Appendix B

Air Quality, Greenhouse Gas Emissions, and Energy Technical Memorandum

MEMORANDUM

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From:	Collin Paludi, Air Quality Specialist, Dudek Nicholas Lorenzen, Air Quality Specialist, Dudek
Subject:	SDSU Imperial Valley Off-Campus Center – Calexico, Affordable Student Housing Project – Air Quality, Greenhouse Gas Emissions, and Energy Technical Memorandum
Date:	December 12, 2024
cc:	Sarah Lozano, Mollie Brogdon, Dudek; Michael Haberkorn, Gatzke Dillon & Ballance
Attachments:	A – Figures B -- Air Quality and Greenhouse Gas Emissions CalEEMod Output Files C – Construction Health Risk Modeling Files

Dudek has conducted an evaluation to determine potential impacts related to air quality, greenhouse gas (GHG) emissions, and energy associated with the proposed San Diego State University (SDSU) Calexico Affordable Student Housing Project (Project or proposed Project), to be located at the SDSU Imperial Valley Off-Campus Center, located in Calexico, California.

This assessment uses the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and, while the California State University (CSU) as a state agency is not subject to local or regional planning regulations, is based on the emissions-based significance thresholds recommended by the Imperial County Air Pollution Control District (ICAPCD) and other applicable thresholds of significance.

The certified 2003 SDSU Imperial Valley Campus Master Plan Project environmental impact report (2003 EIR) analyzed the air quality impacts associated with development of a Campus Master Plan at the Calexico site at a program level of review. This technical memorandum presents an analysis of potential impacts associated with construction and operation of the proposed housing at a Project-specific level of review, evaluating the potential for Project-generated construction and operational criteria air pollutant emissions to exceed established state and federal ambient air quality standards, result in adverse health impacts on sensitive receptors, result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, or conflict with the implementation of applicable air quality management plans. This technical memorandum also evaluates if implementation of the proposed Project would result in GHG emissions that would have a significant impact on the environment or if the Project would conflict with applicable plans, policies, or regulations for the purpose of reducing GHG emissions. Finally, this technical memorandum evaluates if implementation of the Project would result in wasteful, inefficient, or unnecessary consumption of energy or conflict with plans for renewable energy or energy efficiency.

As described below, this technical memorandum concludes that the proposed Project would result in less-than-significant impacts related to air quality, GHG emissions, and energy use.

1 Project Overview and Background

In September 2003, the CSU certified an environmental impact report for the SDSU Imperial Valley Master Plan Project (State Clearinghouse No. 2002051010) and approved a Campus Master Plan for the expansion and

improvement of the SDSU Imperial Valley Off-Campus Center, which includes locations in Calexico and Brawley, both located in Imperial County (SDSU 2003). The Off-Campus Center is an extension of SDSU's main campus in San Diego and furthers the University's regional educational mission to provide additional educational opportunities to the outlying communities of Imperial County. The previously certified and approved Campus Master Plan and EIR provided the authorization necessary for enrollment of 850 full-time equivalent (FTE)[1] students at the Off-Campus Center, corresponding associated faculty and staff, and a framework for development of the facilities necessary to serve this projected enrollment and campus population.

The Off-Campus Center - Calexico is approximately 8.3 acres in size and is located in the City of Calexico (City). Most of the Calexico location is built out, consisting of several educational and support facilities. The environmental impacts associated with development of the Off-Campus Center – Calexico were evaluated at a program level of review in the 2003 EIR. In the CSU's continuing effort to build out the Imperial Valley Off-Campus Center and provide additional educational opportunities, SDSU presently proposes construction and operation of a four-building complex that would provide affordable student housing at the Calexico location for 80 students and a resident manager. Additional details regarding the proposed housing is provided below.

2 Project Location and Existing Conditions

The Off-Campus Center – Calexico is located at 720 Heber Avenue in downtown Calexico, approximately 0.5 miles north of the United States–Mexico border (see Figure 1, Regional Map). Regional access to the Off-Campus Center is provided via SR-111 and SR-98 to the north. The Calexico location is bordered by four streets: Heber Avenue to the west, Sherman Street to the north, Blair Avenue to the east, and 7th Street to the south. Residential uses bound the Calexico complex to the north, east, south, and west. Other surrounding uses include Calexico High School, located northeast, and Calexico City Hall, located immediately south. The Off-Campus Center - Calexico currently consists of 17 buildings and an associated surface parking lot (see Figure 2, Vicinity Map, and Figure 3A, Existing Campus Master Plan).

As a state entity, the CSU/SDSU is not subject to local government plans, regulations, and guidelines, such as those contained in the City's General Plan. The above notwithstanding, for information purposes, the Off-Campus Center -Calexico is zoned as Open Space and is designated as Public Facilities in the City's General Plan (City of Calexico 2015a).

The proposed Project site is approximately 0.58 acres in size (25,320 square feet) and is located at the southeast corner of the campus, at the northwest corner of East 7th Street and Blair Avenue (see Figure 2). The entirety of the Project site has previously been graded and is relatively flat in nature, with an average elevation of 3.5 feet above mean sea level. The Project site encompasses the locations identified in the Campus Master Plan as future Building 21 (see Figure 3A and Figure 3B, Proposed Campus Master Plan). The Project site consists of vacant and undeveloped land with two trees located along the northern boundary of the site. A chain-link fence separates the Project site from the recently removed temporary Campus Buildings 201, which were located immediately west of the Project site.

[1] A full-time equivalent (FTE) student is one full-time student taking 15 course credits, or 3 part-time students each taking 5 course credits.

3 Project Description

3.1 Affordable Student Housing Complex

The proposed Project would involve the construction of a single-story, four-building complex approximately 12,840 square feet in size that would provide for affordable student housing. The complex would include three student housing buildings, including one smaller live-in unit building, and a community building. Two of the three proposed residential buildings would each be approximately 5,500 square feet in size and would include five four-bedroom, two-bathroom apartment units, totaling 40 student beds per building (two student beds per bedroom, 80 student beds in total). The third proposed residential building would be a live-in manager unit that would consist of a single two-bedroom, one-bathroom apartment. The proposed live-in unit would also include approximately 100 square feet of office space that is intended to provide a space for tenant meetings, social services, or counseling. All apartment units would also be equipped with a living area and kitchen. The proposed community building program would be approximately 840 square feet and include laundry, mail, restroom, electrical, and maintenance facilities. The mail room would be located outside, under the shaded amenity patio of the community building (see Table 1).

Table 1. Affordable Student Housing Complex Area Calculations

	Quantity	Area (Square Feet)	Beds
Residential Buildings (3)			
4-Bedroom, 8-Bed Unit	5	5,150	40
4-Bedroom, 8-Bed Unit	5	5,150	40
Live-In Unit	1	1,000	2
Office (Included in Live-In Unit)	N/A	N/A	N/A
Subtotal	*11*	*11,300*	*82*
Community Building (1)			
Laundry Room	1	300	N/A
Service Rooms	4	450	N/A
Restroom	2	100	N/A
Mail/Package (Outside)	1	270	N/A
Subtotal	*N/A*	*1,150*	*N/A*
Other			
Trash/Recycling Enclosure	1	850	N/A
Open Space	N/A	2,300	N/A
Landscaping/hardscaping	N/A	12,500	N/A
Subtotal	*N/A*	*13,650*	*N/A*
Combined Total	**N/A**	**26,100**	**82**

Note: N/A = not applicable.
All square foot amounts presented in the table are approximate amounts only and may not add to the site plan area totals described in this document due to rounding.

Other on-site proposed amenities include a courtyard, bike racks, and a community waste enclosure. The courtyard would be approximately 1,600 square feet and would be centrally located in the proposed complex (see Figure 4, Site

Plan). Approximately 15 bike racks would be provided throughout the Project site. A community waste enclosure at the northeast corner of the Project site would allow residents a convenient place to dispose of waste and recyclables.

3.1.1 Operation

The Off-Campus Center - Calexico, including the Project site, is owned and operated by the CSU/SDSU. The CSU Board of Trustees, on behalf of SDSU, is the lead agency responsible for certifying the adequacy and completeness of this document and approval of the proposed Project. SDSU and the IVCCD have received joint funding under the State of California Higher Education Student Housing Grant Program to construct the proposed Project.

To support basic housing needs for students in the Imperial Valley, SDSU and IVCCD have executed a 30-year master lease agreement that details operation of the Project. This agreement dictates that 40 of the 82 proposed student beds would be reserved for IVCCD students who attend the Imperial Valley College in Imperial. Likewise, 40 of the proposed 82 beds, would be reserved for SDSU Off-Campus Center - Calexico students. A 2-bedroom unit would also provide living space for on-site management. SDSU would be responsible for operating, managing, and maintaining the proposed Project once operational.

Student beds made available under the proposed Project would be leased/rented to eligible low-income students. Eligible low-income students are defined as having 30% of 50% of the Annual Median Income for Imperial County. In the event, after a good faith outreach effort, there is not sufficient demand from students meeting the eligibility requirements within 90 days of the start of the fall semester, unassigned beds may be leased at market rates to SDSU and IVCCD students not meeting the low-income eligibility requirements. In addition to meeting the low-income criteria, eligible students would be required to be enrolled students and take a minimum average of 12 degree-applicable units per semester term, or the quarterly equivalent (with exceptions permitted), to facilitate timely degree completion.

3.1.2 Other Project Elements

Building and Site Design

The proposed buildings have been designed to reflect the character and massing of the existing Off-Campus Center - Calexico, as well as the surrounding neighborhood. Building design is centered around a courtyard-style housing complex and would consist of smooth stucco walls with downspouts and rafters, punctuated by composite terra cotta–colored roof tile accents and windows. Maximum building heights would range from 14 feet to 18 feet.

Landscaping, Other Site Improvements, and Lighting

The Project would include approximately 16,000 square feet of on-site landscaping and hardscape improvements (i.e., pedestrian walkways). All proposed landscaping would consist of drought-tolerant, indigenous plants. The landscape scheme would include shrubs, hedges, and a variety of trees. A total of 39 trees would be added to the Project site including five fan palms, eight mesquite trees, six evergreen elms, and 20 yucca trees.

All exterior on-site lighting would be hooded or shielded, directed downward, and would be compliant with applicable standards for lighting control and light pollution reduction (i.e., Title 24, American National Standards Institute/Illuminating Engineering Society).

The proposed complex would be secured via an iron security fence that would measure 6 feet in height and run approximately 64 linear feet, connecting to the proposed buildings. Access to the complex would only be available to residents and their guests via two pedestrian gates located at the northwestern corner and southern portion of the proposed complex. The gates would be equipped with security card access for residents.

Utilities and Public Services

New points of connection for domestic water, fire supply water, sewer, storm drainage and electrical connections from existing utility lines would be required to serve the proposed Project. Potable water service, as well as sewer collection services at the Project site, would be provided by the City. The Project would connect to an existing sanitary sewer maintenance access line located in Blair Avenue via new 6-inch mains. Connections for water (including domestic, fire, and irrigation) would be from an existing water main located in Blair Avenue. Distribution water pipes would be extended underground to serve each proposed building. A new water meter would be located in the proposed maintenance room in the community building. Adequate water treatment capacity and supply and sewer treatment capacity exists within the City's water and sewer system to accommodate the Project; therefore, no capacity upgrades to infrastructure would be necessary.

Stormwater drainage includes two stormwater catch basins. One basin would be located on the eastern boundary of the Project site, and the second would be situated immediately east of the existing chain-link fence at the western boundary of the Project site. The proposed catch basins would function as both water quality and flood control features, by filtering out surface water contaminants and slowing stormwater runoff prior to stormwater discharge into the City's stormwater system via one new storm drain located in the southeast corner of the Project site.

Electrical services within the Project area are provided by Imperial Irrigation District, which provides electric power to over 158,000 customers in the Imperial Valley in addition to areas of Riverside and San Diego counties (IID 2024). New utility connections and infrastructure would be required to support electrical services on site. The Project would connect to on-site electrical power infrastructure via an existing 12kV, three phase, three wire, 60 Hertz overhead line routed along East 7th Street. No natural gas usage is proposed for the Project.

The Project would require a new point of connection for on-site telecommunications and would connect to the existing AT&T communications via the on-campus minimum point of entry.

Access, Circulation, and Parking

Regional access to the Project site is provided via SR-111 and SR-98 to the north. Local access is provided via Blair Avenue and East 7th Street. Parking to the Project site is available in the existing campus parking lot, immediately north of the Project site, which has sufficient capacity to serve the proposed Project. On-site circulation improvements would consist of additional paved pathway/pedestrian walkway features throughout the proposed complex and along the northern boundary of the Project site (see Figure 4). Emergency access would be provided directly adjacent to the Project site on East 7th Street and Blair Avenue.

3.1.3 Design Standards and Energy Efficiency

In May 2014, the CSU Board of Trustees broadened the application of sustainable practices to all areas of the university by adopting the first systemwide sustainability policy, which applies sustainable principles across all

areas of university operations, including facility operations and utility management. In May 2024, the CSU Sustainability Policy was updated to expand on existing sustainability goals (CSU 2024). The CSU Sustainability Policy seeks to integrate sustainability into all facets of the CSU, including academics, facility operations, the built environment, and student life (CSU 2018). Relatedly, the state has also strengthened energy-efficiency requirements in the California Green Building Standards Code (Title 24 of the California Code of Regulations).

As a result, all CSU new construction, remodeling, renovation, and repair projects, including the proposed Project, would be designed with consideration of optimum energy utilization, low life cycle operating costs, and compliance with all applicable state energy codes and regulations. Progress submittals during design are monitored for individual envelope, indoor lighting, and mechanical system performances. In compliance with these goals, the proposed Project would be equipped with solar ready design features that would facilitate and optimize the future installation of a solar photovoltaic (PV) system.

3.1.4 Off-Site Improvements

Off-site improvements would include the resurfacing of a portion of Blair Avenue adjacent to the eastern boundary of the Project site that would be disturbed as a result of trenching to make necessary connections to the existing water main and sanitary sewer maintenance access. Any area disturbed as a result of this connection within Blair Avenue would be resurfaced to existing conditions. All off-site improvements would occur within the Blair Avenue right-of-way.

3.1.5 Construction

Construction would be performed by qualified contractors. Plans and specifications would incorporate stipulations regarding standard CSU/SDSU requirements and acceptable construction practices, such as those set forth in the SDSU Stormwater Management Plan, CSU Seismic Policy, The CSU Office of the Chancellor Guidelines, and the CSU Sustainability Policy, regarding grading and demolition, safety measures, vehicle operation and maintenance, excavation stability, erosion control, drainage alteration, groundwater disposal, public safety, and dust control.

Construction Timeline

Construction of the proposed Project would take approximately 17 months to complete and is estimated to begin as early as January 2025 and be completed by May 2026, with occupancy planned for fall 2026. Construction activities would generally occur Monday through Friday between the hours of 8:00 a.m. and 5:00 p.m., with the potential for weekend construction on Saturday between 9:00 a.m. and 5:00 p.m. No construction would occur on Sundays or holidays or at night.

Construction Activities

A construction mobilization or staging area would be located immediately northeast of the proposed Project site and would occupy approximately 8,000 square feet. The area would be located east of existing Campus Building 6, west of Blair Avenue, and south of the existing parking lot (see Figure 2 and Figure 3A). To accommodate use of this area, four trees would be removed.

Construction would include site preparation, grading and excavation, utility installation/trenching, building foundation pouring, building construction, and landscaping. Excavation depths are anticipated to be 3 feet below grade. The majority of waste (i.e., excavated gravel/soil) generated during Project construction would be balanced/used within the site. Approximately 2,600 cubic yards of soil would be removed from the site and exported to Republic Services Allied Imperial Landfill, approximately 12 miles north. The entire Project site, including construction mobilization area (approximately 34,000 square feet in total) would be disturbed as a result of Project construction. Two trees would be removed from the Project site to accommodate the proposed Project.

Table 2 displays the construction equipment anticipated to be used during construction.

Table 2. Anticipated Construction Equipment

Aerial Lifts	Pressure Washers
Air Compressors	Pumps
Cement and Mortar Mixers	Rollers
Concrete/Industrial Saws	Rough Terrain Forklifts
Dumpers/Tenders	Rubber-Tired Dozers
Excavators	Rubber-Tired Loaders
Forklifts	Scrapers
Generator Sets	Signal Boards
Graders	Skid Steer Loaders
Off-Highway Tractors	Surfacing Equipment
Off-Highway Trucks	Sweepers/Scrubbers
Other Construction Equipment	Tractors/Loaders/Backhoes
Other General Industrial Equipment	Trenchers
Other Material Handling Equipment	Welders
Plate Compactors	

Source: Dorsey and Nielson Construction Inc, pers. comm., 2024

Construction Waste

The Project would generate construction debris during on-site clearing activities. In accordance with Section 5.408 of the California Green Building Standards Code, the Project would implement a construction waste management plan for recycling and/or salvaging for reuse of at least 65% of nonhazardous construction/demolition debris. Additionally, the Project would be required to meet Leadership in Energy and Environmental Design v4 requirements for waste reduction during construction. Solid waste generated during construction would be hauled off site to the Republic Services Allied Imperial Landfill at 104 East Robinson Road in Imperial, California.

4 Analysis Methodology

The analysis presented herein considers the potential environmental impacts of the proposed Project relative to existing conditions. Establishment of the Project site's existing air quality, GHG emissions, and energy conditions and assessment of Project-attributed changes in air quality, GHG emissions, and energy impacts has been prepared

using information contained in the previously certified 2003 EIR, with the information updated, as necessary, to reflect specific conditions of the proposed Project.

At the time the EIR for the SDSU Imperial Valley Campus Master Plan Project was certified in 2003, an evaluation of GHG emissions and energy was not required under CEQA. Since that time, California's legal landscape has changed relative to the consideration of GHG emissions and energy under CEQA via the enactment of numerous statutory schemes; the promulgation of implementing regulations; the issuance of executive orders and planning documents at the state, regional, and local levels; and the publication of relevant judicial decisions. While CEQA now requires evaluation of potential GHG emission and energy impacts of a project, based on the *Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) decision and other published case law, information about the effects of GHG emissions and energy is not "new information" triggering a requirement to prepare a subsequent or supplemental EIR under CEQA Guidelines Section 15162(a)(3).

However, as this proposed Project is being considered under the umbrella of the 2003 EIR, this environmental analysis also has considered the relevance of CEQA Guidelines Section 15168(c)(1), which addresses the use of program EIRs for purposes of streamlining the environmental review of implementing projects. Under that provision, "[i]f a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration." Therefore, pursuant to CEQA Guidelines Section 15168(c)(1), an analysis of the proposed Project's GHG emissions and energy has been prepared, as described in Sections 5 and 6 below.

The Project site is located within the Salton Sea Air Basin (SSAB) and is within the jurisdictional boundaries of ICAPCD, which has jurisdiction over the central portion of Riverside County (Coachella Valley) and all of Imperial County, where the proposed Project is located. Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include reactive organic gases (ROGs), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides, particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (coarse particulate matter, or PM_{10}), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size (fine particulate matter, or $PM_{2.5}$). ROGs and NO_x are important because they are precursors to ozone (O_3).

Criteria air pollutant emissions associated with construction of the proposed Project were estimated for the following emission sources: operation of off-road construction equipment, architectural coating, on-road vendor (material delivery) trucks, and worker vehicles. The operational criteria air pollutant emissions were estimated from area sources, mobile sources, energy sources, and stationary sources.

4.1 Construction Modeling Methodology

The California Emissions Estimator Model (CalEEMod) Version 2022.1 was used to estimate emissions from construction and operation of the proposed Project (CAPCOA 2022). CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and GHG emissions associated with construction activities and operation of a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the land use type that represents the Project and its size, construction schedule, and anticipated use of construction equipment, were based on information provided by the applicant or default model parameters if Project specifics were unavailable. Based on

the proposed Project schedule, construction would commence in November 2024 and last approximately 17 months, ending in March 2026 [2]. The first year of the proposed Project's operation would be 2026, after completion of construction. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate and phases overlap):

- Grading – 2.5 months (November 2024–February 2025)
- Building Construction – 12 months (March 2025–March 2026)
- Architectural Coating – 5 months (July 2025–December 2025)

The estimated construction duration was provided by the Project applicant. The construction equipment mix used for estimating the construction emissions of the Project is based on information provided by the Project applicant and is shown in Table 3, Construction Scenario Assumptions.

Table 3. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Grading	14	0	6	Graders	1	8
				Tractors/Loaders/ Backhoes	2	8
				Rubber-Tired Dozers	1	8
				Dumpers/Tenders	1	8
Building Construction	8	2	0	Forklift	6	8
				Tractors/Loaders/ Backhoes	2	8
				Cement and Mortar Mixers	1	8
				Aerial Lifts	3	8
				Skid Steer Loaders	1	8
				Welders	2	8
Architectural Coating	2	0	0	Air Compressor	1	6

Note: See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for details.

For the analysis, it was assumed that heavy construction equipment would be operating 5 days per week (22 days per month) during Project construction. Construction worker and vendor trips were based on applicant-provided

[2] The analysis assumes a construction start date of November 2024, which represented the earliest date construction would initiate at the time this technical memorandum was prepared. The construction schedule has since been revised to start in January 2025 and conclude in May 2025; the operational date has not changed. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

data. Equipment emissions were estimated using the CalEEMod default emission factors for the construction duration.

4.2 Operation Modeling Methodology

Emissions from the operational phase of the Project were estimated using CalEEMod. Operational year 2026 was assumed, as it would be the first year following completion of construction.

Mobile Sources

As discussed previously, the proposed Project would not increase SDSU Imperial Valley FTE enrollment beyond the level previously approved within the 2003 EIR; therefore, the mobile emissions associated with the SDSU Off-Campus Center - Calexico were previously analyzed and do not need to be included in this assessment. However, the 2003 EIR did not estimate the trips generated by those student residents commuting to the IVCCD campus from the Project site. These trips, therefore, were analyzed within the transportation technical memorandum for the proposed Project. Following the guidance of the transportation technical memorandum, a conservative estimate of 79 daily trips was used to model emissions associated with the IVCCD student residents within CalEEMod (Dudek 2024).

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2022). Consumer product ROG emissions are estimated in CalEEMod based on the floor area of residential buildings and on the default factor of pounds of ROG per building square foot per day.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per dwelling unit per day) and number of summer days (when landscape maintenance would generally be performed) and winter days (CAPCOA 2022).

Energy

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. Per the applicant and consistent with the CSU's aim to minimize use of natural gas and transition to electric alternatives, no natural gas would be used on site. All space and water heating will be electrified.

4.3 Construction Health Risk Methodology

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. ICAPCD recommends a carcinogenic (cancer) risk threshold of 10 in 1 million. Additionally, some toxic air contaminants (TACs) increase non-cancer health risk due to long-term (chronic) exposures. The Chronic Hazard Index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. ICAPCD recommends a Chronic Hazard Index significance threshold of one (project increment).

The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. Diesel particulate matter (DPM) has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. No short-term, acute relative exposure level has been established for DPM; therefore, acute impacts of DPM are not addressed in this assessment. The health risk assessment (HRA) prepared for the Project evaluated the risk to existing nearby residents from DPM generated by operation of on-site construction equipment and from haul and vendor trucks accessing the site during construction.

The dispersion modeling of DPM was performed using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD), which is the model the ICAPCD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2023a). For the Project, AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the "X/Q" values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength and is used as a way to simplify the representation of emissions from many sources. The X/Q values of ground-level concentrations were determined for construction emissions using AERMOD and the maximum concentrations determined for the 1hour and period-averaging periods. Principal parameters of this modeling are presented in Table 4, Construction Health Risk Assessment AERMOD Principal Parameters.

Table 4. Construction Health Risk Assessment AERMOD Principal Parameters

Parameter	Details
Meteorological Data	The latest 4-year meteorological data (2015–2018, 2021) for the Imperial County Airport Station (KIPL) from CARB were downloaded and then input to AERMOD.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the area surrounding the Project site, the urban option was selected.
Terrain Characteristics and Elevation Data	The digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with an approximately 30-meter (1 arc-second) resolution.
Emission Sources and Release Parameters	Air dispersion modeling of DPM from construction activities was conducted using emissions estimated using CalEEMod, assuming emissions would occur 5 days per week. The construction equipment DPM emissions were modeled as a line of adjacent volume sources where construction activity is anticipated to occur. The line of adjacent volume sources were assumed to have a release height of 3.4 meters, a plume height of 6.8 meters, and a plume width of 8.6 meters (SBCAPCD 2023).

Table 4. Construction Health Risk Assessment AERMOD Principal Parameters

Parameter	Details
Receptors	Discrete receptors were located at residences immediately adjacent to the Project site.

Notes: AERMOD = American Meteorological Society/Environmental Protection Agency Regulatory Model; CARB = California Air Resources Board; DPM = diesel particulate matter; CalEEMod = California Emissions Estimator Model.
See Attachment C, Construction Health Risk Modeling Files, for additional information.

Dispersion model plot files from AERMOD were then imported into the California Air Resources Board (CARB) Hotspots Analysis and Reporting Program (HARP2) to determine health risk, which requires peak 1-hour emission rates and annual emission rates for all pollutants for each modeling source. The Project's potential cancer and non-cancer health impacts from construction assume an exposure duration of 20.28 months, including the 17-month construction period and starting at the third trimester of pregnancy, which is the earliest age at which children could be exposed. The risk results were then compared to ICAPCD thresholds to assess Project impact significance.

5 Air Quality Assessment

5.1 Air Quality Impact Analysis and Conclusions

5.1.1 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to air quality are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). For the purposes of this air quality analysis, a significant impact would occur if the Project would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether a project would have a significant impact on air quality.

ICAPCD has established numeric significance thresholds (see Table 5) to assist lead agencies in determining whether a proposed project may have a significant air quality impact. A project would result in a substantial contribution to an existing air quality violation of the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for O_3, which is a nonattainment pollutant, if the project's construction or operational emissions would exceed ICAPCD's ROG or NO_x significance thresholds. These emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly, and the effects of an individual project's emissions of O_3 precursors (ROG and NO_x) on O_3 levels in ambient air cannot be determined through air

quality models or other quantitative methods. The SSAB is also designated as nonattainment for the federal and state PM_{10} standards and designated as unclassified or in attainment for all other criteria air pollutants.

The 2017 ICAPCD CEQA Handbook provides guidelines and numeric thresholds for determining the significance of project impacts and the recommended level of environmental analysis required based on total anticipated emissions from project operations (ICAPCD 2017). These guidelines are provided in Table 5, ICAPCD Air Quality Significance Thresholds, below and are organized by Tier I and Tier II projects. Per the ICAPCD CEQA Handbook, projects whose operational emissions are below Tier I thresholds are not required to develop a comprehensive air quality analysis report or an EIR and can rely on an initial study to determine that impacts are less than significant. As discussed in Section 5.1.2, Air Quality Assessment Impact Analysis, below, the proposed Project is considered a Tier I project per ICAPCD guidelines (ICAPCD 2017).

Table 5. ICAPCD Air Quality Significance Thresholds

Pollutant	Emissions (pounds per day)		
	Operational		
	Tier 1	Tier II	Construction
ROGs	<137	137 and greater	75
NO_x	<137	137 and greater	100
CO	<550	550 and greater	550
SO_x	<150	150 and greater	N/A
PM_{10}	<150	150 and greater	150
$PM_{2.5}$	<550	550 and greater	N/A
Level of Significance	Less than Significant	Significant Impact	N/A
Level of Analysis	Initial Study	Comprehensive Air Quality Analysis Report	N/A
Environmental Document	Negative Declaration	MND or EIR	N/A

Source: ICAPCD 2017.
Notes: ICAPCD = Imperial County Air Pollution Control District; ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; N/A = not applicable; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MND = mitigated negative declaration; EIR = environmental impact report.

Thresholds of significance for project construction are also provided in Table 5. According to ICAPCD CEQA guidance, construction particulate matter impacts for Tier I projects should be assessed qualitatively as opposed to quantitatively, although it is ultimately at the discretion of the lead agency to quantify construction emissions. As described below, the proposed Project is below the operational thresholds for Tier I projects and thus is not required to quantitatively evaluate PM_{10} impacts for construction. However, construction emissions were quantified for disclosure purposes.

Regardless of project size and whether construction emissions are quantified, ICAPCD requires implementation of standard measures for construction equipment and fugitive PM_{10} at all construction sites. These standard measures are listed below and are collectively known as Regulation VIII, Fugitive Dust Control Measures, of ICAPCD's Rules and Regulations. The fugitive dust benefits from implementation of these regulatory compliance measures were not included in the CalEEMod emissions modeling given that the measures cannot be readily quantified. In this case, fugitive dust emissions (PM_{10}) generated during Project construction would likely be

lower than the estimates reported in Table 6, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions, below.

a) All disturbed areas, including Bulk Material storage which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.
b) All on-site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
c) All unpaved traffic areas one (1) acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emission shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
d) The transport of Bulk Materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of Bulk Material. In addition, the cargo compartment of all Haul Trucks is to be cleaned and/or washed at delivery site after removal of Bulk Material.
e) All Track-Out or Carry-Out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an Urban area.
f) Movement of Bulk Material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.
g) The construction of any new Unpaved Road is prohibited within any area with a population of 500 or more unless the road meets the definition of a Temporary Unpaved Road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

5.1.2 Impact Analysis

The analysis prepared for the 2003 EIR determined that there would be no significant air quality impacts as a result of development of the SDSU Off-Campus Center Master Plan - Calexico. The air quality assessment concluded that there would be no construction-related impacts or project-related exceedances for any criteria air pollutants during operation. As such, no air quality–related mitigation measures were required or identified in the 2003 EIR. A summary of the prior analysis is provided below along with the current Project-specific analysis for each Appendix G significance criteria, as applicable.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The proposed Project site is located within the SSAB, which includes all of Imperial County and the central portion of Riverside County (Coachella Valley). Imperial County, where the Project site is located, is within the jurisdictional boundaries of the ICAPCD. The ICAPCD is responsible for developing and implementing the clean air plans for attainment and maintenance of the NAAQS and CAAQS in the SSAB, including the

2018 PM_{10} State Implementation Plan and the 2017 State Implementation Plan for the 75 parts per billion 8-hour Ozone Standard.

The previous analysis prepared for the 2003 EIR found that the project would have less-than-significant impacts related to conflicting with implementation of the applicable air quality plan. Given that the proposed Project is within the scope of the approved Off-Campus Center Master Plan - Calexico and certified EIR, that determination remains applicable. However, because ICAPCD has adopted additional air quality plans since certification of the EIR in 2003, a discussion of the proposed Project's potential to conflict with applicable plans that post-date the certified EIR is provided below.

The most efficient approach to determining project consistency with applicable air quality plans is assessing whether the proposed development is consistent with the growth anticipated by the land use plans that were used for preparation of the air quality plans. The relevant land use plan for the proposed Project is the 2003 Off-Campus Center Master Plan - Calexico. Local and regional plans, including the City's 2007 General Plan and the Imperial County General Plan, are not applicable because as a state entity, the CSU/SDSU is not subject to local government plans, regulations, and guidelines.

Relatedly, ICAPCD's air quality attainment plans are based, in part, on regional population and employment (and thus vehicle miles traveled [VMT]) growth projections from the Southern California Association of Governments (SCAG), which is the designated Metropolitan Planning Organization for Imperial County. Thus, a project's conformance with SCAG's Metropolitan Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2016[3]) that was considered in the preparation of the air quality attainment plans would demonstrate that the project would not conflict with or obstruct implementation of the air quality plans.

As discussed in Section 3, Project Description, student enrollment and corresponding faculty and staff resulting from the proposed Project would remain within the approved maximum FTE enrollment analyzed in the previously certified EIR and approved Off-Campus Center Master Plan - Calexico for development of the Calexico Center, which itself is included in Imperial County's General Plan Land Use Element (Imperial County 2015) which was in turn used to create SCAG's growth forecast for the region.[3] Therefore, implementation of the proposed Project would not result in development in excess of what was anticipated in the approved Off-Campus Center Master Plan - Calexico and Imperial County General Plan, and would not result population growth beyond what was assumed in SCAG's RTP/SCS. As the proposed Project is consistent with the growth projections used to prepare the air quality management plans for the SSAB (2018 PM_{10} and 2017 Ozone State Implementation Plans), the Project would be consistent with these plans. Impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plans would be **less than significant**.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The nonattainment status of regional pollutants is a result of past and present development, and ICAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the

[3] Note that, while the Connect SoCal 20216 RTP/SCS is not the most current RTP/SCS adopted by SCAG, it is referenced here for contextual consistency as the regional plan considered during the preparation of the relevant regional air quality treatment plans.

determination of whether a project's individual emissions would have a cumulatively considerable contribution resulting in an impact on air quality.

The air quality analysis prepared for the 2003 EIR found that there would be no significant construction-related air quality impacts and no project-related exceedances or excessive concentrations of any criteria air pollutants per either state or federal standards.

The construction emissions estimate in the 2003 EIR was based on "typical worst day construction activities associated with a school campus construction project similar to the proposed project" (SDSU 2003). The EIR's "typical worst day" equipment-related emissions estimation parameters included use of forklifts, off-highway trucks, tracked loaders, tracked tractor/dozers, scrapers, and rollers. The total equipment hours (i.e., total pieces of equipment × total hours of daily operation per piece) for the "typical worst day" were approximately 68 equipment hours per day. Additionally, the total earthwork quantity used in the 2003 EIR analysis was 10,000 cubic yards of material over 30 days, or 866 tons per day. As discussed in the Project-specific analysis below, the construction equipment and activity anticipated for implementation of the proposed Project is within the impact analysis envelope of the certified 2003 EIR.

While the proposed Project fits within the impact analysis envelope of the 2003 EIR for equipment use and grading, the prior EIR assessment did not estimate emissions associated with off-site worker or vendor trips. Given that emissions from these sources have the potential to result in air quality impacts with construction of the proposed Project, an updated Project-specific estimate of air quality emissions from Project construction is provided.

Additionally, the operational emissions estimate in the 2003 EIR included emissions from motor vehicles associated with the projected FTE enrollment of 850 ultimately expected at the Calexico Center. The analysis found that trip generation associated with this increase in FTE would result in no exceedances of ICAPCD threshold levels for all criteria air pollutants. Given that the proposed Project would not increase the previously approved maximum FTE enrollment, the proposed Project is consistent with the 850 FTE previously analyzed in the 2003 EIR. However, as described in Section 3, the proposed Project would also accommodate IVCCD students who use their personal vehicles to commute to the IVCCD campus from the Project site. The emissions associated with these trips were not previously analyzed and are therefore included in the analysis herein.

The Project-specific analysis for air quality impacts is discussed separately for construction and operation below.

Construction

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and ROG off-gassing) and off-site sources (i.e., on-road vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for particulate matter, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated.

Internal combustion engines used by construction equipment, trucks, and worker vehicles would result in emissions of ROGs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Additionally, PM_{10} and $PM_{2.5}$ emissions would be generated by entrained dust, which results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil. The proposed Project would be required to comply with ICAPCD Regulation VIII (Fugitive Dust Control Measures) to control dust emissions generated during any dust-generating activities. Standard construction measures that would be employed to reduce fugitive dust emissions include limiting visible emissions to no greater than 20% opacity through use of chemical stabilizers, dust suppressants, and/or watering. Based on the developed nature of the Project site and surrounding areas and given that on-site and off-site roads would be paved, the default percentage of paved road was adjusted to more accurately represent on-road travel during Project construction. To account for potential unpaved vehicle movement within the Project site vicinity, it was conservatively estimated that 95% of all travel (i.e., worker and vendor trips) would be on paved roads, with 5% on unpaved roads.

CalEEMod Version 2022.1 was used to estimate emissions from construction of the proposed Project. CalEEMod default construction parameters were used when detailed Project-specific information was not available, including specific off-road equipment for each phase. The construction equipment needed to build out the proposed Project is similar to that analyzed in the 2003 EIR. Maximum daily activity would require approximately 48 equipment hours per day, which is well within the scope of the 68 hours analyzed for the "typical worst day" in the 2003 EIR.

According to preliminary Project detail, the material movement estimated for construction of the proposed Project is 2,600 cubic yards of cut to be exported off site, which also is within the scope of the previously identified 10,000 cubic yards analyzed in the 2003 EIR. Additional detail on Project-specific construction parameters is included in Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files.

Table 6, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions, presents the estimated maximum daily construction emissions generated during Project construction. Details of the emission calculations are provided in Attachment B.

Table 6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2024	1.82	17.12	17.27	0.03	28.14	4.54
2025	2.32	15.25	16.27	0.03	28.03	4.45
2026	0.81	7.07	10.99	0.02	12.74	1.47
Maximum	2.64	17.12	17.27	0.03	28.14	4.54
ICAPCD Threshold	*75*	*100*	*550*	*N/A*	*150*	*N/A*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ICAPCD = Imperial County Air Pollution Control District; N/A = not applicable.
Emission reductions from implementation of Mitigation Measure (MM) AQ-1, which requires Tier 4 engines for all construction equipment greater than 50 horsepower, would reduce NO_x and PM emissions. Emission reductions from MM-AQ-1 were not captured in this table.
See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for complete results.

As shown in Table 6, Project construction would not exceed ICAPCD's daily thresholds. Therefore, construction impacts associated with criteria air pollutant emissions would be **less than significant**.

Operation

Criteria air pollutant emissions from daily operation of the proposed Project were estimated using a combination of CalEEMod default parameters and Project-specific information provided by the applicant, where available. Operational year 2026 was analyzed as it is anticipated to be the first year of operation following completion of Project construction. Criteria air pollutant emissions sources and associated information are discussed in Section 4.3, Construction Health Risk Methodology. Table 7, Estimated Maximum Daily Operations Criteria Air Pollutant Emissions, presents the estimated maximum daily emissions generated during operation of the proposed Project. Details of the emission calculations are provided in Attachment B.

Table 7. Estimated Maximum Daily Operations Criteria Air Pollutant Emissions

Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Mobile	0.38	0.19	1.91	<0.01	137.03	13.67
Area	0.34	0.01	0.57	<0.01	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.72**	**0.20**	**2.48**	**<0.01**	**137.03**	**13.67**
ICAPCD Threshold	*137*	*137*	*550*	*150*	*150*	*550*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ICAPCD = Imperial County Air Pollution Control District.
<0.01 indicates values smaller than 0.005.
See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for complete results.

As shown in Table 7, the proposed Project would not exceed ICAPCD's significance thresholds during operations. Therefore, operational impacts associated with criteria air pollutant emissions would be **less than significant.**

In considering cumulative impacts from the proposed Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SSAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed ICAPCD's significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SSAB. If a project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if: (1) the project's contribution accounts for a significant proportion of the cumulative total emissions and (2) the project is inconsistent with ICAPCD air quality plans, which address cumulative emissions in the SSAB.

The SSAB has been designated as a federal and state nonattainment area for O_3 and PM_{10}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SSAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction of the proposed Project would generate ROG and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. As indicated in Tables 6 and 7, Project-generated

construction and operational emissions would not exceed ICAPCD's emission-based significance thresholds for any criteria air pollutant.

Cumulative localized impacts would potentially result if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the proposed Project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be speculative. However, future projects would be subject to CEQA and would require an air quality analysis and, where necessary, mitigation if the project would exceed ICAPCD's significance thresholds. Criteria air pollutant emissions associated with construction activity of future proposed projects also would be reduced through implementation of control measures required by ICAPCD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to ICAPCD Regulation VIII (Fugitive Dust Control Measures), which sets forth general and specific requirements for all construction sites in the ICAPCD.

Based on the previous considerations, the Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and cumulative impacts would be **less than significant**.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, older adults, and people with cardiovascular and chronic respiratory diseases. According to CARB, sensitive receptor locations may include hospitals, schools, and daycare centers (CARB 2023). The closest sensitive receptors include residences approximately 80 feet to the south of the Project site and approximately 100 feet to the east of the Project site.

The air quality analysis prepared for the 2003 EIR found that there would be no significant impact related to exposure of sensitive receptors to substantial pollutant concentrations. The analysis focused on the use of chemical toxics (i.e., pesticides) associated with adjacent/past agricultural activity and its impact on receptors near the Project site. The analysis found that there would be no significant impacts related to pesticide drift, and no mitigation measures were required. The Project-specific analysis provided below expands this discussion to include the impact of pollutants generated during construction and operation on sensitive receptors proximate to the site.

CO Hot Spots

Exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. Mobile source impacts, including those related to CO, occur essentially on two scales of motion. Regionally, Project-related construction travel would add to regional trip generation and increase the VMT within the local airshed and the SSAB. Locally, construction traffic would be added to the roadway system in the vicinity of the Project site. Although the SSAB is currently an attainment area for CO, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-Project traffic. Because of

continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SSAB is steadily decreasing.

The proposed Project would generate trips associated with construction worker vehicles and construction vendor trucks accessing the site. Title 40 of the California Code of Regulations, Section 93.123(c)(5), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site." Accordingly, while Project construction would involve on-road vehicle trips from trucks and workers during construction, construction activities would last approximately 17 months and would not require a Project-level construction hotspot analysis. As such, potential Project-generated impacts associated with CO hotspots would be **less than significant**.

Valley Fever Exposure

Valley fever is a fungus that lives in the top 2 to 12 inches of soil; therefore, during soil disturbance, the fungal spores can be released into the air. The spores are too small to be seen by the naked eye, and there is no reliable way to test the soils for spores (CDPH 2021). The disease is caused by inhalation of dust containing *Coccidioides immitis*, the fungal spore. Most people who are exposed have no or very mild systems; however, in a small percentage of the population, it can generate more serious symptoms of meningitis, pneumonia, or chronic fatigue.

The Project site is located in Imperial County, which is a county where valley fever is considered endemic. With 20 reported incidences of valley fever in 2022 (CDPH 2022), the rate of valley fever in Imperial County is 11.2 per 100,000 people, which is lower than the California average of 19.1 per 100,000 people. Furthermore, Statewide incidence of valley fever decreased 6.8% from 2021 and 16.6% from 2019 (CDPH 2022).

Construction workers have increased risk of valley fever exposure where their tasks include the disturbance of soils where fungal spores are found. Valley fever infection rates are highest in California from June to November. Therefore, a risk of valley fever infection exists for construction personnel working on the Project in the peak summer and fall months.

Importantly, the risk of exposure to valley fever from construction-related dust during Project build-out would be minimized by Project compliance with the ICAPCD's Regulation VIII, Fugitive Dust Control Measures. Rule VIII sets forth best available control measures and standards of practice for minimizing and preventing the generation of dust; examples of such measures include the regular watering of disturbed soil and the application of chemical stabilizers to minimize dust. Due to the Project's compliance with these applicable regulatory standards, which suppress the release of dust that may contain fungal spores, impacts to construction workers and nearby sensitive receptors would be **less than significant**

Toxic Air Contaminants

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. Health effects from carcinogenic air toxics

are usually described in terms of cancer risk, with a recommended an incremental threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects, which are evaluated using a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects (OEHHA 2015). The greatest potential for TAC emissions during construction would be DPM emissions from heavy equipment use.

An HRA was performed to evaluate potential health risk associated with construction of the Project. Concentrations of TACs would be highest during construction due to the intensity and concurrence of off-road equipment usage. Conversely, operation of the Project, which is residential in nature and would not include any on-site stationary sources (e.g., emergency generator), would not generate considerable quantities of TACs; therefore, an operational HRA is not required for the Project.

The following discussion summarizes the dispersion modeling and HRA methodology. Supporting construction HRA documentation, including detailed assumptions, is presented in Attachment C, Construction Health Risk Modeling Files.

As discussed in Section 4.3, a construction HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors as a result of Project construction. Results of the construction HRA are presented in Table 8, Construction Health Risk Assessment Results – Unmitigated.

Table 8. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per million	58.26	10	Potentially Significant
Chronic Hazard Index – Residential	Index value	0.04	1.0	Less than Significant

Source: Attachment C, Construction Health Risk Modeling Files.
Note: CEQA = California Environmental Quality Act.

As shown in Table 8, Project construction activities would result in a Residential Maximum Individual Cancer Risk of 58.26 in 1 million, which exceeds the significance threshold of 10 in 1 million. Project construction would result in a Residential Chronic Hazard Index of 0.04, which is below the 1.0 significance threshold.

The following mitigation shall be implemented to reduce TAC emissions in the form of DPM during construction:

MM-AQ-1 Construction Equipment Emissions Reductions. Prior to the commencement of construction activities, CSU/SDSU, or its designee, shall direct the construction contractor to demonstrate that all 75-horsepower or greater diesel-powered equipment is powered with Tier 4 Final engines certified by the California Air Resources Board (CARB) and that all such equipment shall be used during Project construction.

An exemption from this requirement may be granted if (1) CSU/SDSU, or its designee, documents equipment with Tier 4 Final engines is not reasonably available and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the Project from other combinations of construction equipment. Before an exemption may be granted, CSU/SDSU, or its designee, shall (1) demonstrate that at least two construction fleet owners/operators in Imperial County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Imperial County during the desired construction schedule and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model (CalEEMod), the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and the Hotspots Analysis and Reporting Program (HARP2) or other industry standard emission estimation method and health risk assessment tools and documentation is provided to the lead agency to confirm that necessary Project-generated emissions and health risk reductions are achieved.

MM-AQ-1, which requires the use of Tier 4 Final engines on construction equipment, shall be implemented to reduce DPM during construction. Table 9, Construction Health Risk Assessment Results – Mitigated, summarizes the results of the HRA for Project construction after mitigation.

Table 9. Construction Health Risk Assessment Results – Mitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per million	8.28	10.0	Less than significant with mitigation
Chronic Hazard Index – Residential	Index value	0.01	1.0	Less than significant

Source: Attachment C, Construction Health Risk Modeling Files.
Note: CEQA = California Environmental Quality Act.

As shown in Table 9, the results of the construction HRA for the Project demonstrate that the construction emissions, following implementation of MM-AQ-1, would result in a potential incremental increase in cancer risk and chronic risk concentrations that would each be below the respective thresholds. As such, the Project would result in a **less-than-significant impact** in regard to potential health risk resulting from mitigated TAC emissions generated during construction.

Health Impacts of Criteria Air Pollutants

The SSAB is designated as nonattainment for O_3 for the NAAQS and CAAQS. Thus, existing O_3 levels in the SSAB are at unhealthy levels during certain periods. The health effects associated with O_3 generally relate to reduced lung function. Because the proposed Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) that would exceed the ICAPCD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and associated health impacts. Similar to construction, Project operation would not lead to exceedance of any ICAPCD threshold.

In addition to O_3, NO_x emissions contribute to potential exceedances of the NAAQS and CAAQS for nitrogen dioxide (NO_2) (since NO_2 is a constituent of NO_x). Exposure to NO_2 can cause lung irritation, bronchitis, and pneumonia and can lower resistance to respiratory infections. As depicted in Tables 6 and 7, Project construction and operation would not exceed the ICAPCD localized thresholds for NO_x. Thus, construction and operation of the proposed Project are not expected to exceed the NO_2 standards or contribute to associated health effects.

CO tends to be a localized impact associated with congested intersections. CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. CO hotspots were discussed previously as a less-than-significant impact. Thus, the proposed Project's CO emissions would not contribute to the health effects associated with this pollutant.

The SSAB is also designated as nonattainment for PM_{10} under the NAAQS and CAAQS. Particulate matter contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing (EPA 2023b). As with O_3 and NO_x, the proposed Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed ICAPCD thresholds. Accordingly, the proposed Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the proposed Project would not result in any potentially significant contribution to local or regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Impacts would be **less than significant**.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

The initial study prepared for the 2003 EIR found there would be no impact related to objectionable odors affecting a substantial number of people. Given that the proposed Project's construction and operational activities are within the scope of the 2003 EIR, the proposed Project remains consistent with that determination. A discussion of odors specific to the proposed Project is provided below for additional context.

Construction

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the proposed Project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural

coatings. Such odors would be temporary, disperse rapidly from the proposed Project site, and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, there would be no impact from construction odors that would affect a substantial number of people.

Operation

Land uses and industrial operations that are potential sources of odor include wastewater treatment plants, sanitary landfills, composting stations, feedlots, asphalt plants, painting/coating operations, and rendering plants (ICAPCD 2017). In addition to the odor source, local meteorological conditions and the distance between the sensitive receptor(s) and the odor source may affect the potential for a project to frequently expose the public to objectionable odors. Although localized air quality impacts are focused on potential impacts to sensitive receptors, such as residences and schools, other land uses where people may congregate (e.g., workplaces) or uses with the intent to attract people (e.g., restaurants and visitor-serving accommodations) should also be considered in the evaluation of potential odor nuisance impacts. The proposed Project would include student housing buildings, which are not expected to produce any nuisance odors; therefore, there would be no impact related to odors caused by the proposed Project during operations.

6 Greenhouse Gas Emissions Assessment

GHGs are those that absorb infrared radiation (i.e., trap heat) in the earth's atmosphere. The trapping and buildup of heat in the atmosphere near the earth's surface (the troposphere) is referred to as the "greenhouse effect" and is a natural process that contributes to the regulation of the earth's temperature, creating a livable environment on earth. The earth's temperature depends on the balance between energy entering and leaving the planet's system, and many factors (natural and human) can cause changes in the earth's energy balance. Human activities that generate and emit GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the earth's surface temperature to rise. This rise in temperature has led to large-scale changes to the earth's system (e.g., temperature, precipitation, wind patterns), which are collectively referred to as climate change. Global climate change is a cumulative impact; a project contributes to this impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008).

As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride (see also CEQA Guidelines Section 15364.5). The primary GHGs that would be emitted by Project-related construction and operations include CO_2, CH_4, and N_2O.

The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare each GHG's ability to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e). Consistent with CalEEMod Version 2022.1, this GHG emissions analysis uses the following GWPs: 25 for CH_4 (i.e., emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2) and 298 for N_2O, based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007).

GHG emissions associated with construction of the proposed Project were estimated for the following emission sources: operation of off-road construction equipment, on-road vendor trucks, and worker vehicles. GHG emission sources associated with operation of the proposed Project include area, energy, solid waste, water, and wastewater categories. The detailed proposed Project construction and operational modeling parameters are included in Attachment B.

6.1 Greenhouse Gas Impact Analysis and Conclusions

6.1.1 Thresholds of Significance

The significance criteria used to evaluate the proposed Project's GHG emissions impacts are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). For the purposes of this GHG emissions analysis, the proposed Project would have a significant environmental impact if it would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled Discussion Draft CEQA and Climate Change Advisory (OPR 2018), states the following:

> [N]either the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable.... Even in the absence of clearly defined thresholds for greenhouse gas emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for greenhouse gas emissions or other scientific data to clearly define what constitutes a 'significant impact', individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2018). CEQA Guidelines Section 15064.7(c) specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." Neither the CSU/SDSU nor ICAPCD has adopted a numeric significance threshold for determining significant impacts associated with project-level GHG emissions. Therefore, in the absence of guidance from these agencies, the significance analysis for the proposed Project's GHG emissions relies on guidance from the neighboring South Coast Air Quality Management District (SCAQMD), as described below.

In October 2008, SCAQMD staff published numeric CEQA significance thresholds for lead agencies to use in assessing GHG impacts of residential and commercial development projects, as presented in its draft guidance document, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans (SCAQMD 2008). This document, which built upon the California Air Pollution Control Officers Association's previous guidance, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the SCAQMD Governing Board. However, in December 2008, the SCAQMD Governing Board adopted an interim 10,000 MT CO_2e per year screening level threshold for stationary source/industrial projects for which SCAQMD is the lead agency (SCAQMD 2010). The 10,000 MT CO_2e per year threshold, which was derived from GHG reduction targets established in Executive Order S-3-05, was based on the conclusion that the threshold was consistent with achieving an emissions capture rate of 90% of all new or modified stationary source projects.

SCAQMD also formed a GHG CEQA Significance Threshold Working Group to work with its staff on developing GHG CEQA significance thresholds. From December 2008 to September 2010, SCAQMD staff hosted working group meetings and revised its 2008 draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The most recent proposal issued by SCAQMD, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1 Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2 Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

Tier 3 Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4 Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of Assembly Bill (AB) 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per-service population for project-level analyses and 6.6 MT CO_2e per-service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5 Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

CEQA Guidelines Section 15064.7(c) specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by

substantial evidence." Therefore, to determine the proposed Project's potential to generate GHG emissions that would have a significant impact on the environment, its GHG emissions were compared to SCAQMD's 3,000 MT CO_2e per year screening threshold recommended for non-industrial projects. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the proposed project, which is assumed to be 30 years (SCAQMD 2008). This impact analysis, therefore, adds amortized construction emissions to the estimated annual operational emissions and then compares operational emissions to the proposed SCAQMD threshold of 3,000 MT CO_2e per year.

6.1.2 Impact Analysis

As discussed in Section 4, Analysis Methodology, at the time the 2003 EIR was certified, an evaluation of GHG emissions was not required under CEQA. Therefore, the impact of Project-related construction and operational GHG emissions was not previously considered. Pursuant to CEQA Guidelines Section 15168(c)(1), an analysis of the proposed Project's GHG emissions has been prepared as described below.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

CalEEMod was used to calculate the construction GHG emissions based on the construction scenario described in Section 5, Air Quality Assessment. Construction of the Project is anticipated to commence in late November 2024 and would last approximately 17 months, ending in March 2026. On-site sources of GHG emissions include off-road equipment, and off-site sources include vendor trucks and worker vehicles. Additional details are provided in Attachment B. Table 10, Estimated Annual Construction Greenhouse Gas Emissions, presents construction emissions for the Project from on-site and off-site emission sources.

Table 10. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
2024	33.52	<0.01	<0.01	0.01	33.78
2025	217.65	0.01	<0.01	0.04	218.94
2026	45.14	<0.01	<0.01	0.01	45.39
Total	**296.31**	**0.01**	**<0.01**	**0.05**	**298.11**
			Amortized (30-year project life)		*9.94*

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent.
See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for complete results.
Totals may not add due to rounding.

As shown in Table 10, the estimated total GHG emissions during Project construction would be approximately 298 MT CO2e over the construction period. Estimated Project-generated construction emissions amortized over 30 years would be approximately 10 MT CO2e per year. GHG emissions generated during construction of the Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operational Emissions

Once operational, the proposed Project would result in GHG emissions from energy use, vehicle travel/mobile sources, solid waste, water use, wastewater generation, and refrigerants. As with construction, GHG emissions from Project operations were estimated using CalEEMod based on a combination of Project-specific details provided by the applicant and default parameters, where necessary. All details for operational criteria air pollutants discussed in Section 4.2, Operation Modeling Methodology, are also applicable for the estimation of operations-related GHG emissions. As such, see Section 5 for a discussion of the operational emissions calculation methodology.

Mobile

As discussed previously, the proposed Project would not increase SDSU Imperial Valley FTE enrollment beyond the level previously approved within the 2003 EIR; therefore, the operational mobile source GHG emissions associated with the Off-Campus Center - Calexico need not be included in this assessment. However, the 2003 EIR did not assess the trips generated by those student residents commuting to the IVCCD campus from the Project site. These trips were analyzed within the transportation technical memorandum for the proposed Project. Following the guidance of this document, a conservative estimate of 79 daily trips was used to model these GHG emissions within CalEEMod (Dudek 2024).

Energy

The estimation of operational energy emissions was based on CalEEMod land use defaults and units or total area (i.e., square footage) of the proposed Project land use (i.e residential). For residential buildings, CalEEMod energy intensity value (electricity or natural gas usage per dwelling unit per year) parameters are based on the Residential Appliance Saturation Survey (RASS). Emissions are calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour [kWh] for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs.

Consistent with the CSU's aim to minimize use of natural gas and transition to electric alternatives, no natural gas would be used on site, and all space and water heating would be electrified. Electrifying uses at the site would reduce GHG emissions associated with Project operations by converting a portion of the Project's forecasted natural gas consumption to electricity. To estimate emissions associated with the elimination of natural gas, use of natural gas during operation of the Project was converted to kWh/year and added to the Project electrical consumption in CalEEMod. Electricity consumption (i.e., kWh/year) was adjusted based on the relative efficiency per source of energy use (e.g., efficiency of powering water heaters with electricity versus natural gas). Energy use efficiency data were obtained from the U.S. Energy Information Administration and U.S. Department of Energy, as appropriate. For further details, see Attachment B.

Annual electricity emissions were estimated in CalEEMod using the emissions factors for Imperial Irrigation District, which would be the electricity provider for the Project. CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kWh) for Imperial Irrigation District are based on the forecasted factors for the operational year.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the proposed Project requires the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the proposed Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment (i.e., biological processes). Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values.

Refrigerants

Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), an operational refrigerant leak rate, and a GWP specific to the type of refrigerant. GHG emissions related to refrigerant leaks from operation of the proposed Project were estimated using CalEEMod default parameters. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and derives average annual emissions from the lifetime estimate.

Solid Waste

The proposed Project would generate solid waste, resulting in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation for the proposed land use were used to estimate GHG emissions associated with solid waste.

Table 11, Estimated Annual Operational Greenhouse Gas Emissions, presents the estimated annual GHG emissions generated during operation of the proposed Project. The emissions results presented reflect operational year 2026, as it is anticipated to be the first year of operation following completion of Project construction. Details of the emission calculations are provided in Attachment B.

Table 11. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Energy	19.79	<0.01	<0.01	N/A	19.88
Mobile	46.27	<0.01	<0.01	0.07	47.19
Water Use	2.85	0.06	<0.01	N/A	4.91
Solid Waste	0.67	0.07	<0.01	N/A	2.33
Area	0.19	<0.01	<0.01	N/A	0.19
Refrigerants	N/A	N/A	N/A	0.01	0.01
Total Annual Operational Emissions	**69.76**	**0.13**	**<0.01**	**0.08**	**74.51**
				Amortized 30-year Construction Emissions	*9.94*
				Total Annual Project Emissions	**84.45**
				SCAQMD Threshold	*3,000*
				Threshold Exceeded?	**No**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent; N/A = not applicable; SCAQMD = South Coast Air Quality Management District.

<0.01 indicates values smaller than 0.005.
See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for complete results.
Totals may not add due to rounding.

As shown in Table 11, the estimated total GHG emissions during operation of the proposed Project would be approximately 84 MT CO_2e per year, including amortized construction emissions. The proposed Project would not exceed the SCAQMD threshold of 3,000 MT CO_2e per year. Projects below this significance criterion have a minimal contribution to global emissions and are considered to have less-than-significant impacts. Therefore, operational impacts associated with directly or indirectly generating a significant quantity of GHG emissions would be **less than significant**.

Of note, it is likely that emissions estimated here are well below what would have been estimated had GHG emissions been analyzed in the 2003 EIR. Since 2003, the State of California has enacted a comprehensive suite of laws to increase efficiencies and thereby reduce GHG emissions associated with water use, solid waste disposal, and building energy use. Accordingly, construction and operation of the proposed Project benefits from the current landscape, which serves to reduce GHG emissions as compared to what was in place in 2003.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Plans adopted to reduce GHG emissions applicable to the proposed Project include the CSU Sustainability Policy, as most recently revised in May 2024; the 2017 Climate Action Plan (CAP) for San Diego State University; CARB's Scoping Plan; and SCAG's Connect SoCal 2024. Each of these plans is described below along with an analysis of the proposed Project's potential to conflict with the related GHG emission reduction goals.

Potential to Conflict with the California State University Sustainability Policy

The CSU Board of Trustees adopted its first systemwide Sustainability Policy in May 2014 and most recently revised the Sustainability Policy in May 2024. The Sustainability Policy was developed to integrate sustainability into all facets of the CSU system, including academics, facility operations, built environment, and student life. The Sustainability Policy focuses mainly on energy and GHG emissions and largely aligns with the State of California's energy and GHG emissions reduction goals (CSU 2024). It aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum through 11 broad policies, including University Sustainability; CAP; Energy Resilience and Procurement; Energy Conservation, Carbon Reduction, and Utility Management; Water Conservation; Sustainable Procurement; Waste Management; Sustainable Food Service; Sustainable Building and Lands Practices; Physical Plant Management; and Transportation.

The proposed Project would comply with all relevant requirements of the CSU Sustainability Policy. For example, the Project shall meet or exceed the minimum requirements equivalent to Leadership in Energy and Environmental Design (LEED) Silver and exceed the applicable energy codes and regulations (i.e., California Code of Regulations, Title 24, Part 6, Building Energy Efficiency Standards) by 10%. Additionally, no natural gas would be used on site, and all space and water heating would be electrified, which is consistent with the CSU's aim to minimize use of natural gas and transition to electric alternatives.

Potential to Conflict with the 2017 Climate Action Plan for San Diego State University

The SDSU CAP was adopted in May 2017 to provide goals and strategies to achieve carbon neutrality and improve sustainability efforts campuswide. The CAP includes results of a baseline emissions inventory that summarizes GHG emissions from campus operations in 2015 and projected emissions to future years to inform development of appropriate reduction strategies. While the SDSU CAP does include goals and strategies that would result in a reduction of GHG emissions at the proposed Project site, the SDSU CAP is not considered qualified per CEQA Guidelines Section 15183.5. Additionally, the CAP was prepared with a focus on the SDSU main campus location in San Diego. Therefore, inclusion of this plan is for informational purposes only.

Emissions sources in the CAP's baseline inventory and emissions projections include energy use, solid waste, water use, and student and faculty/staff commute (i.e., mobile source emissions) associated with activity at SDSU's main campus in San Diego. Overall, emissions from energy use and mobile sources accounted for the majority of GHG emissions in the baseline inventory and therefore present the greatest opportunity for future GHG emissions reductions. As previously discussed, the previously approved FTE student enrollment would not increase with the proposed Project above what was already analyzed in the certified 2003 EIR for the approved Off-Campus Center Master Plan - Calexico. The Project features housing that would accommodate both SDSU Imperial Valley and IVCCD students. Those SDSU students living at the Project site would no longer have to commute to school, while the IVCCD students would travel to the IVCCD campus from the site. The transportation technical memorandum prepared for this proposed Project determined that the SDSU Imperial Valley students would generate a nominal number of net vehicle trips, while the IVCCD students would generate an average 79 daily trips (Dudek 2024). As a whole, the Project was determined to be screened out from conducting a VMT analysis and would result in a less-than-significant VMT impact. The Project is, therefore, unlikely to conflict with the CAP.

The CAP vision for energy highlights a shift from natural gas–based co-generation toward grid energy and on-site renewables. For solid waste, the CAP aims to encourage recycling and move toward zero waste in the future. The CAP's vision for water use is to encourage efficient landscaping (e.g., drought-resistant and native species, limited turf, and efficient irrigation systems) and ensure ultra-low flow and high-performance fixtures are used for potable water systems.

Consistent with this vision, the Project would not use natural gas, and all space and water heating would be electrified. The proposed Project would also exceed the Title 24 Building Energy Efficiency Standards by at least 10% and would meet or exceed the minimum requirements equivalent to LEED Silver consistent with the CSU Sustainability Policy, reducing overall energy demand and consumption.

As such, the proposed Project would support the vision of and not conflict with the overall goal of the SDSU CAP. Specifically, the proposed Project's elimination of natural gas supports SDSU's goal to achieve carbon neutrality through increased energy efficiency for campus operations.

Potential to Conflict with CARB's Scoping Plan

The California State legislature passed the Global Warming Solutions Act of 2006 (AB 32) to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range

climate objectives. Since the passage of AB 32, the state has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. For the proposed Project, the relevant GHG emissions reduction targets include those established by Senate Bill (SB) 32 and AB 1279, which require GHG emissions be reduced to 40% below 1990 levels by 2030 and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 calls upon the state to achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter.

As defined by AB 32, CARB is required to develop the Scoping Plan, which provides the framework for actions to achieve the state's GHG emission targets. The Scoping Plan is required to be updated every 5 years and requires CARB and other state agencies to adopt regulations and initiatives that will reduce GHG emissions statewide. The first Scoping Plan was adopted in 2008, with subsequent updates adopted in 2014, 2017, and (most recently) 2022. While the Scoping Plan is not directly applicable to specific projects, it does provide the official framework for the measures and regulations that will be pursued by the state's executive branch of government to reduce California's GHG emissions in alignment with the legislatively adopted targets. Therefore, a project would be found to not conflict with the statutes establishing statewide GHG reduction targets if it would meet the Scoping Plan policies and would not impede attainment of the goals therein.

CARB's 2017 Scoping Plan was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017). The most recent Scoping Plan outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses the state's progress towards meeting the 2030 SB 32 target (CARB 2022). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the 2017 and 2022 Scoping Plans that outline the strategy to achieve those targets are the most applicable to the proposed Project.

To achieve the 2030 goal of 40% below 1990 GHG emission levels, the 2017 Scoping Plan included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), measures to increase the stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and measures to increase the stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the 2017 Scoping Plan also recommended continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%. Many of these measures and programs would result in the reduction of Project-related GHG emissions with no action required at the Project-level. These programs would benefit GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (Low Carbon Fuel Standard), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy). Implementation of these statewide programs would result in a reduction of operational GHG emissions over the Project lifetime.

CARB approved the 2022 Scoping Plan in December 2022, which includes the state's plan to reduce anthropogenic emissions to 85% below 1990 levels by 2045 and achieve carbon neutrality by 2045 or earlier. The 2022 Scoping Plan also assesses the progress the state is making towards reducing GHG emissions to at least 40% below 1990 levels by 2030, as is required by SB 32 and laid out in the 2017 Scoping Plan. The carbon reduction programs included in the 2022 Scoping Plan build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes

and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). Implementation of the measures and programs included in the 2022 Scoping Plan largely are the responsibility of policymakers and would result in the reduction of Project-related GHG emissions with no action required at the Project-level. Given that the proposed Project would be fully electric (i.e., no natural gas consumption) and includes the potential for on-site solar power generation, Project implementation would support the 2022 Scoping Plan's goals above.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the 2022 Scoping Plan to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. The proposed Project would support the state's carbon neutrality goals, as implementation would increase renewable, carbon-free electricity sources within the state, decreasing reliance on fossil fuels. While transitioning to renewable alternatives will support the state's overall climate goals, the 2022 Scoping Plan also indicates that achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time.

Overall, the proposed Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent applicable and required by law. As mentioned above, several Scoping Plan measures would result in reductions of Project-related GHG emissions with no action required at the Project-level, including those related to energy efficiency, reduced fossil fuel use, and renewable energy production. As demonstrated above, the proposed Project would not conflict with CARB's 2017 or 2022 Scoping Plan updates and with the state's ability to achieve the 2030 and 2045 GHG reduction and carbon neutrality goals. Further, the proposed Project's consistency with the applicable measures and programs would assist in meeting Imperial County's contribution to GHG emission reduction targets in California.

Potential to Conflict with SCAG's 2024 RTP/SCS "Connect SoCal"

The Southern California Association of Governments has jurisdiction over Imperial County and is responsible for the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). As required by federal and state regulations, the RTP/SCS is updated every 4 years. In April 2024, SCAG adopted the 2024-2050 RTP/SCS. Connect SoCal 2024-2050 builds upon prior planning cycles to update the vision of the region's future (SCAG 2024). SCAG's Connect SoCal 2024–2050 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS is a regional growth management strategy, which targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain the GHG emission reduction targets set forth by CARB, the 2024–2050 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2024–2050 RTP/SCS would result in more complete communities with various transportation and housing choices while reducing automobile use.

The 2024–2050 RTP/SCS identifies the following strategy areas to support its environmental goals: Sustainable Development, Air Quality, Clean Transportation, Natural and Agricultural Lands Preservation, and Climate Resilience. An analysis of the Project's compliance with the applicable strategies is presented below.

- **Sustainable Development.** The 2024–2050 RTP/SCS identifies sustainable development, including water and energy-efficient building practices and green infrastructure, as a strategy to reduce GHG emissions. The proposed Project would include green building design and construction practices pursuant to LEED Silver certification. Furthermore, the Project would utilize electricity for water and space heating systems (as opposed to natural gas). The modified Project would continue to promote sustainability at the Off-Campus Center - Calexico.
- **Air Quality.** The 2024–2050 RTP/SCS identifies air quality and meeting federal and state ambient air quality standards as a co-benefit of reducing GHG emissions. The Project would not exceed the ICAPCD's threshold of significance for any criteria air pollutant and would not result in any significant impacts related to air quality following mitigation.
- **Clean Transportation.** The 2024–2050 RTP/SCS identifies EV charging infrastructure, adoption of zero-emission vehicles, and clean transit as ways to reduce GHG emissions from mobile sources. As discussed previously in Section 3, Project Description, the proposed Project would promote clean transportation through its proximity to campus. Student occupants of the proposed development would be adjacent to campus, thereby reducing the need to commute to school in personal vehicles. Additionally, the Project would promote clean transportation by providing bicycle storage on-site.
- **Natural and Agricultural Lands Preservation.** The 2024–2050 RTP/SCS promotes the conservation and restoration of natural and agricultural lands through several policies, such as quantifying the carbon sequestration potential of natural and agricultural lands and prioritization of sensitive habitat and wildlife corridors for permanent protection. The proposed Project would not result in the removal of natural or agricultural lands.
- **Climate Resilience:** The 2024–2050 RTP/SCS promotes regional coordination and solutions for effective emergency response for climate-related hazards. Additionally, in the category of climate resilience, SCAG has established the following policies: prioritize the most vulnerable populations and communities subject to climate hazards; support local and regional climate and hazard planning; support nature-based solutions to increase regional resilience; promote sustainable water use planning; and, support an integrated planning approach to help jurisdictions meet housing needs in a drier environment. While the proposed Project does not directly pertain to these climate resilience efforts, the Project would not interfere with these policies. The proposed Project would repurpose existing vacant space on an already developed site, which is generally considered more efficient and sustainable than new construction.

Based on the analysis provided above the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be **less than significant**.

7 Energy Assessment

Project implementation would result in energy use for construction and operation, including use of electricity and petroleum-based fuels. The proposed Project's impact on energy resources is discussed separately below for construction and operation. Energy consumption (electricity and petroleum consumption) was estimated using CalEEMod data from the air quality and GHG assessment, which was based on modeling inputs developed in consultation with the Project applicant, as well as default parameters where necessary. For further detail on the modeling parameters and results of the energy analysis, please refer to the Attachment B.

7.1 Energy Impact Analysis and Conclusions

7.1.1 Thresholds of Significance

The significance criteria used to evaluate the proposed Project's energy impacts are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). For the purposes of this energy analysis, the proposed Project would have a significant environmental impact if it would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

7.1.2 Impact Analysis

As discussed in Section 4, at the time the 2003 EIR was certified, an evaluation of energy was not required under CEQA. Pursuant to CEQA Guidelines Section 15168(c)(1), an analysis of the proposed Project's energy impacts relating to construction and operation of the proposed affordable student housing apartments has been prepared as described below.

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Implementation of the proposed Project would result in energy use for construction and operation, including use of electricity and petroleum-based fuels for off-road equipment. The electricity and fuel used for construction of the proposed Project would be temporary, would be substantially less than that required for Project operation, and would have a negligible contribution to the Project's overall energy consumption. Additionally, although electricity usage at the Off-Campus Center - Calexico would increase due to the implementation of the Project, the Project's energy efficiency would exceed the current Building Energy Efficiency Standards (Title 24) in accordance with the CSU Sustainability Policy (CSU 2024). Further, while the Project would see an increase in petroleum use during construction and operation, vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time.

Construction Energy Use

Electricity

Electricity consumed during Project construction would vary throughout the construction period based on the construction activities being performed. Various construction activities would require electricity, including the conveyance of water that would be used for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power. Such electricity demand would be temporary and nominal and would cease upon the completion of construction. Imperial Irrigation District is the electricity provider to the Project site and provided approximately 3,584 gigawatt-hours of electricity in 2022 (CEC 2023a). Overall, construction activities associated with the proposed Project would require limited electricity consumption that would not be expected to have an adverse impact on available Imperial Irrigation District electricity supplies and infrastructure. Therefore, the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

Petroleum-Based Fuels

Petroleum-based fuel usage represents most energy consumed during construction. Petroleum fuels would be used to power off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site, as well as construction material delivery truck trips.

Fuel consumption from construction equipment and vehicles was estimated by converting the total CO_2 emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. All off-road equipment and vendor trucks are anticipated to use diesel fuel, while worker vehicles are analyzed based upon gasoline fuel use. Construction is estimated to last approximately 17 months beginning in November 2024. The conversion factor for gasoline is 8.78 kilograms per MT CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per MT CO_2 per gallon (The Climate Registry 2023). The estimated diesel fuel usage from construction of the proposed Project is shown in Table 12, Estimated Construction Fuel Use.

Table 12. Estimated Construction Fuel Use

Construction Year	Off-Road Equipment (diesel)	On-Road Vendor Trucks (diesel)	On-Road Haul Trucks (diesel)	On-Road Workers (gasoline)
	Fuel Use (gallons)			
2024	2,794	N/A	276	252
2025	2,905	92	56	267
2026	2,948	118	N/A	248
Total	**8,646**	**210**	**332**	**767**

Notes: N/A = not applicable.
See Attachment B, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files, for complete results.
Totals may not sum precisely due to rounding.

As shown in Table 12, construction of the proposed Project is anticipated to require 767 gallons of gasoline and 9,188 gallons of diesel over the 17-month construction period. The proposed Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. The proposed Project would also be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation, which requires the vehicle fleet to reduce emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emissions Control Strategies. Therefore, impacts associated with construction energy use would be **less than significant**.

Operations Energy Use

Electricity

The proposed Project would require electricity for multiple purposes at buildout, including cooling, lighting, appliances, etc. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. Electricity consumption associated with Project operation is based on the CalEEMod outputs presented in Attachment B.

CalEEMod default values for energy consumption for the proposed Project were applied for the Project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy use in buildings is divided by the program into end-use categories subject to Title 24 requirements (end-uses associated with the building envelope, such as the heating, ventilating, and air-conditioning system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

According to the applicant, total annual electricity demand associated with proposed Project operation would be approximately 45,858 kWh per year. Because natural gas is not incorporated in Project operations, the default natural gas consumption assumed by CalEEMod for space heating, water heating, etc. was converted to kWh and added to the demand, totaling 95,571 kWh per year. For context, in 2022, California used approximately 290 billion kWh of electricity (CEC 2023b). Locally, in 2022, non-residential electricity demand in Imperial County was approximately 891 million kWh (CEC 2023b).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2022 standards, became effective on January 1, 2023. The proposed Project would exceed the Title 24 Building Energy Efficiency Standards by at least 10% in compliance with the CSU Sustainability Policy (CSU 2024). Exceedance of the applicable Title 24 standards would reduce overall energy consumption of the proposed Project and would ensure that the energy demands would not be inefficient, wasteful, or otherwise unnecessary, and the Project's effect on electrical demands during operation would be **less than significant**.

Natural Gas

Consistent with the CSU's aim to minimize use of natural gas and transition to electric alternatives, operation of the proposed Project would be fully electric and would not require natural gas. As such, there would be no impact to natural gas–related supply and infrastructure capacity, and the Project's effect on natural gas demands during operation would be **less than significant**.

Petroleum

During operation, fuel consumption resulting from the Project would be generated by vehicle fuel consumption, consisting of the trips generated by those student residents commuting to the IVCCD campus from the Project site.

Annual petroleum use from operation from vehicle fuel consumption would be approximately 5,248 gallons per year. By comparison, California as a whole consumed approximately 26 billion gallons of petroleum in 2022 (EIA 2023), and in 2022 Imperial County consumed an estimated 66 million gallons of gasoline and an estimated 30 million gallons of diesel (CEC 2022). As such, petroleum demand required for implementation of the proposed Project is relatively insignificant and would not be inefficient, wasteful, or otherwise unnecessary. The Project's effect on petroleum supply during operation would be **less than significant**.

In summary, implementation of the Project would increase the demand for electricity and petroleum in the region during construction and operation. However, because the Project would implement all current, applicable regulations and policies, the Project would not be wasteful or inefficient and would not result in unnecessary energy resource consumption. Relatedly, since the proposed Project would comply with and exceed the Title 24 energy conservation standards pursuant to the CSU Sustainability Policy, the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts would be **less than significant**.

Of note, and consistent with the discussion of GHG emissions impact above (Section 6.1.2, Greenhouse Gas Emissions Assessment Impact Analysis), it is likely that energy use estimated here is well below what would have been estimated had energy been analyzed in the 2003 EIR. Since 2003, the state has enacted a comprehensive suite of laws to increase efficiencies and thereby reduce energy use associated with water use, solid waste disposal, and building energy use, among others. Accordingly, construction and operation of the proposed Project benefits from the current legal landscape, which serves to reduce energy demand as compared to what was in place in 2003.

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

The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. At a minimum, the proposed Project would be subject to and would comply with the 2022 California Building Code (24 CCR Part 6). Additionally, as discussed in Section 6.1.2, the proposed Project would not conflict with the CSU Sustainability Policy or the SDSU CAP, which was adopted in 2017 to achieve carbon neutrality, in part, through goals and strategies that support increased energy efficiency and transition to renewable energy alternatives campuswide. Specifically, no natural gas would be used on site, and all space and water heating would be electrified, which is consistent with the CSU's aim to minimize use of natural gas and transition to electric alternatives.

The proposed Project would also not conflict with CARB's Climate Change Scoping Plan, which identifies several strategies to reduce GHG emissions through energy efficiency. As discussed in further detail in Section 6.1.2, the proposed Project would be subject to these strategies as many are state actions requiring no additional involvement at the project level. As such, implementation of the proposed Project would not conflict with applicable plans for energy efficiency, and the impacts during construction and operation would be **less than significant**.

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Attachment A

Figures

SOURCE: ESRI

FIGURE 1

Regional Map

DUDEK

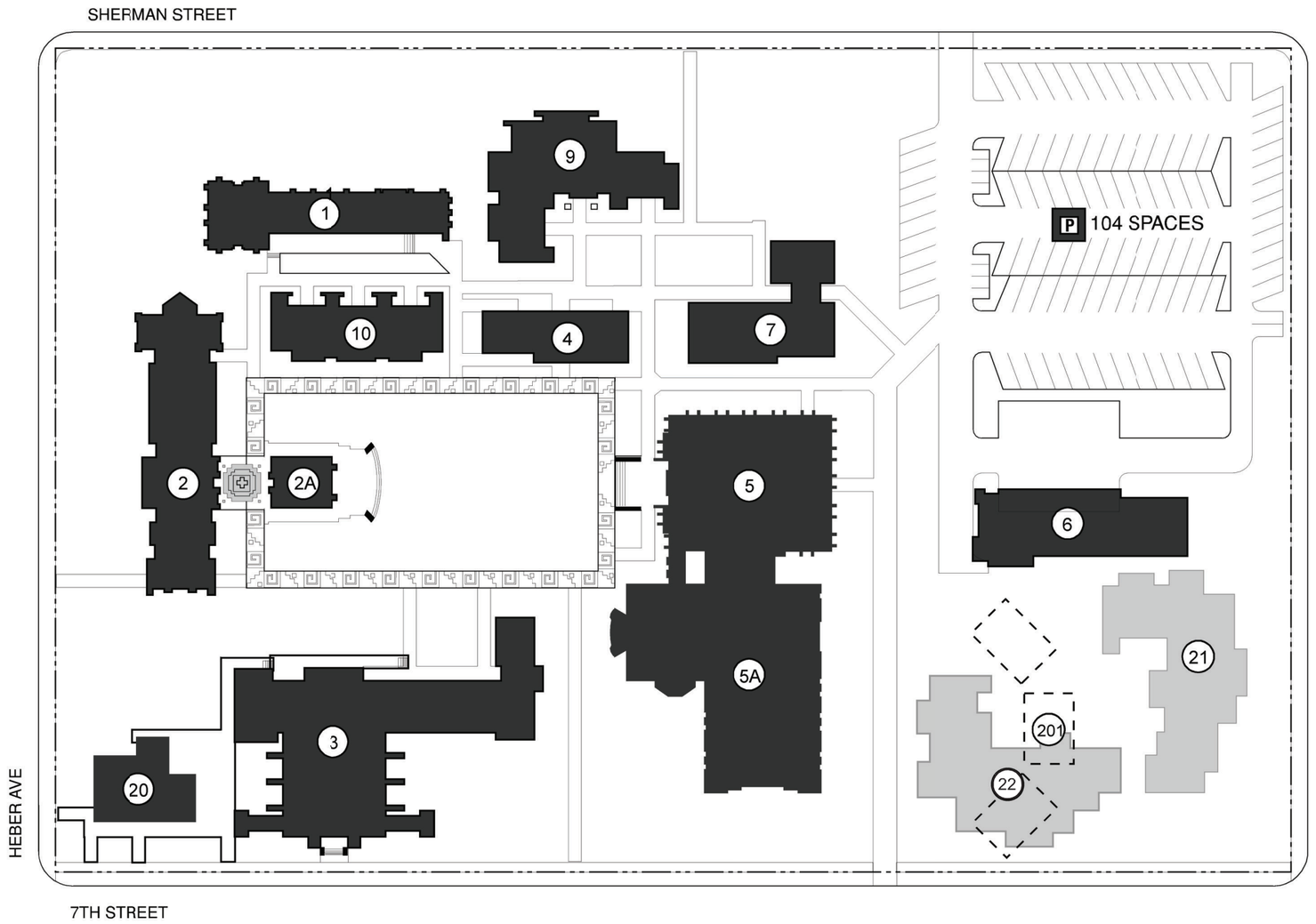
0 4 8 Miles

SOURCE: AERIAL-ESRI MAPPING SERVICE 2023; DEVELOPMENT-SDSU 2024

DUDEK

0 100 200 Feet

FIGURE 2
Vicinity Map



SDSU-IVC BUILDING LEGEND

1. North Classroom
2. Administration
2A. Art Gallery
3. Auditorium
4. Classrooms
5. Library
5A. Library Addition
6. Physical Plant
7. Computer Building/Campus Store
8. Student Affairs
9. Faculty Offices East
10. Faculty Offices West
20. Student Center
21. Classroom Building/Classroom Building East
22. Classroom Building South
201. Temporary Buildings

San Diego State University

Imperial Valley Campus - Calexico
Campus Master Plan
Master Plan Enrollment: 850 FTE
Approval Date: February 1980
Revised Date: September 2003
Main Campus Acreage: 8.4

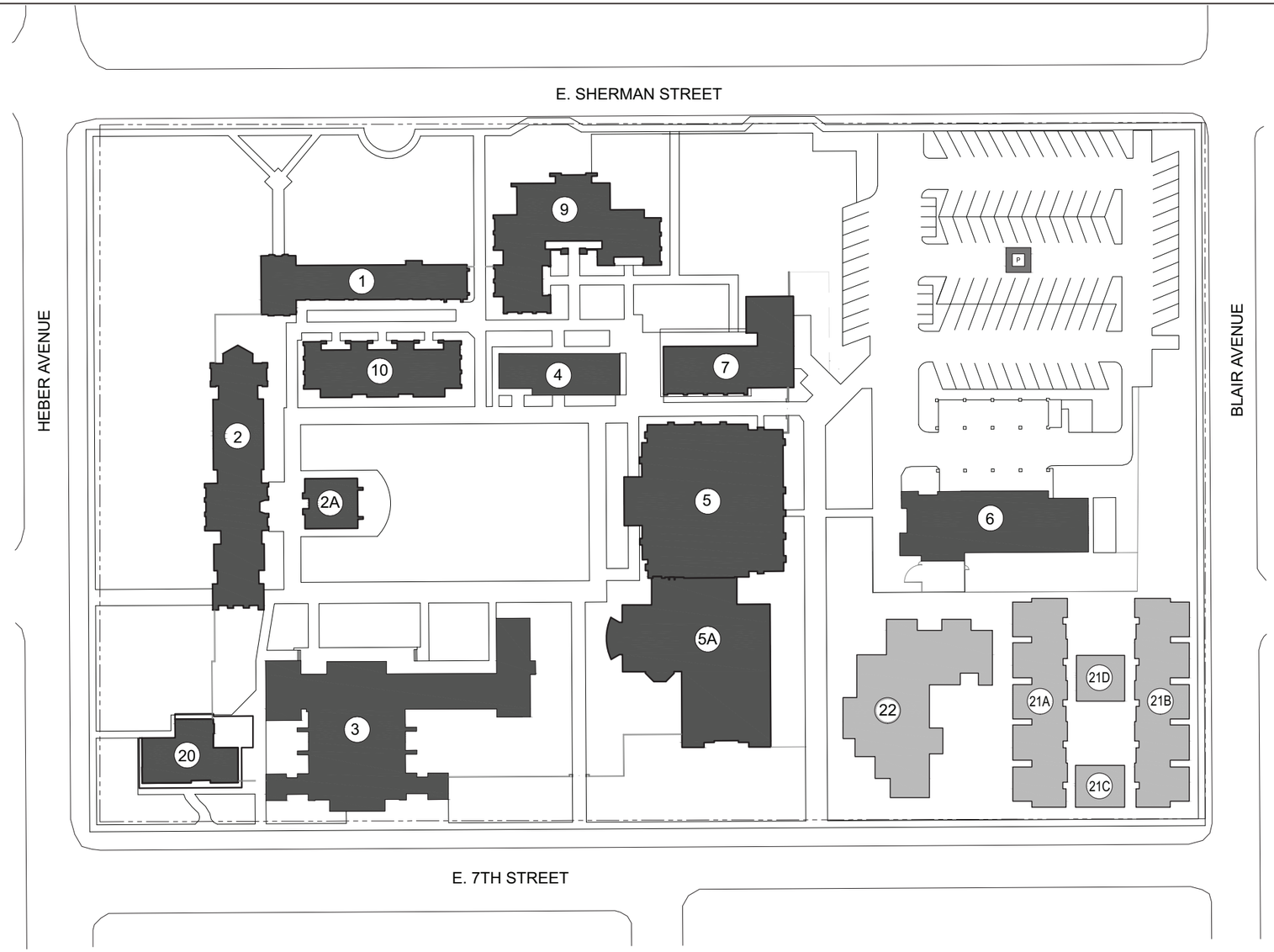
SOURCE: SDSU 2003

N

0 25' 50' 100'

Buildings	Campus Boundary	Parking
EXISTING BUILDING	EXISTING	EXISTING LOT
FUTURE BUILDING	FUTURE	FUTURE LOT
TEMPORARY BUILDING		EXISTING STRUCTURE
EXISTING BUILDING NOT IN USE		FUTURE STRUCTURE

FIGURE 3A
Existing Campus Master Plan



SDSU-IVC BUILDING LEGEND

1. North Classroom
2. Administration
2A. Art Gallery
3. Auditorium
4. Classrooms
5. Library
5A. Library Addition
6. Physical Plant
7. Computer Building/Campus Store
8. Student Affairs
9. Faculty Offices East
10. Faculty Offices West
20. Student Center
21A. Student Housing West
21B. Student Housing East
21C. Student Housing Office
21D. Student Housing Community Center
22. Classroom Building South

PROPOSED
San Diego State University
Imperial Valley Campus - Calexico
Campus Master Plan
Master Plan Enrollment: 850 FTE
Approval Date: 1980
Revised Date: September 2003
Main Campus Acreage: 8.4

N

0 50' 100' 200'

Buildings	Campus Boundary	Parking
EXISTING BUILDING	EXISTING	EXISTING LOT
FUTURE BUILDING	FUTURE	FUTURE LOT
TEMPORARY BUILDING		EXISTING STRUCTURE
EXISTING BUILDING NOT IN USE		FUTURE STRUCTURE

SOURCE: SDSU 2024

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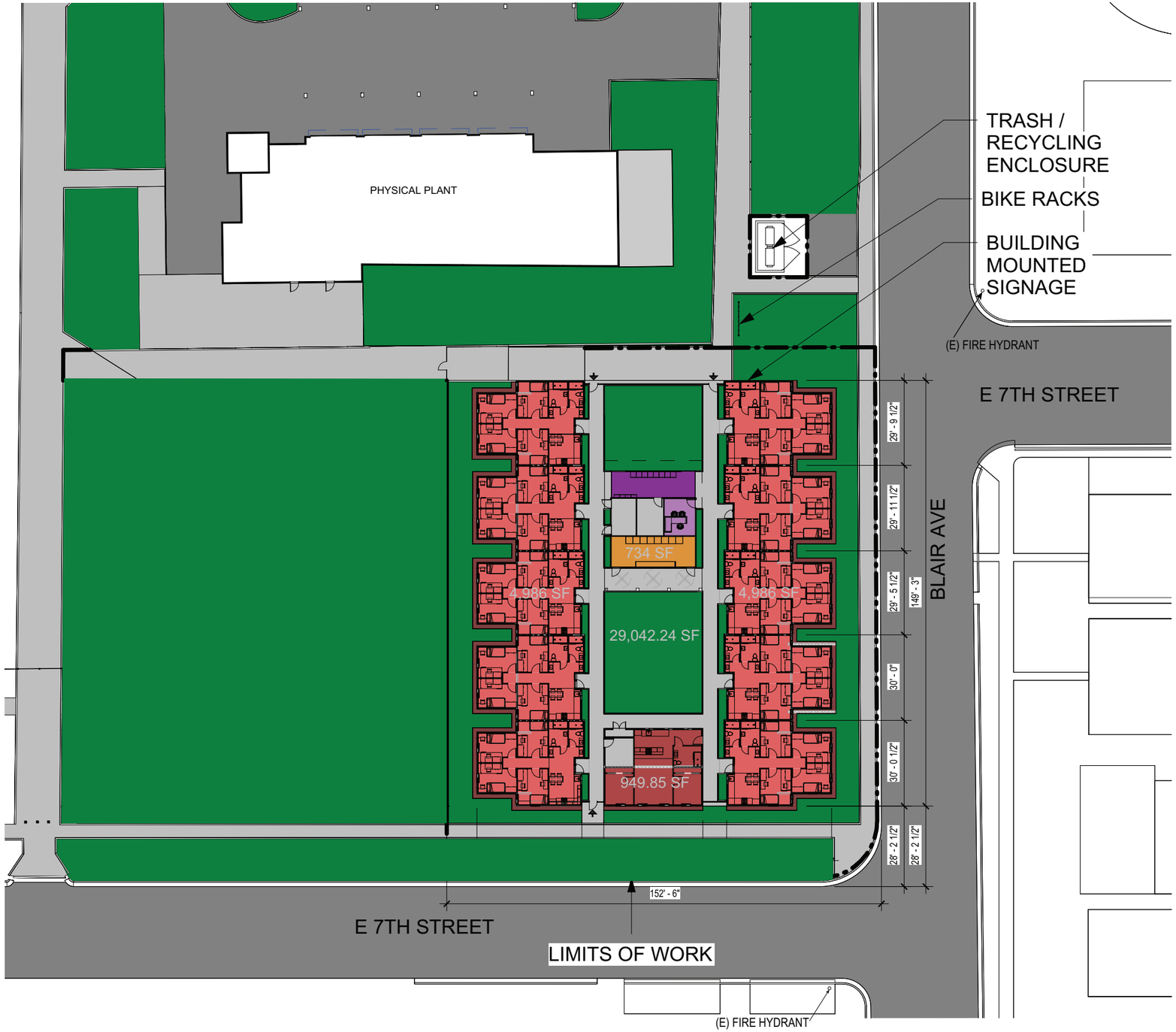
FIGURE 3B
Proposed Campus Master Plan

LEGEND

- BEDROOM
- LAUNDRY
- LIVE-IN APARTMENT
- LOBBY
- MAIL/UPS
- SERVICE



0' 5' 10' 20' 40'

N

SOURCE: SDSU 2024

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FIGURE 4
Site Plan

Attachment B

Air Quality and Greenhouse Gas Emissions
CalEEMod Output Files

SDSU Calexico Housing Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

3.3. Grading (2025) - Unmitigated

3.5. Building Construction (2025) - Unmitigated

3.7. Building Construction (2026) - Unmitigated

3.9. Architectural Coating (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SDSU Calexico Housing
Construction Start Date	5/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	4.80
Location	32.6717893759576, -115.4911915049235
County	Imperial
City	Calexico
Air District	Imperial County APCD
Air Basin	Salton Sea
TAZ	5612
EDFZ	19
Electric Utility	Imperial Irrigation District
Gas Utility	Southern California Gas
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Low Rise	10.0	Dwelling Unit	0.58	11,656	18,105	—	36.0	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.54	2.34	8.29	12.9	0.02	0.30	15.3	15.6	0.27	1.54	1.81	—	1,877	1,877	0.07	0.03	0.72	1,887
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.52	2.32	17.1	17.3	0.03	0.78	27.4	28.1	0.72	3.82	4.54	—	3,029	3,029	0.12	0.07	0.04	3,052
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.23	1.10	5.96	8.43	0.01	0.23	10.4	10.7	0.21	1.15	1.36	—	1,315	1,315	0.05	0.02	0.22	1,322
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.20	1.09	1.54	< 0.005	0.04	1.91	1.95	0.04	0.21	0.25	—	218	218	0.01	< 0.005	0.04	219

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.54	2.34	8.29	12.9	0.02	0.30	15.3	15.6	0.27	1.54	1.81	—	1,877	1,877	0.07	0.03	0.72	1,887
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.17	1.82	17.1	17.3	0.03	0.78	27.4	28.1	0.72	3.82	4.54	—	3,029	3,029	0.12	0.07	0.04	3,052
2025	2.52	2.32	15.3	16.3	0.03	0.68	27.4	28.0	0.62	3.82	4.45	—	3,021	3,021	0.12	0.07	0.03	3,044
2026	0.96	0.81	7.07	11.0	0.02	0.23	12.5	12.7	0.21	1.26	1.47	—	1,692	1,692	0.07	0.02	0.01	1,701
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.12	1.14	1.17	< 0.005	0.05	1.80	1.85	0.05	0.25	0.30	—	202	202	0.01	< 0.005	0.04	204
2025	1.23	1.10	5.96	8.43	0.01	0.23	10.4	10.7	0.21	1.15	1.36	—	1,315	1,315	0.05	0.02	0.22	1,322
2026	0.16	0.13	1.13	1.78	< 0.005	0.04	1.98	2.02	0.03	0.20	0.23	—	273	273	0.01	< 0.005	0.04	274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.03	0.02	0.21	0.21	< 0.005	0.01	0.33	0.34	0.01	0.05	0.05	—	33.5	33.5	< 0.005	< 0.005	0.01	33.8
2025	0.23	0.20	1.09	1.54	< 0.005	0.04	1.91	1.95	0.04	0.21	0.25	—	218	218	0.01	< 0.005	0.04	219
2026	0.03	0.02	0.21	0.33	< 0.005	0.01	0.36	0.37	0.01	0.04	0.04	—	45.1	45.1	< 0.005	< 0.005	0.01	45.4

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.74	0.72	0.20	2.48	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	7.79	470	477	0.82	0.03	1.15	507
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.59	0.58	0.21	1.45	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	7.79	429	437	0.82	0.03	0.11	466
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.63	0.61	0.19	1.81	< 0.005	< 0.005	121	121	< 0.005	12.1	12.1	7.79	414	421	0.81	0.03	0.50	450
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.11	0.03	0.33	< 0.005	< 0.005	22.1	22.1	< 0.005	2.21	2.21	1.29	68.5	69.8	0.13	< 0.005	0.08	74.5

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.40	0.38	0.19	1.91	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	335	335	0.02	0.02	1.07	342
Area	0.34	0.34	0.01	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.52	1.52	< 0.005	< 0.005	—	1.52
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	120	120	0.01	< 0.005	—	120
Water	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	0.74	0.72	0.20	2.48	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	7.79	470	477	0.82	0.03	1.15	507
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.29	0.21	1.45	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	296	296	0.02	0.02	0.03	302
Area	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	120	120	0.01	< 0.005	—	120
Water	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	0.59	0.58	0.21	1.45	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	7.79	429	437	0.82	0.03	0.11	466
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.28	0.18	1.39	< 0.005	< 0.005	121	121	< 0.005	12.1	12.1	—	279	279	0.02	0.02	0.41	285
Area	0.33	0.33	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.12	1.12	< 0.005	< 0.005	—	1.13
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	120	120	0.01	< 0.005	—	120
Water	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	0.63	0.61	0.19	1.81	< 0.005	< 0.005	121	121	< 0.005	12.1	12.1	7.79	414	421	0.81	0.03	0.50	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.05	0.03	0.25	< 0.005	< 0.005	22.1	22.1	< 0.005	2.21	2.21	—	46.3	46.3	< 0.005	< 0.005	0.07	47.2
Area	0.06	0.06	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	19.8	19.8	< 0.005	< 0.005	—	19.9
Water	—	—	—	—	—	—	—	—	—	—	—	0.62	2.23	2.85	0.06	< 0.005	—	4.91
Waste	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.33
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.11	0.11	0.03	0.33	< 0.005	< 0.005	22.1	22.1	< 0.005	2.21	2.21	1.29	68.5	69.8	0.13	< 0.005	0.08	74.5

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.7	16.1	0.02	0.77	—	0.77	0.71	—	0.71	—	2,588	2,588	0.10	0.02	—	2,597
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.11	1.07	< 0.005	0.05	—	0.05	0.05	—	0.05	—	172	172	0.01	< 0.005	—	173
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.5	28.5	< 0.005	< 0.005	—	28.6
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.12	1.01	0.00	0.00	19.2	19.2	0.00	1.94	1.94	—	186	186	0.01	0.01	0.02	188
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.35	0.10	< 0.005	< 0.005	5.36	5.37	< 0.005	0.54	0.55	—	255	255	< 0.005	0.04	0.01	267
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	1.26	1.26	0.00	0.13	0.13	—	13.3	13.3	< 0.005	< 0.005	0.02	13.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	16.9	16.9	< 0.005	< 0.005	0.02	17.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.23	0.23	0.00	0.02	0.02	—	2.20	2.20	< 0.005	< 0.005	< 0.005	2.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	2.81	2.81	< 0.005	< 0.005	< 0.005	2.94

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.60	14.8	15.2	0.02	0.67	—	0.67	0.62	—	0.62	—	2,589	2,589	0.11	0.02	—	2,598

Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.30	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	228	228	0.01	< 0.005	—	229
Dust From Material Movement	—	—	—	—	—	—	0.24	0.24	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	—	37.9
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.10	0.93	0.00	0.00	19.2	19.2	0.00	1.94	1.94	—	182	182	0.01	0.01	0.02	184
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.34	0.10	< 0.005	< 0.005	5.36	5.37	< 0.005	0.54	0.55	—	250	250	< 0.005	0.04	0.01	262

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	1.67	1.67	0.00	0.17	0.17	—	17.3	17.3	< 0.005	< 0.005	0.03	17.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	22.0	22.0	< 0.005	< 0.005	0.02	23.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.31	0.31	0.00	0.03	0.03	—	2.86	2.86	< 0.005	< 0.005	< 0.005	2.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.82

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.81	7.27	10.5	0.02	0.27	—	0.27	0.25	—	0.25	—	1,526	1,526	0.06	0.01	—	1,531
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.81	7.27	10.5	0.02	0.27	—	0.27	0.25	—	0.25	—	1,526	1,526	0.06	0.01	—	1,531
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.57	0.48	4.27	6.17	0.01	0.16	—	0.16	0.14	—	0.14	—	896	896	0.04	0.01	—	899
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.78	1.13	< 0.005	0.03	—	0.03	0.03	—	0.03	—	148	148	0.01	< 0.005	—	149
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.94	0.00	0.00	11.0	11.0	0.00	1.11	1.11	—	123	123	< 0.005	< 0.005	0.43	125
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	1.52	1.52	< 0.005	0.15	0.16	—	63.0	63.0	< 0.005	0.01	0.17	65.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.53	0.00	0.00	11.0	11.0	0.00	1.11	1.11	—	104	104	0.01	< 0.005	0.01	105
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	1.52	1.52	< 0.005	0.15	0.16	—	63.0	63.0	< 0.005	0.01	< 0.005	65.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.39	0.00	0.00	6.37	6.37	0.00	0.64	0.64	—	65.7	65.7	< 0.005	< 0.005	0.11	66.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.88	0.88	< 0.005	0.09	0.09	—	37.0	37.0	< 0.005	0.01	0.04	38.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	1.16	1.16	0.00	0.12	0.12	—	10.9	10.9	< 0.005	< 0.005	0.02	11.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.16	0.16	< 0.005	0.02	0.02	—	6.12	6.12	< 0.005	< 0.005	0.01	6.38
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.76	6.94	10.5	0.02	0.23	—	0.23	0.21	—	0.21	—	1,526	1,526	0.06	0.01	—	1,531
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.11	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	245	245	0.01	< 0.005	—	246
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.5	40.5	< 0.005	< 0.005	—	40.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.05	0.49	0.00	0.00	11.0	11.0	0.00	1.11	1.11	—	102	102	0.01	< 0.005	0.01	103
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	1.52	1.52	< 0.005	0.15	0.16	—	61.8	61.8	< 0.005	0.01	< 0.005	64.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	1.74	1.74	0.00	0.18	0.18	—	17.6	17.6	< 0.005	< 0.005	0.03	17.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.24	0.24	< 0.005	0.02	0.02	—	9.91	9.91	< 0.005	< 0.005	0.01	10.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.32	0.32	0.00	0.03	0.03	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.96
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.71
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	1.33	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	1.33	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.27	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.2	40.2	< 0.005	< 0.005	—	40.4
Architectural Coatings	0.40	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.66	6.66	< 0.005	< 0.005	—	6.68
Architectural Coatings	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.23	0.00	0.00	2.75	2.75	0.00	0.28	0.28	—	30.8	30.8	< 0.005	< 0.005	0.11	31.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.13	0.00	0.00	2.75	2.75	0.00	0.28	0.28	—	26.0	26.0	< 0.005	< 0.005	< 0.005	26.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.82	0.82	0.00	0.08	0.08	—	8.43	8.43	< 0.005	< 0.005	0.01	8.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.15	0.15	0.00	0.02	0.02	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.40	0.38	0.19	1.91	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	335	335	0.02	0.02	1.07	342
Total	0.40	0.38	0.19	1.91	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	335	335	0.02	0.02	1.07	342

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.30	0.29	0.21	1.45	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	296	296	0.02	0.02	0.03	302
Total	0.30	0.29	0.21	1.45	< 0.005	< 0.005	137	137	< 0.005	13.7	13.7	—	296	296	0.02	0.02	0.03	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.05	0.05	0.03	0.25	< 0.005	< 0.005	22.1	22.1	< 0.005	2.21	2.21	—	46.3	46.3	< 0.005	< 0.005	0.07	47.2
Total	0.05	0.05	0.03	0.25	< 0.005	< 0.005	22.1	22.1	< 0.005	2.21	2.21	—	46.3	46.3	< 0.005	< 0.005	0.07	47.2

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	120	120	0.01	< 0.005	—	120
Total	—	—	—	—	—	—	—	—	—	—	—	—	120	120	0.01	< 0.005	—	120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	120	120	0.01	< 0.005	—	120
Total	—	—	—	—	—	—	—	—	—	—	—	—	120	120	0.01	< 0.005	—	120

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	19.8	19.8	< 0.005	< 0.005	—	19.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	19.8	19.8	< 0.005	< 0.005	—	19.9

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.05	0.01	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.52	1.52	< 0.005	< 0.005	—	1.52
Total	0.34	0.34	0.01	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.52	1.52	< 0.005	< 0.005	—	1.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.01	0.01	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19
Total	0.06	0.06	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	13.4	17.2	0.39	0.01	—	29.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.62	2.23	2.85	0.06	< 0.005	—	4.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.62	2.23	2.85	0.06	< 0.005	—	4.91

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.03	0.00	4.03	0.40	0.00	—	14.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.33
Total	—	—	—	—	—	—	—	—	—	—	—	0.67	0.00	0.67	0.07	0.00	—	2.33

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	11/28/2024	2/14/2025	5.00	57.0	—
Building Construction	Building Construction	3/7/2025	3/23/2026	5.00	272	—

Architectural Coating	Architectural Coating	7/23/2025	12/23/2025	5.00	110	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Building Construction	Aerial Lifts	Electric	Average	3.00	8.00	46.0	0.31
Building Construction	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	14.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT

Grading	Hauling	6.00	12.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	2.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	23,603	7,868	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	2,600	33,482	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	255	457	0.03	< 0.005
2026	255	457	0.03	< 0.005
2024	0.00	457	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	79.0	87.8	67.8	28,710	331	368	284	120,278

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
23603.399999999998	7,868	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	270

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	95,571	457	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	1,961,875	452,965

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	7.48	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.4	annual days of extreme heat
Extreme Precipitation	0.30	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	70.3
AQ-PM	71.2
AQ-DPM	96.6
Drinking Water	52.7
Lead Risk Housing	72.6

Pesticides	0.00
Toxic Releases	49.1
Traffic	95.0
Effect Indicators	—
CleanUp Sites	50.3
Groundwater	72.5
Haz Waste Facilities/Generators	50.1
Impaired Water Bodies	99.5
Solid Waste	0.00
Sensitive Population	—
Asthma	69.3
Cardio-vascular	91.0
Low Birth Weights	29.7
Socioeconomic Factor Indicators	—
Education	92.5
Housing	92.9
Linguistic	99.6
Poverty	88.7
Unemployment	99.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	0.744257667
Employed	5.530604389
Median HI	0.333632747

Education	—
Bachelor's or higher	34.49249326
High school enrollment	100
Preschool enrollment	26.78044399
Transportation	—
Auto Access	4.978827153
Active commuting	64.80174516
Social	—
2-parent households	12.53689208
Voting	9.534197357
Neighborhood	—
Alcohol availability	37.35403567
Park access	81.35506224
Retail density	86.68035416
Supermarket access	72.93725138
Tree canopy	9.508533299
Housing	—
Homeownership	18.58077762
Housing habitability	25.1764404
Low-inc homeowner severe housing cost burden	64.49377647
Low-inc renter severe housing cost burden	12.38290774
Uncrowded housing	27.15257282
Health Outcomes	—
Insured adults	9.008084178
Arthritis	0.0
Asthma ER Admissions	41.2
High Blood Pressure	0.0

Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	85.8
Cognitively Disabled	22.1
Physically Disabled	3.2
Heart Attack ER Admissions	6.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	73.3
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	6.8
Elderly	27.3
English Speaking	0.3
Foreign-born	88.7
Outdoor Workers	10.7

Climate Change Adaptive Capacity	—
Impervious Surface Cover	18.3
Traffic Density	87.1
Traffic Access	23.0
Other Indices	—
Hardship	98.9
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	96.0
Healthy Places Index Score for Project Location (b)	3.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	El Centro Corridor

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Attachment C

Construction Health Risk Modeling Files

Table of Contents

AERMOD Input File	2
HARP2 Unmitigated Output Log	62
Unmitigated Cancer Risk Output file	64
UnmitigatedChronic Risk Output file	65
HARP2 Mitigated Output Log	66
Mitigated Cancer Risk Output file	68
MitigatedChronic Risk Output file	69

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** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 6/19/2024
** File: U:\Documents\AQ_GHG\HARP2\SDSU Calexico Con HRA\SDSU Calexico Con HRA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
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  MODELOPT DFAULT CONC
  AVERTIME 1 PERIOD
  URBANOPT 179057
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "SDSU Calexico Con HRA.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
```

****

**

**

SO STARTING

** Source Location **

** Source ID - Type - X Coord. - Y Coord. **

** ----------

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** PREFIX

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** Configuration = Adjacent

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** Source Parameters **

** LINE VOLUME Source ID = SLINE1

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SRCPARAM L0000191	0.0046728972	5.00	2.33	4.65
SRCPARAM L0000192	0.0046728972	5.00	2.33	4.65
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SRCPARAM L0000198	0.0046728972	5.00	2.33	4.65
SRCPARAM L0000199	0.0046728972	5.00	2.33	4.65
SRCPARAM L0000200	0.0046728972	5.00	2.33	4.65
SRCPARAM L0000201	0.0046728972	5.00	2.33	4.65
SRCPARAM L0000202	0.0046728972	5.00	2.33	4.65

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  SRCPARAM L0000203   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000204   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000205   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000206   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000207   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000208   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000209   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000210   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000211   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000212   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000213   0.0046728972    5.00    2.33    4.65
  SRCPARAM L0000214   0.0046728972    5.00    2.33    4.65
** ----------------------------------------------------------------
  URBANSRC ALL
  SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED "SDSU Calexico Con HRA.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
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**

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ME STARTING

SURFFILE C:\Users\nlorenzen\Downloads\KIPL_747185_03144\KIPL_747185_03144\KIPL_2015-2018_2021_ADJU.SFC

PROFFILE C:\Users\nlorenzen\Downloads\KIPL_747185_03144\KIPL_747185_03144\KIPL_2015-2018_2021_ADJU.PFL

SURFDATA 3144 2015

UAIRDATA 3190 2015

PROFBASE -17.7 METERS

ME FINISHED

**

****

** AERMOD Output Pathway

****

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 1 1ST

** Auto-Generated Plotfiles

PLOTFILE 1 ALL 1ST "SDSU Calexico Con HRA.AD\01H1GALL.PLT" 31

PLOTFILE PERIOD ALL "SDSU Calexico Con HRA.AD\PE00GALL.PLT" 32

SUMMFILE "SDSU Calexico Con HRA.sum"

OU FINISHED

*** Message Summary For AERMOD Model Setup ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)

A Total of 3 Warning Message(s)

A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********

*** NONE ***

******** WARNING MESSAGES ********

ME W340 530 PRBASE: Possible Error in PROFBASE Input: Value is < 0 PROFBASE

ME W186 531 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 531 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

****

*** SETUP Finishes Successfully ***

****

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

* Model Uses Regulatory DEFAULT Options

* Model Is Setup For Calculation of Average CONCentration Values.

* NO GAS DEPOSITION Data Provided.

* NO PARTICLE DEPOSITION Data Provided.

* Model Uses NO DRY DEPLETION. DDPLETE = F

* Model Uses NO WET DEPLETION. WETDPLT = F

* Stack-tip Downwash.

* Model Accounts for ELEVated Terrain Effects.

* Use Calms Processing Routine.

* Use Missing Data Processing Routine.

* No Exponential Decay.

* Model Uses URBAN Dispersion Algorithm for the SBL for 214 Source(s),

for Total of 1 Urban Area(s):

Urban Population = 179057.0 ; Urban Roughness Length = 1.000 m

* Urban Roughness Length of 1.0 Meter Used.

* ADJ_U* - Use ADJ_U* option for SBL in AERMET

* CCVR_Sub - Meteorological data includes CCVR substitutions

* TEMP_Sub - Meteorological data includes TEMP substitutions

* Model Assumes No FLAGPOLE Receptor Heights.

* The User Specified a Pollutant Type of: PM_10

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 214 Source(s); 1 Source Group(s); and 57 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 214 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 19191

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = -17.70 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: SDSU Calexico Con HRA.err

**File for Summary of Results: SDSU Calexico Con HRA.sum

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000001	0	0.46729E-02	641496.7	3615947.5	1.7	5.00	2.33	4.65	YES		NO
L0000002	0	0.46729E-02	641501.7	3615947.9	1.7	5.00	2.33	4.65	YES		NO
L0000003	0	0.46729E-02	641506.6	3615948.3	1.7	5.00	2.33	4.65	YES		NO
L0000004	0	0.46729E-02	641508.2	3615944.9	1.7	5.00	2.33	4.65	YES		NO
L0000005	0	0.46729E-02	641508.3	3615939.9	1.7	5.00	2.33	4.65	YES		NO
L0000006	0	0.46729E-02	641508.4	3615934.9	1.7	5.00	2.33	4.65	YES		NO
L0000007	0	0.46729E-02	641508.4	3615929.9	1.7	5.00	2.33	4.65	YES		NO
L0000008	0	0.46729E-02	641508.5	3615924.9	1.7	5.00	2.33	4.65	YES		NO
L0000009	0	0.46729E-02	641508.6	3615919.9	1.7	5.00	2.33	4.65	YES		NO
L0000010	0	0.46729E-02	641508.6	3615914.9	1.7	5.00	2.33	4.65	YES		NO
L0000011	0	0.46729E-02	641508.7	3615909.9	1.7	5.00	2.33	4.65	YES		NO
L0000012	0	0.46729E-02	641508.8	3615904.9	1.7	5.00	2.33	4.65	YES		NO
L0000013	0	0.46729E-02	641508.9	3615899.9	1.7	5.00	2.33	4.65	YES		NO
L0000014	0	0.46729E-02	641508.9	3615894.9	1.7	5.00	2.33	4.65	YES		NO

L0000015	0	0.46729E-02	641509.0	3615889.9	1.7	5.00	2.33	4.65	YES	NO
L0000016	0	0.46729E-02	641509.1	3615884.9	1.7	5.00	2.33	4.65	YES	NO
L0000017	0	0.46729E-02	641509.1	3615879.9	1.7	5.00	2.33	4.65	YES	NO
L0000018	0	0.46729E-02	641509.2	3615874.9	1.7	5.00	2.33	4.65	YES	NO
L0000019	0	0.46729E-02	641506.1	3615873.1	1.7	5.00	2.33	4.65	YES	NO
L0000020	0	0.46729E-02	641501.1	3615873.2	1.7	5.00	2.33	4.65	YES	NO
L0000021	0	0.46729E-02	641496.1	3615873.3	1.6	5.00	2.33	4.65	YES	NO
L0000022	0	0.46729E-02	641491.1	3615873.4	1.6	5.00	2.33	4.65	YES	NO
L0000023	0	0.46729E-02	641486.1	3615873.5	1.6	5.00	2.33	4.65	YES	NO
L0000024	0	0.46729E-02	641481.1	3615873.5	1.6	5.00	2.33	4.65	YES	NO
L0000025	0	0.46729E-02	641476.1	3615873.6	1.6	5.00	2.33	4.65	YES	NO
L0000026	0	0.46729E-02	641471.1	3615873.7	1.6	5.00	2.33	4.65	YES	NO
L0000027	0	0.46729E-02	641466.1	3615873.8	1.6	5.00	2.33	4.65	YES	NO
L0000028	0	0.46729E-02	641461.1	3615873.9	1.6	5.00	2.33	4.65	YES	NO
L0000029	0	0.46729E-02	641456.1	3615874.0	1.6	5.00	2.33	4.65	YES	NO
L0000030	0	0.46729E-02	641451.1	3615874.1	1.6	5.00	2.33	4.65	YES	NO
L0000031	0	0.46729E-02	641446.1	3615874.1	1.6	5.00	2.33	4.65	YES	NO
L0000032	0	0.46729E-02	641441.1	3615874.2	1.7	5.00	2.33	4.65	YES	NO
L0000033	0	0.46729E-02	641436.1	3615874.3	1.7	5.00	2.33	4.65	YES	NO
L0000034	0	0.46729E-02	641431.1	3615874.4	1.7	5.00	2.33	4.65	YES	NO
L0000035	0	0.46729E-02	641426.8	3615875.1	1.7	5.00	2.33	4.65	YES	NO
L0000036	0	0.46729E-02	641426.8	3615880.1	1.7	5.00	2.33	4.65	YES	NO
L0000037	0	0.46729E-02	641426.9	3615885.1	1.7	5.00	2.33	4.65	YES	NO
L0000038	0	0.46729E-02	641427.0	3615890.1	1.8	5.00	2.33	4.65	YES	NO
L0000039	0	0.46729E-02	641427.1	3615895.1	1.8	5.00	2.33	4.65	YES	NO
L0000040	0	0.46729E-02	641427.1	3615900.1	1.8	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.46729E-02	641427.2	3615905.1	1.8	5.00	2.33	4.65	YES	NO
L0000042	0	0.46729E-02	641427.3	3615910.1	1.8	5.00	2.33	4.65	YES	NO
L0000043	0	0.46729E-02	641427.4	3615915.1	1.8	5.00	2.33	4.65	YES	NO
L0000044	0	0.46729E-02	641427.4	3615920.1	1.8	5.00	2.33	4.65	YES	NO
L0000045	0	0.46729E-02	641431.1	3615921.6	1.8	5.00	2.33	4.65	YES	NO
L0000046	0	0.46729E-02	641436.1	3615921.8	1.8	5.00	2.33	4.65	YES	NO
L0000047	0	0.46729E-02	641441.1	3615922.0	1.7	5.00	2.33	4.65	YES	NO
L0000048	0	0.46729E-02	641446.1	3615922.2	1.7	5.00	2.33	4.65	YES	NO
L0000049	0	0.46729E-02	641451.1	3615922.4	1.7	5.00	2.33	4.65	YES	NO
L0000050	0	0.46729E-02	641456.1	3615922.5	1.7	5.00	2.33	4.65	YES	NO
L0000051	0	0.46729E-02	641461.1	3615922.7	1.7	5.00	2.33	4.65	YES	NO
L0000052	0	0.46729E-02	641466.1	3615922.9	1.7	5.00	2.33	4.65	YES	NO
L0000053	0	0.46729E-02	641471.1	3615923.1	1.6	5.00	2.33	4.65	YES	NO
L0000054	0	0.46729E-02	641476.1	3615923.3	1.6	5.00	2.33	4.65	YES	NO

L0000055	0	0.46729E-02	641481.1	3615923.5	1.6	5.00	2.33	4.65	YES	NO
L0000056	0	0.46729E-02	641486.1	3615923.7	1.6	5.00	2.33	4.65	YES	NO
L0000057	0	0.46729E-02	641491.1	3615923.9	1.6	5.00	2.33	4.65	YES	NO
L0000058	0	0.46729E-02	641494.5	3615925.5	1.6	5.00	2.33	4.65	YES	NO
L0000059	0	0.46729E-02	641494.2	3615930.5	1.6	5.00	2.33	4.65	YES	NO
L0000060	0	0.46729E-02	641494.0	3615935.5	1.7	5.00	2.33	4.65	YES	NO
L0000061	0	0.46729E-02	641493.7	3615940.5	1.7	5.00	2.33	4.65	YES	NO
L0000062	0	0.46729E-02	641493.8	3615945.1	1.7	5.00	2.33	4.65	YES	NO
L0000063	0	0.46729E-02	641498.8	3615945.1	1.7	5.00	2.33	4.65	YES	NO
L0000064	0	0.46729E-02	641503.8	3615945.1	1.7	5.00	2.33	4.65	YES	NO
L0000065	0	0.46729E-02	641505.3	3615941.6	1.7	5.00	2.33	4.65	YES	NO
L0000066	0	0.46729E-02	641505.2	3615936.6	1.7	5.00	2.33	4.65	YES	NO
L0000067	0	0.46729E-02	641505.2	3615931.6	1.7	5.00	2.33	4.65	YES	NO
L0000068	0	0.46729E-02	641505.2	3615926.6	1.7	5.00	2.33	4.65	YES	NO
L0000069	0	0.46729E-02	641505.2	3615921.6	1.7	5.00	2.33	4.65	YES	NO
L0000070	0	0.46729E-02	641505.1	3615916.6	1.7	5.00	2.33	4.65	YES	NO
L0000071	0	0.46729E-02	641505.1	3615911.6	1.7	5.00	2.33	4.65	YES	NO
L0000072	0	0.46729E-02	641505.1	3615906.6	1.7	5.00	2.33	4.65	YES	NO
L0000073	0	0.46729E-02	641505.1	3615901.6	1.7	5.00	2.33	4.65	YES	NO
L0000074	0	0.46729E-02	641505.0	3615896.6	1.7	5.00	2.33	4.65	YES	NO
L0000075	0	0.46729E-02	641505.0	3615891.6	1.7	5.00	2.33	4.65	YES	NO
L0000076	0	0.46729E-02	641505.0	3615886.6	1.7	5.00	2.33	4.65	YES	NO
L0000077	0	0.46729E-02	641505.0	3615881.6	1.7	5.00	2.33	4.65	YES	NO
L0000078	0	0.46729E-02	641503.1	3615878.4	1.7	5.00	2.33	4.65	YES	NO
L0000079	0	0.46729E-02	641498.1	3615878.3	1.6	5.00	2.33	4.65	YES	NO
L0000080	0	0.46729E-02	641493.1	3615878.3	1.6	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.46729E-02	641488.1	3615878.2	1.6	5.00	2.33	4.65	YES	NO
L0000082	0	0.46729E-02	641483.1	3615878.1	1.6	5.00	2.33	4.65	YES	NO
L0000083	0	0.46729E-02	641478.1	3615878.0	1.6	5.00	2.33	4.65	YES	NO
L0000084	0	0.46729E-02	641473.1	3615878.0	1.6	5.00	2.33	4.65	YES	NO
L0000085	0	0.46729E-02	641468.1	3615877.9	1.6	5.00	2.33	4.65	YES	NO
L0000086	0	0.46729E-02	641463.1	3615877.8	1.6	5.00	2.33	4.65	YES	NO
L0000087	0	0.46729E-02	641458.1	3615877.8	1.6	5.00	2.33	4.65	YES	NO
L0000088	0	0.46729E-02	641453.1	3615877.7	1.6	5.00	2.33	4.65	YES	NO
L0000089	0	0.46729E-02	641448.1	3615877.6	1.6	5.00	2.33	4.65	YES	NO
L0000090	0	0.46729E-02	641443.1	3615877.5	1.6	5.00	2.33	4.65	YES	NO
L0000091	0	0.46729E-02	641438.2	3615877.5	1.7	5.00	2.33	4.65	YES	NO
L0000092	0	0.46729E-02	641433.2	3615877.4	1.7	5.00	2.33	4.65	YES	NO
L0000093	0	0.46729E-02	641430.0	3615879.2	1.7	5.00	2.33	4.65	YES	NO
L0000094	0	0.46729E-02	641430.2	3615884.2	1.7	5.00	2.33	4.65	YES	NO

L0000095	0	0.46729E-02	641430.4	3615889.2	1.7	5.00	2.33	4.65	YES	NO
L0000096	0	0.46729E-02	641430.6	3615894.2	1.7	5.00	2.33	4.65	YES	NO
L0000097	0	0.46729E-02	641430.8	3615899.2	1.8	5.00	2.33	4.65	YES	NO
L0000098	0	0.46729E-02	641431.0	3615904.2	1.8	5.00	2.33	4.65	YES	NO
L0000099	0	0.46729E-02	641431.1	3615909.2	1.8	5.00	2.33	4.65	YES	NO
L0000100	0	0.46729E-02	641431.3	3615914.2	1.8	5.00	2.33	4.65	YES	NO
L0000101	0	0.46729E-02	641434.1	3615916.5	1.8	5.00	2.33	4.65	YES	NO
L0000102	0	0.46729E-02	641439.1	3615916.7	1.7	5.00	2.33	4.65	YES	NO
L0000103	0	0.46729E-02	641444.1	3615916.8	1.7	5.00	2.33	4.65	YES	NO
L0000104	0	0.46729E-02	641449.1	3615916.9	1.7	5.00	2.33	4.65	YES	NO
L0000105	0	0.46729E-02	641454.1	3615917.1	1.7	5.00	2.33	4.65	YES	NO
L0000106	0	0.46729E-02	641459.1	3615917.2	1.7	5.00	2.33	4.65	YES	NO
L0000107	0	0.46729E-02	641464.1	3615917.4	1.6	5.00	2.33	4.65	YES	NO
L0000108	0	0.46729E-02	641469.1	3615917.5	1.6	5.00	2.33	4.65	YES	NO
L0000109	0	0.46729E-02	641474.1	3615917.6	1.6	5.00	2.33	4.65	YES	NO
L0000110	0	0.46729E-02	641479.1	3615917.8	1.6	5.00	2.33	4.65	YES	NO
L0000111	0	0.46729E-02	641484.1	3615917.9	1.6	5.00	2.33	4.65	YES	NO
L0000112	0	0.46729E-02	641489.1	3615918.1	1.6	5.00	2.33	4.65	YES	NO
L0000113	0	0.46729E-02	641494.1	3615918.2	1.6	5.00	2.33	4.65	YES	NO
L0000114	0	0.46729E-02	641496.3	3615921.3	1.6	5.00	2.33	4.65	YES	NO
L0000115	0	0.46729E-02	641496.8	3615926.3	1.6	5.00	2.33	4.65	YES	NO
L0000116	0	0.46729E-02	641497.2	3615931.3	1.7	5.00	2.33	4.65	YES	NO
L0000117	0	0.46729E-02	641497.7	3615936.3	1.7	5.00	2.33	4.65	YES	NO
L0000118	0	0.46729E-02	641498.2	3615939.7	1.7	5.00	2.33	4.65	YES	NO
L0000119	0	0.46729E-02	641498.3	3615934.7	1.7	5.00	2.33	4.65	YES	NO
L0000120	0	0.46729E-02	641498.5	3615929.7	1.7	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.46729E-02	641498.7	3615924.7	1.6	5.00	2.33	4.65	YES	NO
L0000122	0	0.46729E-02	641498.9	3615919.7	1.6	5.00	2.33	4.65	YES	NO
L0000123	0	0.46729E-02	641499.1	3615914.7	1.6	5.00	2.33	4.65	YES	NO
L0000124	0	0.46729E-02	641499.3	3615909.7	1.6	5.00	2.33	4.65	YES	NO
L0000125	0	0.46729E-02	641499.5	3615904.7	1.6	5.00	2.33	4.65	YES	NO
L0000126	0	0.46729E-02	641499.7	3615899.7	1.6	5.00	2.33	4.65	YES	NO
L0000127	0	0.46729E-02	641499.9	3615894.7	1.6	5.00	2.33	4.65	YES	NO
L0000128	0	0.46729E-02	641500.1	3615889.7	1.6	5.00	2.33	4.65	YES	NO
L0000129	0	0.46729E-02	641500.3	3615884.7	1.6	5.00	2.33	4.65	YES	NO
L0000130	0	0.46729E-02	641495.5	3615884.3	1.6	5.00	2.33	4.65	YES	NO
L0000131	0	0.46729E-02	641490.5	3615884.1	1.6	5.00	2.33	4.65	YES	NO
L0000132	0	0.46729E-02	641485.5	3615884.0	1.6	5.00	2.33	4.65	YES	NO
L0000133	0	0.46729E-02	641480.5	3615883.8	1.6	5.00	2.33	4.65	YES	NO
L0000134	0	0.46729E-02	641475.5	3615883.6	1.6	5.00	2.33	4.65	YES	NO

L0000135	0	0.46729E-02	641470.5	3615883.4	1.6	5.00	2.33	4.65	YES	NO
L0000136	0	0.46729E-02	641465.5	3615883.2	1.6	5.00	2.33	4.65	YES	NO
L0000137	0	0.46729E-02	641460.5	3615883.0	1.6	5.00	2.33	4.65	YES	NO
L0000138	0	0.46729E-02	641455.5	3615882.8	1.6	5.00	2.33	4.65	YES	NO
L0000139	0	0.46729E-02	641450.5	3615882.6	1.6	5.00	2.33	4.65	YES	NO
L0000140	0	0.46729E-02	641445.5	3615882.4	1.6	5.00	2.33	4.65	YES	NO
L0000141	0	0.46729E-02	641440.5	3615882.2	1.7	5.00	2.33	4.65	YES	NO
L0000142	0	0.46729E-02	641436.1	3615882.6	1.7	5.00	2.33	4.65	YES	NO
L0000143	0	0.46729E-02	641435.9	3615887.6	1.7	5.00	2.33	4.65	YES	NO
L0000144	0	0.46729E-02	641435.8	3615892.6	1.7	5.00	2.33	4.65	YES	NO
L0000145	0	0.46729E-02	641435.7	3615897.5	1.7	5.00	2.33	4.65	YES	NO
L0000146	0	0.46729E-02	641435.6	3615902.5	1.7	5.00	2.33	4.65	YES	NO
L0000147	0	0.46729E-02	641435.4	3615907.5	1.7	5.00	2.33	4.65	YES	NO
L0000148	0	0.46729E-02	641437.2	3615910.8	1.7	5.00	2.33	4.65	YES	NO
L0000149	0	0.46729E-02	641442.2	3615910.9	1.7	5.00	2.33	4.65	YES	NO
L0000150	0	0.46729E-02	641447.2	3615911.1	1.7	5.00	2.33	4.65	YES	NO
L0000151	0	0.46729E-02	641452.2	3615911.3	1.7	5.00	2.33	4.65	YES	NO
L0000152	0	0.46729E-02	641457.2	3615911.4	1.6	5.00	2.33	4.65	YES	NO
L0000153	0	0.46729E-02	641462.2	3615911.6	1.6	5.00	2.33	4.65	YES	NO
L0000154	0	0.46729E-02	641467.2	3615911.7	1.6	5.00	2.33	4.65	YES	NO
L0000155	0	0.46729E-02	641472.2	3615911.9	1.6	5.00	2.33	4.65	YES	NO
L0000156	0	0.46729E-02	641477.2	3615912.1	1.6	5.00	2.33	4.65	YES	NO
L0000157	0	0.46729E-02	641482.2	3615912.2	1.6	5.00	2.33	4.65	YES	NO
L0000158	0	0.46729E-02	641487.2	3615912.4	1.6	5.00	2.33	4.65	YES	NO
L0000159	0	0.46729E-02	641491.4	3615911.7	1.6	5.00	2.33	4.65	YES	NO
L0000160	0	0.46729E-02	641491.8	3615906.7	1.6	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
L0000161	0	0.46729E-02	641492.2	3615901.7	1.6	5.00	2.33	4.65	YES	NO	
L0000162	0	0.46729E-02	641492.6	3615896.7	1.6	5.00	2.33	4.65	YES	NO	
L0000163	0	0.46729E-02	641493.0	3615891.7	1.6	5.00	2.33	4.65	YES	NO	
L0000164	0	0.46729E-02	641489.6	3615890.0	1.6	5.00	2.33	4.65	YES	NO	
L0000165	0	0.46729E-02	641484.6	3615889.6	1.6	5.00	2.33	4.65	YES	NO	
L0000166	0	0.46729E-02	641479.6	3615889.1	1.6	5.00	2.33	4.65	YES	NO	
L0000167	0	0.46729E-02	641474.6	3615888.7	1.6	5.00	2.33	4.65	YES	NO	
L0000168	0	0.46729E-02	641469.6	3615888.3	1.6	5.00	2.33	4.65	YES	NO	
L0000169	0	0.46729E-02	641464.7	3615887.9	1.6	5.00	2.33	4.65	YES	NO	
L0000170	0	0.46729E-02	641459.7	3615887.5	1.6	5.00	2.33	4.65	YES	NO	
L0000171	0	0.46729E-02	641454.7	3615887.1	1.6	5.00	2.33	4.65	YES	NO	
L0000172	0	0.46729E-02	641449.7	3615886.7	1.6	5.00	2.33	4.65	YES	NO	
L0000173	0	0.46729E-02	641444.7	3615886.2	1.7	5.00	2.33	4.65	YES	NO	
L0000174	0	0.46729E-02	641441.4	3615887.7	1.7	5.00	2.33	4.65	YES	NO	

L0000175	0	0.46729E-02	641441.1	3615892.7	1.7	5.00	2.33	4.65	YES	NO
L0000176	0	0.46729E-02	641440.8	3615897.7	1.7	5.00	2.33	4.65	YES	NO
L0000177	0	0.46729E-02	641440.6	3615902.7	1.7	5.00	2.33	4.65	YES	NO
L0000178	0	0.46729E-02	641441.3	3615906.8	1.7	5.00	2.33	4.65	YES	NO
L0000179	0	0.46729E-02	641446.3	3615906.9	1.7	5.00	2.33	4.65	YES	NO
L0000180	0	0.46729E-02	641451.3	3615907.0	1.7	5.00	2.33	4.65	YES	NO
L0000181	0	0.46729E-02	641456.3	3615907.1	1.6	5.00	2.33	4.65	YES	NO
L0000182	0	0.46729E-02	641461.3	3615907.3	1.6	5.00	2.33	4.65	YES	NO
L0000183	0	0.46729E-02	641466.3	3615907.4	1.6	5.00	2.33	4.65	YES	NO
L0000184	0	0.46729E-02	641471.3	3615907.5	1.6	5.00	2.33	4.65	YES	NO
L0000185	0	0.46729E-02	641476.3	3615907.6	1.6	5.00	2.33	4.65	YES	NO
L0000186	0	0.46729E-02	641481.3	3615907.7	1.6	5.00	2.33	4.65	YES	NO
L0000187	0	0.46729E-02	641485.6	3615907.2	1.6	5.00	2.33	4.65	YES	NO
L0000188	0	0.46729E-02	641486.1	3615902.2	1.6	5.00	2.33	4.65	YES	NO
L0000189	0	0.46729E-02	641486.5	3615897.2	1.6	5.00	2.33	4.65	YES	NO
L0000190	0	0.46729E-02	641483.6	3615894.9	1.6	5.00	2.33	4.65	YES	NO
L0000191	0	0.46729E-02	641478.6	3615894.3	1.6	5.00	2.33	4.65	YES	NO
L0000192	0	0.46729E-02	641473.7	3615893.7	1.6	5.00	2.33	4.65	YES	NO
L0000193	0	0.46729E-02	641468.7	3615893.0	1.6	5.00	2.33	4.65	YES	NO
L0000194	0	0.46729E-02	641463.7	3615892.4	1.6	5.00	2.33	4.65	YES	NO
L0000195	0	0.46729E-02	641458.8	3615891.8	1.6	5.00	2.33	4.65	YES	NO
L0000196	0	0.46729E-02	641453.8	3615891.1	1.6	5.00	2.33	4.65	YES	NO
L0000197	0	0.46729E-02	641448.9	3615890.5	1.6	5.00	2.33	4.65	YES	NO
L0000198	0	0.46729E-02	641446.6	3615893.2	1.7	5.00	2.33	4.65	YES	NO
L0000199	0	0.46729E-02	641446.2	3615898.2	1.7	5.00	2.33	4.65	YES	NO
L0000200	0	0.46729E-02	641445.8	3615903.2	1.7	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000201	0	0.46729E-02	641450.4	3615903.6	1.7	5.00	2.33	4.65	YES	NO
L0000202	0	0.46729E-02	641455.4	3615903.7	1.6	5.00	2.33	4.65	YES	NO
L0000203	0	0.46729E-02	641460.4	3615903.8	1.6	5.00	2.33	4.65	YES	NO
L0000204	0	0.46729E-02	641465.4	3615903.9	1.6	5.00	2.33	4.65	YES	NO
L0000205	0	0.46729E-02	641470.4	3615904.0	1.6	5.00	2.33	4.65	YES	NO
L0000206	0	0.46729E-02	641475.4	3615904.1	1.6	5.00	2.33	4.65	YES	NO
L0000207	0	0.46729E-02	641480.4	3615904.2	1.6	5.00	2.33	4.65	YES	NO
L0000208	0	0.46729E-02	641481.3	3615900.1	1.6	5.00	2.33	4.65	YES	NO
L0000209	0	0.46729E-02	641478.2	3615898.1	1.6	5.00	2.33	4.65	YES	NO
L0000210	0	0.46729E-02	641473.2	3615897.9	1.6	5.00	2.33	4.65	YES	NO
L0000211	0	0.46729E-02	641468.2	3615897.7	1.6	5.00	2.33	4.65	YES	NO
L0000212	0	0.46729E-02	641463.2	3615897.5	1.6	5.00	2.33	4.65	YES	NO
L0000213	0	0.46729E-02	641458.2	3615897.4	1.6	5.00	2.33	4.65	YES	NO
L0000214	0	0.46729E-02	641453.3	3615897.2	1.6	5.00	2.33	4.65	YES	NO

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,

L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,

L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 , L0000064 ,

L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 , L0000072 ,

L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 ,

L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 , L0000088 ,

L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 , L0000096 ,

L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 , L0000103 , L0000104 ,

L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 , L0000111 , L0000112 ,

L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 , L0000119 , L0000120 ,

L0000121 , L0000122 , L0000123 , L0000124 , L0000125 , L0000126 , L0000127 , L0000128 ,

L0000129 , L0000130 , L0000131 , L0000132 , L0000133 , L0000134 , L0000135 , L0000136 ,

L0000137 , L0000138 , L0000139 , L0000140 , L0000141 , L0000142 , L0000143 , L0000144 ,

L0000145 , L0000146 , L0000147 , L0000148 , L0000149 , L0000150 , L0000151 , L0000152 ,

L0000153 , L0000154 , L0000155 , L0000156 , L0000157 , L0000158 , L0000159 , L0000160 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0000161 , L0000162 , L0000163 , L0000164 , L0000165 , L0000166 , L0000167 , L0000168 ,

L0000169 , L0000170 , L0000171 , L0000172 , L0000173 , L0000174 , L0000175 , L0000176 ,

L0000177 , L0000178 , L0000179 , L0000180 , L0000181 , L0000182 , L0000183 , L0000184 ,

L0000185 , L0000186 , L0000187 , L0000188 , L0000189 , L0000190 , L0000191 , L0000192 ,

L0000193 , L0000194 , L0000195 , L0000196 , L0000197 , L0000198 , L0000199 , L0000200 ,

L0000201 , L0000202 , L0000203 , L0000204 , L0000205 , L0000206 , L0000207 , L0000208 ,

L0000209 , L0000210 , L0000211 , L0000212 , L0000213 , L0000214 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
179057.		L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,

L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,

L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 , L0000064 ,

L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 , L0000072 ,

L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 ,

L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 , L0000088 ,

L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 , L0000096 ,

L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 , L0000103 , L0000104 ,

L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 , L0000111 , L0000112 ,

L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 , L0000119 , L0000120 ,

L0000121 , L0000122 , L0000123 , L0000124 , L0000125 , L0000126 , L0000127 , L0000128 ,

L0000129 , L0000130 , L0000131 , L0000132 , L0000133 , L0000134 , L0000135 , L0000136 ,

L0000137 , L0000138 , L0000139 , L0000140 , L0000141 , L0000142 , L0000143 , L0000144 ,

L0000145 , L0000146 , L0000147 , L0000148 , L0000149 , L0000150 , L0000151 , L0000152 ,

L0000153 , L0000154 , L0000155 , L0000156 , L0000157 , L0000158 , L0000159 , L0000160 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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L0000161 , L0000162 , L0000163 , L0000164 , L0000165 , L0000166 , L0000167 , L0000168 ,

L0000169 , L0000170 , L0000171 , L0000172 , L0000173 , L0000174 , L0000175 , L0000176 ,

L0000177 , L0000178 , L0000179 , L0000180 , L0000181 , L0000182 , L0000183 , L0000184 ,

L0000185 , L0000186 , L0000187 , L0000188 , L0000189 , L0000190 , L0000191 , L0000192 ,

L0000193 , L0000194 , L0000195 , L0000196 , L0000197 , L0000198 , L0000199 , L0000200 ,

L0000201 , L0000202 , L0000203 , L0000204 , L0000205 , L0000206 , L0000207 , L0000208 ,

L0000209 , L0000210 , L0000211 , L0000212 , L0000213 , L0000214 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

(641545.0, 3616010.1,	1.7,	1.7,	0.0);	(641547.0, 3615987.8,	1.7,	1.7,	0.0);
(641545.0, 3615961.0,	1.7,	1.7,	0.0);	(641539.1, 3615940.1,	1.7,	1.7,	0.0);
(641547.0, 3615902.9,	1.8,	1.8,	0.0);	(641547.0, 3615886.0,	1.9,	1.9,	0.0);
(641548.5, 3615871.6,	1.9,	1.9,	0.0);	(641541.0, 3615852.3,	1.8,	1.8,	0.0);
(641542.5, 3615841.8,	1.8,	1.8,	0.0);	(641543.0, 3615825.0,	1.8,	1.8,	0.0);
(641544.0, 3615796.7,	1.8,	1.8,	0.0);	(641557.4, 3615810.6,	1.8,	1.8,	0.0);
(641490.4, 3615811.1,	1.8,	1.8,	0.0);	(641502.8, 3615829.9,	1.8,	1.8,	0.0);
(641483.0, 3615839.4,	1.7,	1.7,	0.0);	(641463.1, 3615835.4,	1.7,	1.7,	0.0);
(641440.8, 3615840.3,	1.7,	1.7,	0.0);	(641420.4, 3615837.4,	1.7,	1.7,	0.0);
(641430.8, 3615810.6,	1.7,	1.7,	0.0);	(641423.4, 3615824.0,	1.7,	1.7,	0.0);
(641281.9, 3615789.7,	1.9,	1.9,	0.0);	(641231.8, 3615821.5,	1.7,	1.7,	0.0);
(641230.8, 3615842.3,	1.7,	1.7,	0.0);	(641228.8, 3615864.7,	1.7,	1.7,	0.0);
(641233.8, 3615887.0,	1.6,	1.6,	0.0);	(641235.2, 3615946.1,	1.6,	1.6,	0.0);
(641232.8, 3615983.3,	1.6,	1.6,	0.0);	(641275.0, 3616053.8,	1.6,	1.6,	0.0);
(641299.3, 3616053.3,	1.7,	1.7,	0.0);	(641312.2, 3616053.3,	1.7,	1.7,	0.0);
(641334.0, 3616052.8,	1.7,	1.7,	0.0);	(641344.5, 3616055.8,	1.7,	1.7,	0.0);
(641359.3, 3616053.8,	1.6,	1.6,	0.0);	(641374.7, 3616053.3,	1.7,	1.7,	0.0);
(641410.0, 3616055.8,	1.7,	1.7,	0.0);	(641420.9, 3616054.8,	1.7,	1.7,	0.0);
(641433.8, 3616066.7,	1.7,	1.7,	0.0);	(641456.1, 3616053.8,	1.7,	1.7,	0.0);

(641469.6, 3616056.3, 1.7, 1.7, 0.0); (641588.7, 3615989.8, 1.7, 1.7, 0.0);
(641584.2, 3615937.2, 1.7, 1.7, 0.0); (641602.6, 3615935.7, 1.7, 1.7, 0.0);
(641609.5, 3615952.5, 1.7, 1.7, 0.0); (641609.0, 3615969.9, 1.7, 1.7, 0.0);
(641608.6, 3615992.3, 1.7, 1.7, 0.0); (641607.6, 3616013.1, 1.7, 1.7, 0.0);
(641582.7, 3615901.9, 1.8, 1.8, 0.0); (641605.6, 3615905.9, 1.7, 1.7, 0.0);
(641582.2, 3615888.0, 1.8, 1.8, 0.0); (641604.1, 3615839.9, 1.8, 1.8, 0.0);
(641607.6, 3615813.5, 1.7, 1.7, 0.0); (641597.6, 3615795.7, 1.7, 1.7, 0.0);
(641563.9, 3615792.7, 1.7, 1.7, 0.0); (641559.9, 3615781.3, 1.8, 1.8, 0.0);
(641478.5, 3615787.7, 1.9, 1.9, 0.0); (641433.3, 3615793.7, 1.7, 1.7, 0.0);
(641229.3, 3616057.8, 1.7, 1.7, 0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\nlorenzen\Downloads\KIPL_747185_03144\KIPL_747185_03144\KIPL_2015-2018_ Met Version: 19191

Profile file: C:\Users\nlorenzen\Downloads\KIPL_747185_03144\KIPL_747185_03144\KIPL_2015-2018_

Surface format: FREE

Profile format: FREE

Surface station no.: 3144 Upper air station no.: 3190

Name: UNKNOWN Name: UNKNOWN

Year: 2015 Year: 2015

First 24 hours of scalar data

YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS WD HT REF TA HT

- -

15 01 01 1 01 -3.7 0.077 -9.000 -9.000 -999. 52. 11.5 0.02 0.86 1.00 1.30 326. 10.0 273.1 2.0

15 01 01 1 02 -8.9 0.121 -9.000 -9.000 -999. 101. 18.2 0.03 0.86 1.00 1.96 29. 10.0 274.2 2.0

15 01 01 1 03 -10.3 0.130 -9.000 -9.000 -999. 113. 19.5 0.03 0.86 1.00 2.13 97. 10.0 273.1 2.0

15 01 01 1 04 -6.4 0.102 -9.000 -9.000 -999. 79. 15.2 0.03 0.86 1.00 1.67 144. 10.0 273.8 2.0

15 01 01 1 05 -6.0 0.099 -9.000 -9.000 -999. 75. 14.7 0.03 0.86 1.00 1.62 138. 10.0 273.8 2.0

15 01 01 1 06 -4.0 0.082 -9.000 -9.000 -999. 57. 12.8 0.04 0.86 1.00 1.23 156. 10.0 270.9 2.0

15 01 01 1 07 -5.9 0.098 -9.000 -9.000 -999. 73. 14.4 0.03 0.86 1.00 1.60 246. 10.0 270.4 2.0

15 01 01 1 08 -1.3 0.055 -9.000 -9.000 -999. 31. 11.5 0.03 0.86 0.47 0.86 258. 10.0 273.1 2.0

15 01 01 1 09 33.7 0.092 0.407 0.007 73. 67. -2.1 0.04 0.86 0.29 0.84 209. 10.0 277.0 2.0

15 01 01 1 10 77.4 0.111 0.789 0.005 232. 89. -1.6 0.04 0.86 0.23 0.97 206. 10.0 279.2 2.0

15 01 01 1 11 106.8 0.119 1.236 0.005 647. 98. -1.4 0.03 0.86 0.21 1.08 22. 10.0 282.0 2.0

15 01 01 1 12 119.7 0.123 1.510 0.005 1051. 104. -1.4 0.02 0.86 0.20 1.20 292. 10.0 283.1 2.0

15 01 01 1 13 116.2 0.135 1.542 0.005 1154. 118. -1.9 0.03 0.86 0.20 1.28 26. 10.0 284.9 2.0

15 01 01 1 14 95.7 0.168 1.475 0.005 1225. 166. -4.6 0.03 0.86 0.21 1.82 26. 10.0 284.9 2.0

15 01 01 1 15 59.5 0.144 1.274 0.005 1267. 131. -4.5 0.03 0.86 0.25 1.59 34. 10.0 284.9 2.0

15 01 01 1 16 11.0 0.130 0.728 0.005 1274. 112. -18.0 0.04 0.86 0.35 1.50 156. 10.0 284.2 2.0

15 01 01 1 17 -5.1 0.092 -9.000 -9.000 -999. 67. 13.8 0.02 0.86 0.66 1.57 290. 10.0 283.1 2.0

15 01 01 1 18 -5.2 0.093 -9.000 -9.000 -999. 68. 14.0 0.03 0.86 1.00 1.52 259. 10.0 281.4 2.0

15 01 01 1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 0.86 1.00 0.00 0. 10.0 278.8 2.0

15 01 01 1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 0.86 1.00 0.00 0. 10.0 277.5 2.0

15 01 01 1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 0.86 1.00 0.00 0. 10.0 277.0 2.0

15 01 01 1 22 -7.1 0.108 -9.000 -9.000 -999. 85. 16.2 0.03 0.86 1.00 1.76 132. 10.0 276.4 2.0

15 01 01 1 23 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 0.86 1.00 0.00 0. 10.0 275.4 2.0

15 01 01 1 24 -7.1 0.107 -9.000 -9.000 -999. 84. 16.0 0.03 0.86 1.00 1.76 230. 10.0 273.8 2.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

15 01 01 01 10.0 1 326. 1.30 273.2 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
641545.00	3616010.13	36.49264	641546.99	3615987.79	54.16644
641545.00	3615960.99	99.74693	641539.05	3615940.14	163.61866
641546.99	3615902.90	180.09422	641546.99	3615886.03	158.38860
641548.48	3615871.63	122.55271	641541.03	3615852.27	87.79669
641542.52	3615841.84	70.22948	641543.02	3615824.96	51.76561
641544.01	3615796.67	33.69862	641557.41	3615810.57	38.59805
641490.40	3615811.06	45.25364	641502.81	3615829.93	65.65680
641482.95	3615839.36	79.34214	641463.09	3615835.39	65.89664

641440.75	3615840.35	59.73538	641420.40	3615837.38	42.89482
641430.83	3615810.57	30.89466	641423.38	3615823.97	35.36594
641281.90	3615789.72	7.71283	641231.76	3615821.49	6.72295
641230.77	3615842.34	7.30542	641228.78	3615864.68	7.84966
641233.75	3615887.02	8.75982	641235.23	3615946.09	10.20660
641232.75	3615983.32	10.45230	641274.95	3616053.82	12.94952
641299.27	3616053.32	14.88694	641312.18	3616053.32	15.89886
641334.02	3616052.82	17.54198	641344.45	3616055.80	17.76514
641359.34	3616053.82	18.80205	641374.73	3616053.32	19.46118
641409.98	3616055.80	19.46673	641420.90	3616054.81	19.70089
641433.80	3616066.72	17.19807	641456.14	3616053.82	19.86800
641469.55	3616056.30	19.35185	641588.69	3615989.78	48.17911
641584.22	3615937.16	101.17000	641602.59	3615935.67	84.77039
641609.54	3615952.55	70.37876	641609.04	3615969.92	58.64524
641608.55	3615992.26	43.68861	641607.55	3616013.11	32.76926
641582.73	3615901.91	109.26444	641605.57	3615905.88	85.00138
641582.24	3615888.01	100.00745	641604.08	3615839.86	44.46092
641607.55	3615813.55	31.22639	641597.63	3615795.68	26.60452
641563.87	3615792.70	29.68025	641559.90	3615781.28	26.27105
641478.48	3615787.73	29.81437	641433.31	3615793.69	24.68127
641229.28	3616057.79	9.73785			

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
641545.00	3616010.13	540.46202	(18052906)	641546.99	3615987.79	633.99178	(18062606)
641545.00	3615960.99	809.49034	(17053106)	641539.05	3615940.14	909.85577	(15020817)
641546.99	3615902.90	964.94263	(18073019)	641546.99	3615886.03	948.55243	(21101017)
641548.48	3615871.63	1049.72750	(21101017)	641541.03	3615852.27	883.74773	(16041818)

641542.52 3615841.84 822.19788 (16041818) 641543.02 3615824.96 645.83291 (16041818)

641544.01 3615796.67 484.95281 (18011117) 641557.41 3615810.57 521.44805 (16041818)

641490.40 3615811.06 568.20203 (18011418) 641502.81 3615829.93 659.91240 (18011117)

641482.95 3615839.36 723.83203 (21090719) 641463.09 3615835.39 741.67870 (16012917)

641440.75 3615840.35 781.96813 (18121708) 641420.40 3615837.38 758.15242 (15122118)

641430.83 3615810.57 591.98326 (15021923) 641423.38 3615823.97 666.58889 (15020618)

641281.90 3615789.72 288.74533 (17013121) 641231.76 3615821.49 238.51893 (17020118)

641230.77 3615842.34 242.22956 (17020918) 641228.78 3615864.68 243.51007 (16011917)

641233.75 3615887.02 256.07298 (15020421) 641235.23 3615946.09 252.70169 (21022721)

641232.75 3615983.32 236.62113 (15011120) 641274.95 3616053.82 224.98872 (21120317)

641299.27 3616053.32 245.89023 (15011007) 641312.18 3616053.32 259.65529 (15021503)

641334.02 3616052.82 284.40186 (17021018) 641344.45 3616055.80 287.76393 (18020519)

641359.34 3616053.82 300.83080 (15011019) 641374.73 3616053.32 313.43351 (15011019)

641409.98 3616055.80 302.02896 (21122305) 641420.90 3616054.81 306.38375 (17121121)

641433.80 3616066.72 296.13740 (17121318) 641456.14 3616053.82 334.64723 (18020918)

641469.55 3616056.30 354.27662 (18020918) 641588.69 3615989.78 485.57217 (17053106)

641584.22 3615937.16 616.70003 (18042118) 641602.59 3615935.67 521.63704 (18073019)

641609.54 3615952.55 467.02866 (15020817) 641609.04 3615969.92 457.13648 (15020817)

641608.55 3615992.26 406.37913 (21011717) 641607.55 3616013.11 373.04690 (15120218)

641582.73 3615901.91 610.43984 (18073019) 641605.57 3615905.88 503.06344 (18032020)

641582.24 3615888.01 605.49439 (18020118) 641604.08 3615839.86 520.42038 (21101017)

641607.55 3615813.55 398.61762 (16021318) 641597.63 3615795.68 401.25667 (16041818)

641563.87 3615792.70 441.74124 (16012217) 641559.90 3615781.28 417.07711 (15021922)

641478.48 3615787.73 483.88362 (18020221) 641433.31 3615793.69 514.68633 (16012917)

641229.28 3616057.79 189.60040 (15011121)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	180.09422 AT (641546.99, 3615902.90, 1.79, 1.79, 0.00) DC
	2ND HIGHEST VALUE IS	163.61866 AT (641539.05, 3615940.14, 1.72, 1.72, 0.00) DC
	3RD HIGHEST VALUE IS	158.38860 AT (641546.99, 3615886.03, 1.88, 1.88, 0.00) DC
	4TH HIGHEST VALUE IS	122.55271 AT (641548.48, 3615871.63, 1.88, 1.88, 0.00) DC
	5TH HIGHEST VALUE IS	109.26444 AT (641582.73, 3615901.91, 1.76, 1.76, 0.00) DC
	6TH HIGHEST VALUE IS	101.17000 AT (641584.22, 3615937.16, 1.68, 1.68, 0.00) DC
	7TH HIGHEST VALUE IS	100.00745 AT (641582.24, 3615888.01, 1.80, 1.80, 0.00) DC
	8TH HIGHEST VALUE IS	99.74693 AT (641545.00, 3615960.99, 1.74, 1.74, 0.00) DC
	9TH HIGHEST VALUE IS	87.79669 AT (641541.03, 3615852.27, 1.84, 1.84, 0.00) DC
	10TH HIGHEST VALUE IS	85.00138 AT (641605.57, 3615905.88, 1.70, 1.70, 0.00) DC

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	1049.72750	ON 21101017: AT (641548.48, 3615871.63, 1.88, 1.88, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)

A Total of 5 Warning Message(s)

A Total of 1316 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 389 Calm Hours Identified

A Total of 927 Missing Hours Identified (2.12 Percent)

******** FATAL ERROR MESSAGES ********

*** NONE ***

******** WARNING MESSAGES ********

ME W340 530 PRBASE: Possible Error in PROFBASE Input: Value is < 0 PROFBASE

ME W186 531 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 531 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at: 21010101

MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

****

*** AERMOD Finishes Successfully ***

****

HARP2 - HRACalc (dated 22118) 6/19/2024 4:40:04 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1.69

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1.69
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitCancerRisk.csv
Cancer risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitNCChronicRisk.csv
Chronic risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitNCAcuteRisk.csv
Acute risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitNCAcuteRiskSumByRec.csv
HRA ran successfully

*HARP - HRACalc v22118 6/19/2024 4:40:04 PM - Cancer Risk - Input File: C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitHRAInput.hra

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_I	EGG_RISK
5	ALL		641547	3615903	5.83E-05	1.69YrCanc	5.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4	ALL		641539.1	3615940	5.29E-05	1.69YrCanc	5.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	ALL		641547	3615886	5.12E-05	1.69YrCanc	5.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7	ALL		641548.5	3615872	3.96E-05	1.69YrCanc	3.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	ALL		641582.7	3615902	3.53E-05	1.69YrCanc	3.53E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41	ALL		641584.2	3615937	3.27E-05	1.69YrCanc	3.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49	ALL		641582.2	3615888	3.24E-05	1.69YrCanc	3.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	ALL		641545	3615961	3.23E-05	1.69YrCanc	3.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	ALL		641541	3615852	2.84E-05	1.69YrCanc	2.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48	ALL		641605.6	3615906	2.75E-05	1.69YrCanc	2.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42	ALL		641602.6	3615936	2.74E-05	1.69YrCanc	2.74E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	ALL		641483	3615839	2.57E-05	1.69YrCanc	2.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	ALL		641609.5	3615953	2.28E-05	1.69YrCanc	2.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	ALL		641542.5	3615842	2.27E-05	1.69YrCanc	2.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	ALL		641463.1	3615835	2.13E-05	1.69YrCanc	2.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	ALL		641502.8	3615830	2.12E-05	1.69YrCanc	2.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	ALL		641440.8	3615840	1.93E-05	1.69YrCanc	1.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44	ALL		641609	3615970	1.90E-05	1.69YrCanc	1.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	ALL		641547	3615988	1.75E-05	1.69YrCanc	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	ALL		641543	3615825	1.67E-05	1.69YrCanc	1.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	ALL		641588.7	3615990	1.56E-05	1.69YrCanc	1.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	ALL		641490.4	3615811	1.46E-05	1.69YrCanc	1.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	ALL		641604.1	3615840	1.44E-05	1.69YrCanc	1.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	ALL		641608.6	3615992	1.41E-05	1.69YrCanc	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18	ALL		641420.4	3615837	1.39E-05	1.69YrCanc	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	ALL		641557.4	3615811	1.25E-05	1.69YrCanc	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	ALL		641545	3616010	1.18E-05	1.69YrCanc	1.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	ALL		641423.4	3615824	1.14E-05	1.69YrCanc	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	ALL		641544	3615797	1.09E-05	1.69YrCanc	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	ALL		641607.6	3616013	1.06E-05	1.69YrCanc	1.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51	ALL		641607.6	3615814	1.01E-05	1.69YrCanc	1.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19	ALL		641430.8	3615811	9.99E-06	1.69YrCanc	9.99E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55	ALL		641478.5	3615788	9.64E-06	1.69YrCanc	9.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	ALL		641563.9	3615793	9.60E-06	1.69YrCanc	9.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52	ALL		641597.6	3615796	8.61E-06	1.69YrCanc	8.61E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
54	ALL		641559.9	3615781	8.50E-06	1.69YrCanc	8.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56	ALL		641433.3	3615794	7.98E-06	1.69YrCanc	7.98E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	ALL		641456.1	3616054	6.43E-06	1.69YrCanc	6.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
36	ALL		641420.9	3616055	6.37E-06	1.69YrCanc	6.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
35	ALL		641410	3616056	6.30E-06	1.69YrCanc	6.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
34	ALL		641374.7	3616053	6.30E-06	1.69YrCanc	6.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39	ALL		641469.6	3616056	6.26E-06	1.69YrCanc	6.26E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	ALL		641359.3	3616054	6.08E-06	1.69YrCanc	6.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	ALL		641344.5	3616056	5.75E-06	1.69YrCanc	5.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31	ALL		641334	3616053	5.67E-06	1.69YrCanc	5.67E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37	ALL		641433.8	3616067	5.56E-06	1.69YrCanc	5.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	ALL		641312.2	3616053	5.14E-06	1.69YrCanc	5.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29	ALL		641299.3	3616053	4.82E-06	1.69YrCanc	4.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	ALL		641275	3616054	4.19E-06	1.69YrCanc	4.19E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	ALL		641232.8	3615983	3.38E-06	1.69YrCanc	3.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	ALL		641235.2	3615946	3.30E-06	1.69YrCanc	3.30E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57	ALL		641229.3	3616058	3.15E-06	1.69YrCanc	3.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	ALL		641233.8	3615887	2.83E-06	1.69YrCanc	2.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24	ALL		641228.8	3615865	2.54E-06	1.69YrCanc	2.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21	ALL		641281.9	3615790	2.50E-06	1.69YrCanc	2.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	ALL		641230.8	3615842	2.36E-06	1.69YrCanc	2.36E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	ALL		641231.8	3615821	2.17E-06	1.69YrCanc	2.17E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v22118 6/19/2024 4:40:04 PM - Chronic Risk - Input File: C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_UnMitHRAInput.hra

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE	BONE/TEET	ENDO	BLOOD	ODOR	GENERAL	MAXHI
5	ALL		641547	3615903	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-02
4	ALL		641539.1	3615940	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-02
6	ALL		641547	3615886	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02
7	ALL		641548.5	3615872	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-02
47	ALL		641582.7	3615902	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-02
41	ALL		641584.2	3615937	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-02
49	ALL		641582.2	3615888	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02
3	ALL		641545	3615961	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02
8	ALL		641541	3615852	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02
48	ALL		641605.6	3615906	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-02
42	ALL		641602.6	3615936	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-02
15	ALL		641483	3615839	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-02
43	ALL		641609.5	3615953	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02
9	ALL		641542.5	3615842	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02
16	ALL		641463.1	3615835	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02
14	ALL		641502.8	3615830	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02
17	ALL		641440.8	3615840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02
44	ALL		641609	3615970	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02
2	ALL		641547	3615988	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02
10	ALL		641543	3615825	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02
40	ALL		641588.7	3615990	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-02
13	ALL		641490.4	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02
50	ALL		641604.1	3615840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E-03
45	ALL		641608.6	3615992	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E-03
18	ALL		641420.4	3615837	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03
12	ALL		641557.4	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-03
1	ALL		641545	3616010	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-03
20	ALL		641423.4	3615824	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-03
11	ALL		641544	3615797	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-03
46	ALL		641607.6	3616013	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-03
51	ALL		641607.6	3615814	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-03
19	ALL		641430.8	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03
55	ALL		641478.5	3615788	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E-03
53	ALL		641563.9	3615793	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.59E-03
52	ALL		641597.6	3615796	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-03
54	ALL		641559.9	3615781	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-03
56	ALL		641433.3	3615794	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-03
38	ALL		641456.1	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-03
36	ALL		641420.9	3616055	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-03
35	ALL		641410	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-03
34	ALL		641374.7	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03
39	ALL		641469.6	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-03
33	ALL		641359.3	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-03
32	ALL		641344.5	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03
31	ALL		641334	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-03
37	ALL		641433.8	3616067	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-03
30	ALL		641312.2	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-03
29	ALL		641299.3	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03
28	ALL		641275	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-03
27	ALL		641232.8	3615983	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-03
26	ALL		641235.2	3615946	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03
57	ALL		641229.3	3616058	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-03
25	ALL		641233.8	3615887	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03
24	ALL		641228.8	3615865	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03
21	ALL		641281.9	3615790	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03
23	ALL		641230.8	3615842	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03
22	ALL		641231.8	3615821	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03

HARP2 - HRACalc (dated 22118) 6/25/2024 3:59:17 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1.69

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1.69
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitCancerRisk.csv
Cancer risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitNCChronicRisk.csv
Chronic risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitNCAcuteRisk.csv
Acute risk total by receptor saved to:
C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitNCAcuteRiskSumByRec.csv
HRA ran successfully

*HARP - HRACalc v22118 6/25/2024 3:59:17 PM - Cancer Risk - Input File: C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitHRAInput.hra

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_I	EGG_RISK
56	ALL		641433.3	3615794	1.135e-06	1.69YrCanc	1.135e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
54	ALL		641559.9	3615781	1.2081e-06	1.69YrCanc	1.2081e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
52	ALL		641597.6	3615796	1.2234e-06	1.69YrCanc	1.2234e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
53	ALL		641563.9	3615793	1.3648e-06	1.69YrCanc	1.3648e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
55	ALL		641478.5	3615788	1.371e-06	1.69YrCanc	1.371e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
19	ALL		641430.8	3615811	1.4207e-06	1.69YrCanc	1.4207e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
51	ALL		641607.6	3615814	1.4359e-06	1.69YrCanc	1.4359e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
46	ALL		641607.6	3616013	1.5069e-06	1.69YrCanc	1.5069e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
11	ALL		641544	3615797	1.5496e-06	1.69YrCanc	1.5496e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
20	ALL		641423.4	3615824	1.6263e-06	1.69YrCanc	1.6263e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
1	ALL		641545	3616010	1.6781e-06	1.69YrCanc	1.6781e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
12	ALL		641557.4	3615811	1.7749e-06	1.69YrCanc	1.7749e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
18	ALL		641420.4	3615837	1.9725e-06	1.69YrCanc	1.9725e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
45	ALL		641608.6	3615992	2.009e-06	1.69YrCanc	2.009e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
50	ALL		641604.1	3615840	2.0445e-06	1.69YrCanc	2.0445e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
13	ALL		641490.4	3615811	2.081e-06	1.69YrCanc	2.081e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
40	ALL		641588.7	3615990	2.2155e-06	1.69YrCanc	2.2155e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
10	ALL		641543	3615825	2.3804e-06	1.69YrCanc	2.3804e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
2	ALL		641547	3615988	2.4908e-06	1.69YrCanc	2.4908e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
44	ALL		641609	3615970	2.6968e-06	1.69YrCanc	2.6968e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
17	ALL		641440.8	3615840	2.7469e-06	1.69YrCanc	2.7469e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
14	ALL		641502.8	3615830	3.0192e-06	1.69YrCanc	3.0192e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
16	ALL		641463.1	3615835	3.0302e-06	1.69YrCanc	3.0302e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
22	ALL		641231.8	3615821	3.0915e-07	1.69YrCanc	3.0915e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
9	ALL		641542.5	3615842	3.2295e-06	1.69YrCanc	3.2295e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
43	ALL		641609.5	3615953	3.2364e-06	1.69YrCanc	3.2364e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
23	ALL		641230.8	3615842	3.3594e-07	1.69YrCanc	3.3594e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
21	ALL		641281.9	3615790	3.5467e-07	1.69YrCanc	3.5467e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
24	ALL		641228.8	3615865	3.6097e-07	1.69YrCanc	3.6097e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
15	ALL		641483	3615839	3.6485e-06	1.69YrCanc	3.6485e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
42	ALL		641602.6	3615936	3.8982e-06	1.69YrCanc	3.8982e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
48	ALL		641605.6	3615906	3.9088e-06	1.69YrCanc	3.9088e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
25	ALL		641233.8	3615887	4.0282e-07	1.69YrCanc	4.0282e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
8	ALL		641541	3615852	4.0373e-06	1.69YrCanc	4.0373e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
57	ALL		641229.3	3616058	4.4779e-07	1.69YrCanc	4.4779e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
3	ALL		641545	3615961	4.5868e-06	1.69YrCanc	4.5868e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
49	ALL		641582.2	3615888	4.5988e-06	1.69YrCanc	4.5988e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
41	ALL		641584.2	3615937	4.6523e-06	1.69YrCanc	4.6523e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
26	ALL		641235.2	3615946	4.6935e-07	1.69YrCanc	4.6935e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
27	ALL		641232.8	3615983	4.8065e-07	1.69YrCanc	4.8065e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
47	ALL		641582.7	3615902	5.0245e-06	1.69YrCanc	5.0245e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
7	ALL		641548.5	3615872	5.6356e-06	1.69YrCanc	5.6356e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
28	ALL		641275	3616054	5.9548e-07	1.69YrCanc	5.9548e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
29	ALL		641299.3	3616053	6.8457e-07	1.69YrCanc	6.8457e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
6	ALL		641547	3615886	7.2835e-06	1.69YrCanc	7.2835e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
30	ALL		641312.2	3616053	7.3111e-07	1.69YrCanc	7.3111e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
4	ALL		641539.1	3615940	7.524e-06	1.69YrCanc	7.524e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
37	ALL		641433.8	3616067	7.9085e-07	1.69YrCanc	7.9085e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
31	ALL		641334	3616053	8.0667e-07	1.69YrCanc	8.0667e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
32	ALL		641344.5	3616056	8.1693e-07	1.69YrCanc	8.1693e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
5	ALL		641547	3615903	8.2816e-06	1.69YrCanc	8.2816e-06	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
33	ALL		641359.3	3616054	8.6461e-07	1.69YrCanc	8.6461e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
39	ALL		641469.6	3616056	8.8989e-07	1.69YrCanc	8.8989e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
34	ALL		641374.7	3616053	8.9492e-07	1.69YrCanc	8.9492e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
35	ALL		641410	3616056	8.9517e-07	1.69YrCanc	8.9517e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
36	ALL		641420.9	3616055	9.0594e-07	1.69YrCanc	9.0594e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00
38	ALL		641456.1	3616054	9.1363e-07	1.69YrCanc	9.1363e-07	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00	0.0e+00

*HARP - HRACalc v22118 6/25/2024 3:59:17 PM - Chronic Risk - Input File: C:\Users\nlorenzen\Desktop\HARP2\SDSU Calexico CON HRA\SDSU CALEXICO CON HRA\hra\SDSU Calexico Con_MitHRAInput.hra

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE	BONE/TEET	ENDO	BLOOD	ODOR	GENERAL	MAXHI
5	ALL		641547	3615903	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-03
4	ALL		641539.1	3615940	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03
6	ALL		641547	3615886	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
7	ALL		641548.5	3615872	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03
47	ALL		641582.7	3615902	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-03
41	ALL		641584.2	3615937	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-03
49	ALL		641582.2	3615888	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-03
3	ALL		641545	3615961	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-03
8	ALL		641541	3615852	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03
48	ALL		641605.6	3615906	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03
42	ALL		641602.6	3615936	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03
15	ALL		641483	3615839	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03
43	ALL		641609.5	3615953	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03
9	ALL		641542.5	3615842	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03
16	ALL		641463.1	3615835	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-03
14	ALL		641502.8	3615830	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-03
17	ALL		641440.8	3615840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-03
44	ALL		641609	3615970	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-03
2	ALL		641547	3615988	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03
10	ALL		641543	3615825	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03
40	ALL		641588.7	3615990	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03
13	ALL		641490.4	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03
50	ALL		641604.1	3615840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03
45	ALL		641608.6	3615992	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03
18	ALL		641420.4	3615837	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03
12	ALL		641557.4	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03
1	ALL		641545	3616010	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03
20	ALL		641423.4	3615824	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03
11	ALL		641544	3615797	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-03
46	ALL		641607.6	3616013	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-03
51	ALL		641607.6	3615814	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.86E-04
19	ALL		641430.8	3615811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E-04
55	ALL		641478.5	3615788	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-04
53	ALL		641563.9	3615793	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-04
52	ALL		641597.6	3615796	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-04
54	ALL		641559.9	3615781	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.30E-04
56	ALL		641433.3	3615794	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-04
38	ALL		641456.1	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04
36	ALL		641420.9	3616055	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04
35	ALL		641410	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-04
34	ALL		641374.7	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-04
39	ALL		641469.6	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-04
33	ALL		641359.3	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04
32	ALL		641344.5	3616056	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-04
31	ALL		641334	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-04
37	ALL		641433.8	3616067	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-04
30	ALL		641312.2	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E-04
29	ALL		641299.3	3616053	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-04
28	ALL		641275	3616054	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-04
27	ALL		641232.8	3615983	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04
26	ALL		641235.2	3615946	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-04
57	ALL		641229.3	3616058	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04
25	ALL		641233.8	3615887	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-04
24	ALL		641228.8	3615865	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-04
21	ALL		641281.9	3615790	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-04
23	ALL		641230.8	3615842	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-04
22	ALL		641231.8	3615821	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-04