Information Officer 1947 Galileo Court, Suite 103 Davis, CA 95618 (530) 757 3650
Public exposure to chemicals known to cause cancer or reproductive toxicity	Office of Environmental Health Hazard Assessment	Martha Sandy, Ph.D., Branch Chief Reproductive and Cancer Hazard Assessment Branch 1001 I Street, 19th Floor Sacramento, California 95814 (916) 324-7572
Public exposure to acutely hazardous materials	Solano County Department of Resource Management, Environmental Health Services Division	James Bezek Director 675 Texas St Suite 5500 Fairfield, California, 94533 (707) 784-6765 RMHelp@solanocounty.com

5.8.7 Permits and Permit Schedule

Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. The Applicant and CEC would collaborate with the YSAQMD on review of this Opt-In Application to ensure compliance with YSAQMD rules and regulations.

5.8.8 References

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf (accessed August 2025).

_____. 2022. Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed January 2025).

Kirkland and Fierey. 1996. Coccidioidomycosis: A Reemerging Infectious Disease. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2626789/ (accessed February 2025).

Rincon Consultants, Inc. 2025. Vaca Dixon Power Center Project Air Quality and Greenhouse Gas Emissions Study. August 2025

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2022. Ambient Air Quality Standards & Valley Attainment Status. https://www.valleyair.org/aqinfo/attainment.htm (accessed August 2025).

Solano, County of. 2024. Solano County General Plan; Chapter 5 – Public health & Safety. December 10. https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=21582 (accessed August 2025).

Solano County Public Health. 2025. Health Reports & Data. https://www.solanocounty.com/depts/ph/reports.asp (accessed August 2025).

Vacaville, City of. 2025. Vacaville Municipal Code. https://www.codepublishing.com/CA/Vacaville/ (accessed September 2025)

Yolo-Solano Air Quality Management District (YSAQMD). 2007. Handbook for Assessing and Mitigating Air Quality Impacts. https://www.ysaqmd.org/wp-content/uploads/Planning/CEQAHandbook2007.pdf (accessed January 2025).

_____. 2023. 2015 NAAQS 8-hr Ozone Attainment & Reasonable Further Progress Plan. https://www.ysaqmd.org/plans-data/ozone/ (accessed January 2025)

_____. 2024a. Planning for Ozone Standards. https://www.ysaqmd.org/plans-data/ozone/ (accessed January 2025).

_____. 2024b. Planning for Particulate Standards. https://ysaqmd.org/plans-data/particulates/ accessed January 2025).