HOME DEPOT PETALUMA AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Petaluma, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed Home Depot construction located along North McDowell Boulevard in Petaluma, California. The air quality impacts and GHG emissions from this project would be associated with construction of the new buildings, trips generated by the operation of the project, and operation of an emergency generator. Air pollutant and GHG emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (including construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1] BAAQMD recommends using a 1,000-foot screening radius around the project site for purposes of identifying community health risk from existing sources of TACs.

Project Description

The approximately 8.6-acre project site is currently occupied by a vacant K-Mart building and associated parking lot. The project proposes to demolish the existing building to construct a 107,891 square-foot Home Depot building along with a 28,216 square-foot Garden Center. The parking area will also be reconstructed to accommodate the new use for 454 parking spaces. Construction is assumed in this assessment to begin in August 2022 and be completed by December 2023.

Setting

The project is located in Sonoma County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are in the multi-family residences to the northwest. Additional sensitive receptors can be found at further distances to the southwest and northeast of the project site, and at the Tiny Tots Preschool north of the project site. This project would not introduce new sensitive receptors (i.e., residents) to the area.

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[4] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[5] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement

[5] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.

and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within a CARE area.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[6] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

City of Petaluma General Plan 2025

The City of Petaluma General Plan 2025 includes policies and programs to reduce exposure of the City's sensitive population to exposure of air pollution and TACs. The following policies and programs are applicable to the proposed project:

4-P-11 To reduce combustion emissions during construction and demolition phases, the contractor of future individual projects should include in construction contracts the following requirements shown to be equally effective:

- Maintain construction equipment engines in good condition and in proper tune per manufacturer's specification for the duration of construction;
- Minimize idling time of construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment;
- Use alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleased gasoline);
- Use add-on control devices such as diesel oxidation catalysts or particulate filters;
- Use diesel equipment that meets the ARB's 2000 or newer certification standard for off-road heavy-duty diesel engines.

4-P-15 Improve air quality by reducing emissions from stationary point sources of air pollution (e.g. equipment at commercial and industrial facilities) and stationary area sources (e.g. wood-burning fireplaces & gas powered lawn mowers) which cumulatively emit large quantities of emissions.

[6] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

A. Continue to work with the Bay Area Air Quality Management District to achieve emissions reductions for non-attainment pollutants; including carbon monoxide, ozone, and PM10, by implementation of air pollution control measures as required by State and federal statutes. The BAAQMD's CEQA Guidelines should be used as the foundation for the City's review of air quality impacts under CEQA.

B. Continue to use Petaluma's development review process and the CEQA regulations to evaluate and mitigate the local and cumulative effects of new development on air quality.

C. Continue to require development projects to abide by the standard construction dust abatement measures included in BAAQMD's CEQA Guidelines. These measures would reduce exhaust and particulate emissions from construction and grading activities.

D. Reduce emissions from residential and commercial uses by requiring the following:

- Use of high efficiency heating and other appliances, such as cooking equipment, refrigerators, and furnaces, and low NOx water heaters in new and existing residential units;
- Compliance with or exceed requirements of CCR Title 24 for new residential and commercial buildings;
- Incorporation of passive solar building design and landscaping conducive to passive solar energy use for both residential and commercial uses, i.e., building orientation in a south to southeast direction, encourage planting of deciduous trees on west sides of structures, landscaping with drought resistant species, and use of groundcovers rather than pavement to reduce heat reflection;
- Encourage the use of battery-powered, electric, or other similar equipment that does not impact local air quality for nonresidential maintenance activities;
- Provide natural gas hookups to fireplaces or require residential use of EPA-certified wood stoves, pellet stoves, or fireplace inserts. Current building code standards generally ban the installation of open-hearth, wood burning fireplaces and wood stoves in new construction. It does, however, allow for the use of low-polluting wood stoves and inserts in fireplaces approved by the federal Environmental Protection Agency, as well as fireplaces fueled by natural gas.

4-P-16 To reduce combustion emissions during construction and demolition phases, the contractor of future individual projects shall encourage the inclusion in construction contracts of the following requirements or measures shown to be equally effective:

- Maintain construction equipment engines in good condition and in proper tune per manufacturer's specification for the duration of construction;
- Minimize idling time of construction related equipment, including heavy-duty equipment, motor vehicles, and portable equipment;
- Use alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline);
- Use add-on control devices such as diesel oxidation catalysts or particulate filters;

- Use diesel equipment that meets the ARB's 2000 or newer certification standard for off-road heavy-duty diesel engines;
- Phase construction of the project;
- Limit the hours of operation of heavy duty equipment.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1. Community risks are considered significant if they exceed these levels.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	None	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual $PM_{2.5}$	0.3 µg/m^3	0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) *		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold.			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: 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 Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and Federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[7] The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Modeling

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Home Improvement Superstore	136	1,000 sqft	136,107	8.63
Parking Lot	454	Parking Space	239,815	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario,

[7] See CARB's EMFAC2021 Emissions Inventory at https://arb.ca.gov/emfac/emissions-inventory.

including equipment list and schedule, were provided by the applicant. The applicant also provided other information such as hauling quantities, asphalt trips, and concrete trips.

The CalEEMod construction information included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was set to the CalEEMod default for each phase. The construction schedule assumed that the earliest possible start date would be August 2022 and would be built out over a period of approximately 17 months, or 358 construction workdays. The earliest year of full operation was assumed to be 2024.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. Demolition was modeled to remove building materials for a 90,453-sf building along with 5,000 tons of material. The modeling assumed 1,000 cy of miscellaneous hauling of material for import and export. There would be 12 cement truck deliveries and import of 8,873 cy of asphalt. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes by assuming each truck could carry 8 tons per load. The number of cement deliveries were provided for the project and converted to total one-way trips, assuming two trips per delivery. Asphalt trucks were assumed to carry 10 cy per delivered load, or 890 truck loads.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. Therefore, the construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling (soil import/export). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Sonoma County for 2022 - 2023 were used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0	CalEEMod default distance with 5-min truck idle time.
Demolition	450	-	411	90,453-sf building demolition. CalEEMod default worker trips.
Site Preparation	540	-	-	CalEEMod default worker trips.
Grading	450	-	250	1,000-cy soil import. 1,000-cy soil export. CalEEMod default worker trips.
Trenching	100	-	-	CalEEMod default worker trips.
Building Construction	33,120	14,260	24	12 cement round trips. CalEEMod default worker and vendor trips.
Architectural Coating	522	-	-	CalEEMod default worker trips
Paving	360	-	2,130	8,873-cy asphalt round trips. CalEEMod default worker trips.

Notes: [1] Based on 2022 - 2023 EMFAC2021 light-duty vehicle fleet mix for Sonoma County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Cement and asphalt trips estimated based on data provided by the applicant.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active construction workdays that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2022	0.07	0.58	0.03	0.02
2023	0.86	0.78	0.04	0.03
Average Daily Construction Emissions Per Year (pounds/day)				
2022 (99 construction workdays)	1.32	11.78	0.58	0.45
2023 (259 construction workdays)	6.66	6.01	0.35	0.24
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

Mitigation Measure AQ-1: Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Recommended Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future employees and customers, and operation of the emergency generator. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2024 if construction begins in 2022. Emissions associated with build-out later than 2024 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. A traffic study was not provided for this assessment. Therefore, the project's trip generation rate was assumed to be the CalEEMod default trip rate and no alterations were made. The default trip types and lengths specified by CalEEMod were also used.

EMFAC2021 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021, which were adjusted with the CARB EMFAC off-model adjustment factors. On road emission rates from 2022 Sonoma County

were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.[8]

Energy

The City of Petaluma has banned natural gas from new construction. As a result, the energy intensity factor for natural gas in CalEEMod was added into the project's Title 24 electricity energy intensity. GHG emissions modeling includes those indirect emissions from electricity consumption. The project applicant estimates total electricity usage at 1,000,000 kw per year. The model has a default rate of 203.98 pounds of CO_2 per megawatt of electricity produced, which is based on Pacific Gas and Electric's (PG&E) 2019 emissions rate. There would be no natural gas usage as the City prohibits natural gas usage from new developments.

Project Generator

The project would include an emergency generator to provide 300-kilowatts (kW). This generator was assumed to be diesel powered. It is assumed the generator would be powered by a 400 horsepower (hp) engine. This generator would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Project Deliveries

The project would include weekly deliveries to maintain inventory in the proposed buildings. Based on information provided by the applicant, it is assumed that there would be about 20 deliveries per week, totaling 40 round trips, or 6 trips per day. The CalEEMod modeling accounts for a mix of heavy and medium heavy-duty trucks.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions since the project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The existing site is occupied by a Kmart building and associated parking lot. However, a CalEEMod model run was not developed to compute emissions from use of the existing land uses

[8] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

since the Kmart building is empty and not in use. It should be noted that the building is present and utilizes some electricity and could be reoccupied without any City approval or CEQA analysis.

Existing Home Depot Traffic

According to Home Depot, there are purchases made from Petaluma customers at other Home Depot stores in the area, especially the store in Rohnert Park. Nearby stores include those in Rohnert Park, Santa Rosa, San Rafael and Napa. Home Depot provided an estimate of daily trips to these stores. CalEEMod, using EMFAC2021 emission rates were used to estimate the emissions associated with this travel. This assessment assumed passby and diverted trips assumed in CalEEMod for this type of landuse would apply to these trips.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod. The daily emissions were calculated assuming 365 days of operation. Table 5 shows average daily emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds. Table 5 also shows how emissions are affected when current traffic from Petaluma customers at other Home Depot stores are included in the modeling.

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
Proposed Home Depot Project				
2024 Project Operational Emissions (*tons/year*)	4.63	2.07	1.90	0.49
2024 Current Petaluma Home Depot Traffic (tons/year)	(0.37)	(0.25)	(0.28)	(0.07)
Total (tons/year)	4.26	1.82	1.62	0.42
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Thresholds?	No	No	No	No
Total (lbs./day)	*25.37*	*11.36*	*10.40*	*2.71*
BAAQMD Thresholds (lbs./day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of an emergency generator powered by a diesel engine. Traffic generated by the project would consist of mostly light-duty gasoline-powered vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk which includes the project contribution, as well as the risk on the new sensitive receptors introduced by the project.

Community Risk Methodology for Construction and Operation

Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[9] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the calculation of TAC and $PM_{2.5}$ emissions, dispersion modeling of these emissions, and computations of cancer risk and non-cancer health effects.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the existing residences to the northwest, south, and northeast of the site, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Community Health Risk from the Project

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[10] This assessment included dispersion modeling to

[9] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.
[10] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

predict the offsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model and EMFAC2021 emissions provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.05 tons (95 pounds). The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.07 tons (138 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[11] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[12] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site.

[11] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[12] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology.* April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

Project Operation

The two identified TAC and annual $PM_{2.5}$ sources associated with the project would be truck deliveries (assumed to be made by diesel trucks) and infrequent operation of a standby generator (also assumed to be powered by diesel fuel). Traffic from the project is would be made up of mostly gasoline-powered vehicles that have emissions spread out over a large area and do not have local effects in terms of community risk (localized cancer risk and annual PM2.5 concentrations).

Project Generator

As discussed above in the Operational Period Emissions section, the project would include an emergency generator to provide 300-kilowatts (kW). This generator was assumed to be diesel powered. It is assumed the generator would be powered by a 400 horsepower (hp) engine. This generator would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were estimated using CalEEMod, then modeled using AERMOD to measure the long-term impacts at the project MEI.

Project Deliveries

As discussed above in the Operational Period Emissions section, the project would include weekly deliveries to maintain inventory in the proposed buildings. Based on information provided by the applicant, it is assumed that there would be about 20 deliveries per week, totaling 40 round trips, or 6 trips per day. Emissions from these deliveries were calculated using EMFAC2021 with an on-site travel distance of a half mile. All delivery trips were assumed to be medium heavy-duty truck trips. These emissions were then input into AERMOD in the same manner (i.e., area sources) as discussed in the Community Health Risk from Project Construction section of this analysis to determine the long-term impacts at the project MEI.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data prepared by Lakes Environmental for modeling in the City of Petaluma was used with the AERMOD model. Construction emissions were modeled as occurring Monday through Friday between 7:00 a.m. to 5:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2022-2023 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters), 15 feet (4.5 meters), and 25 feet (7.6 meters) were used to represent the breathing height on the first, second, and third floor of nearby single and multi-family

residences.[13] A receptor height of 3 feet (1 meter) was used to represent the breathing height of children at the nearby Tiny Tots Preschool.

Summary of Construction Community Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the Office of Environmental Health Hazard Assessment (OEHHA) guidance for age sensitivity factors and exposure parameters as recommended by BAAQMD (see *Attachment 1)*. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. The child (ages 2 through 16 years old) cancer risk parameters were used to calculate the increased cancer risk for the preschool students.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation refence exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction MEI was located on the first floor (5 feet above ground) of a multi-family residential complex northwest of the project site. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the construction MEI. Note that the cancer risk assessment for this project assumes the presence of infants and children. However, this residential complex appears to be occupied by adults only. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with construction activities at the nearby schools. The maximum increased cancer risks were adjusted using child exposure parameters. The uncontrolled cancer risk, $PM_{2.5}$ concentration, and HI at the nearby schools do not exceed their respective BAAQMD single-source significance thresholds, as shown in Table 5.

[13] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

Table 6. Project Health Risk Impacts at the Off-site MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impact				
Project Construction	Unmitigated	3.22 (infant)	0.04	<0.01
Project Generator (300kW, 400hp diesel-fired emergency generator, 50 hours/year operation)		0.17	<0.01	<0.01
Project Deliveries (MHDT, 6 trips per day)		0.02	<0.01	<0.01
Total Project (Construction + Operation)	Unmitigated	3.41 (infant)	<0.06	<0.03
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
Most Affected Nearby School – Tiny Tots Preschool				
Project Construction	Unmitigated	0.36 (child)	<0.01	<0.01
Project Generator (300kW, 400hp diesel-fired emergency generator, 50 hours/year operation)		0.01	<0.01	<0.01
Project Deliveries (MHDT, 6 trips per day)		<0.01	<0.01	<0.01
Total Project (Construction + Operation)	Unmitigated	<0.38	<0.03	<0.03
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

Figure 1. Locations of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impact

Cumulative Community Risks of all TAC Sources at the Offsite Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e., influence area). These sources include rail lines, highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and based on provided traffic information indicated that two roadways, State Route 1, within the influence area would have traffic exceeding 10,000 vehicles per day. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified five stationary source with the potential to affect the project site and MEI. Figure 2 shows the project area included within the influence area and the location of the MEI. Details of the modeling and community risk calculations are included in *Attachment 5*.

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources

Highways – U.S. Highway 101

The project MEI is located near Highway 101. A refined analysis of the impacts of TACs and $PM_{2.5}$ to the MEI receptor is necessary to evaluate potential cancer risks and $PM_{2.5}$ concentrations from Highway 101. A review of the traffic information reported by Caltrans indicates that Highway 101 traffic includes 103,000 vehicles per day (based on an annual average)[14] that are about 5.7 percent trucks, of which 3.7 percent are considered diesel heavy duty trucks and 2.0 percent are medium duty trucks.[15]

Local Roadways – North McDowell Boulevard

A refined analysis of potential health impacts from vehicle traffic on North McDowell Boulevard was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on Highway 101 and N McDowell Blvd using the Caltrans version of the CARB EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (Sonoma County), type of road (freeway and major/collector), traffic mix assigned by CT-EMFAC2017 for the county, adjusted for the local truck mix on Highway 101 and truck percentage for non-state highways in Sonoma County (4.32 percent)[16] for N McDowell Blvd, year of analysis (2022 – construction year), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2022 (construction year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CT-EMFAC2017. Year 2022 emissions were

[14] Caltrans. 2021. *2019 Traffic Volumes California State Highways.*
[15] Caltrans. 2021. *2020 Annual Average Daily Truck Traffic on the California State Highway System.*
[16] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

Average daily traffic (ADT) volumes and truck percentages were based on Caltrans data for Highway 101. Traffic volumes were assumed to increase 1 percent per year for a total of 106,090 vehicles. Hourly traffic distributions specific to these segments of Highway 101 were obtained from Caltrans Performance Measurement System (PeMS). PeMS data is collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.[17] The fraction of traffic volume each hour was calculated and applied to the 2022 average daily traffic volumes estimate to estimate hourly traffic emission rates for Highway 101.

Based on traffic data from the Caltrans PeMS, traffic speeds during the daytime and nighttime periods were identified. For northbound traffic on Highway 101, the following speeds were assumed for all vehicles:

- 65 mph – From 9:00 p.m. until 7:00 a.m.
- 60 mph – From 7:00 a.m. until 11:00 a.m., and from 8:00 p.m. until 9:00 p.m.
- 40 mph – From 11:00 a.m. until 3:00 p.m., and from 7:00 p.m. until 8:00 p.m.
- 35 mph – From 3:00 p.m. until 7:00 p.m.

For southbound traffic on Highway 101, the following speeds were assumed for all vehicles:

- 65 mph – From 8:00 p.m. until 6:00 a.m.
- 60 mph – From 6:00 a.m. until 8:00 p.m.

The ADT for N McDowell Blvd was provided by the applicant's Traffic Consultant. The estimated ADT on N McDowell Blvd was 25,977 vehicles based on a 1% per year increase from an assumed 2019 ADT of 25,220. Average hourly traffic distributions for Sonoma County roadways were developed using the EMFAC model,[18] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. An average travel speed of 30 mph on N McDowell Blvd was used for all hours of the day based on posted speed limit signs on the roadway.

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for future traffic on Highway 101 and N McDowell Blvd, and using these emissions with an air quality dispersion model to calculate TAC and $PM_{2.5}$ concentrations at the project MEI receptor locations. Maximum increased lifetime cancer risks and annual $PM_{2.5}$ concentrations for the receptors were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters described in *Attachment 1*.

[17] https://dot.ca.gov/programs/traffic-operations/mpr/pems-source

[18] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis.[19] TAC and $PM_{2.5}$ emissions from traffic on Highway 101 and N McDowell Blvd within about 1,000 feet of the project site were evaluated with the model. Emissions from vehicle traffic were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent northbound and southbound travel lanes on Highway 101 and N McDowell Blvd. The same meteorological data and off-site sensitive receptors used in the previous construction dispersion modeling were used in the highway and roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations and heights. Annual TAC and $PM_{2.5}$ concentrations for 2022 from traffic on Highway 101 and N McDowell Blvd were calculated using the model. Concentrations were calculated at the project MEI with receptor heights of 5 feet (1.5 meters) to represent the breathing heights on the first floor of the nearby residence.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,[20] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Five sources were identified using this tool, a gas dispensing facility, three generators, and a location with multiple generators.

The screening level risks and hazards provided by BAAQMD for the stationary source was adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Gasoline Dispending Facilities*. Community risk impacts from the stationary source upon the MEI are reported in Table 7.

Summary of Cumulative Health Risk Impact at Construction MEI

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e., the MEI). The project would not have an exceedance with respect to community risk caused by project construction activities since the maximum unmitigated cancer risk, annual $PM_{2.5}$ concentration, and HI do not exceed the BAAQMD single or cumulative-source threshold.

[19] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012
[20] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

Table 7. Impacts from Combined Sources at Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction & Operation	Unmitigated	3.41 (infant)	<0.06	<0.03
Highway 101, ADT 106,090		8.57	0.17	-
N McDowell Blvd, ADT 25,977		0.71	0.02	-
SRM Alliance Hospital Services (Facility ID #11308, Generators), MEI at 1000+ feet		4.91	0.01	<0.01
City of Petaluma Dept of Water Resources (Facility ID #13876, Generators), MEI at 950 feet		0.01	-	-
Raley's (Facility ID #19349, Generators), MEI at 1000+ feet		<0.01	-	-
Friedman's Home Improvement (Facility ID #22312, Generators), MEI at 1000+ feet		0.05	-	-
City of Petaluma Water Dept (Facility ID #109964, Gas Dispensing Facility), MEI at 1000+ feet		<0.01	-	-
Combined Sources	Unmitigated	<17.68	<0.26	<0.04
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.[21] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even

[21] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons (MT) CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with

traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[22] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic

[22] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[23]

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[24] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[25] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[26] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

City of Petaluma General Plan 2025

The City of Petaluma General Plan 2025 includes policies and programs to reduce exposure of the City's sensitive population to exposure of air pollution, TACs, and GHG emissions. The following policies and programs are applicable to the proposed project:

4-P-15 Improve air quality by reducing emissions from stationary point sources of air pollution (e.g. equipment at commercial and industrial facilities) and stationary area sources (e.g. wood-burning fireplaces & gas powered lawn mowers) which cumulatively emit large quantities of emissions.

D. Continue to work with the Bay Area Air Quality Management District to achieve emissions reductions for non-attainment pollutants; including carbon monoxide, ozone, and PM10, by implementation of air pollution control measures as required by State and federal statutes. The BAAQMD's CEQA Guidelines should be used as the foundation for the City's review of air quality impacts under CEQA.

E. Continue to use Petaluma's development review process and the CEQA regulations to evaluate and mitigate the local and cumulative effects of new development on air quality.

[23] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[24] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018*. April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf
[25] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
[26] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.

F. Continue to require development projects to abide by the standard construction dust abatement measures included in BAAQMD's CEQA Guidelines. These measures would reduce exhaust and particulate emissions from construction and grading activities.

D. Reduce emissions from residential and commercial uses by requiring the following:
- Use of high efficiency heating and other appliances, such as cooking equipment, refrigerators, and furnaces, and low NOx water heaters in new and existing residential units;
- Compliance with or exceed requirements of CCR Title 24 for new residential and commercial buildings;
- Incorporation of passive solar building design and landscaping conducive to passive solar energy use for both residential and commercial uses, i.e., building orientation in a south to southeast direction, encourage planting of deciduous trees on west sides of structures, landscaping with drought resistant species, and use of groundcovers rather than pavement to reduce heat reflection;
- Encourage the use of battery-powered, electric, or other similar equipment that does not impact local air quality for nonresidential maintenance activities;
- Provide natural gas hookups to fireplaces or require residential use of EPA-certified wood stoves, pellet stoves, or fireplace inserts. Current building code standards generally ban the installation of open-hearth, wood burning fireplaces and wood stoves in new construction. It does, however, allow for the use of low-polluting wood stoves and inserts in fireplaces approved by the federal Environmental Protection Agency, as well as fireplaces fueled by natural gas.

4-P-16 To reduce combustion emissions during construction and demolition phases, the contractor of future individual projects shall encourage the inclusion in construction contracts of the following requirements or measures shown to be equally effective:

- Maintain construction equipment engines in good condition and in proper tune per manufacturer's specification for the duration of construction;
- Minimize idling time of construction related equipment, including heavy-duty equipment, motor vehicles, and portable equipment;
- Use alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline);
- Use add-on control devices such as diesel oxidation catalysts or particulate filters;
- Use diesel equipment that meets the ARB's 2000 or newer certification standard for off-road heavy-duty diesel engines;
- Phase construction of the project;
- Limit the hours of operation of heavy-duty equipment.

4-P-24 Comply with AB 32 and its governing regulations to the full extent of the City's jurisdictional authority.

4-P-25 To the full extent of the City's jurisdictional authority, implement any additional adopted State legislative or regulatory standards, policies and practices designed to reduce greenhouse gas emissions, as those measures are developed.

4-P-26 Implement all measures identified in the municipal Climate Action Plan to meet the municipal target set in Resolution 2005-118 (20% below 2000 levels by 2010).

4-P-30 Continue to monitor new technology and innovative sustainable design practices for applicability to ensure future development minimizes or eliminates the use of fossil fuel and GHG-emitting energy consumption.

City of Petaluma Greenhouse Gas Emissions Reduction Action Plan

The City of Petaluma's Greenhouse Gas Emissions Reduction Action Plan addresses emissions from municipal government activities and sources per Resolution 2002-117. The purpose of the plan is to identify and prioritize programs, projects, and procedural policies that will help the City government achieve the municipal GHG emission goals of Resolution 2005-118 by more than 20 percent below 2000 levels by 2015. The plan does not apply to land development projects.

The Sonoma County Regional Climate Action Plan, developed in 2016, includes 2020 GHG emission reduction measures for Petaluma.[27] This plan is an advisory document that the City uses to assist in achieving reduction of GHG emissions. Development projects within the City of Petaluma are encouraged to comply with the intent of the Climate Action Plan and realize GHG reductions through voluntary application of reduction measures. The reduction measures are categorized by goals for State and Regional Measures and then by Local Measures. Under a Business as Usual scenario, emissions in Petaluma would be 542,970 metric tons (MT) in 2020. State measures (e.g., vehicle reduction, cap and trade, renewable portfolios) would reduce these emissions by 119,660 MT. Regional measures are anticipated to reduce emissions by another 28,200 MT and Local Measures would reduce emissions by 18,490 MT. Under this plan, Petaluma's GHG emissions would be reduced to 376,620 MT in 2020. These emissions would be 31 percent below business as usual projection and below estimated 1990 emission of 387,020 MT.

Petaluma Climate Action Framework

Adopted on August 5, 2019, the City of Petaluma's Climate Action Framework outlines the principles that guide the City's ongoing response to and discussion about the climate crisis. Based on four sections, the framework will guide the City as it works to avoid catastrophic climate change and adapt to its expected impacts. The Framework is the foundation for engagement and further input, but none of the actions proposed commit the City to a specific action nor does anything in the Framework amend any existing City legislation or regulation.

The following goals and action items from the City of Petaluma's Climate Action Framework are applicable to this project:

[27] Sonoma County Regional Climate Protection Authority. 2016. *Climate Action 2020 and Beyond*. July.

Mitigation and Sequestration Goals

- Develop a Climate Action Plan outlining the actions the City will take to achieve its climate goals.
- Eliminate emissions from the building sector through zero-emissions new construction (emissions embedded in materials and those emitted during construction and operation), building retrofits, appliance replacements, and use of renewable generated clean electricity.
- Reduce consumption emissions to the level necessary to meet our overall climate goals.

Mitigation and Sequestration Action Items

- Mandate all-electric new construction to eliminate fossil fuel use in new buildings.
- Require all new construction, additions, and major rehab projects to use low-embodied carbon materials, starting with concrete.

BAAQMD GHG Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold. Evidence published by the State indicates the AB 32 goal of reducing statewide GHG emissions to 1990 levels was met prior to 2020. Current State plans are to further reduce emissions to 40% below 1990 levels by 2030. Assuming statewide emissions are at 1990 levels or lower in 2020, it would be logical to reduce the BAAQMD-recommended threshold for meeting the AB 32 threshold by 40% to develop a threshold for 2030.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines and the City's Climate Action Plan.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population is based on the number of employees and residents. As provided by the applicant, there would be about 145 to 175 employees. The service population for this project that would apply to annual GHG emissions is expected to be 160 employees.

Construction GHG Emissions

GHG emissions associated with construction were computed at 512 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. The applicant provided annual electricity usage, water usage, and solid waste information. This information was included in the operational CalEEMod model run. As shown in Table 9, net annual GHG emissions resulting from operation of the proposed project are predicted to be 2,270 metric tons (MT) of CO_2e in 2024 and 2,189 MT of CO_2e in 2030. The service population emission for the year 2024 and 2030 are predicted to be 14.19 and 13.68 MT/CO_2e/year/service population, respectively.

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. The project would exceed the annual emissions bright-line threshold of 660 MT CO_2e/year in 2030 and the service population significance threshold. Therefore, the project would be in exceedance for GHG emissions.

Table 9. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2024	Proposed Project in 2030
Area	0.01	0.01
Energy Consumption[1]	101.32	101.32
Mobile	2,149.31	2,067.52
Solid Waste Generation[2]	18.49	18.49
Water Usage[3]	1.20	1.20
Project	2,270.33	2,188.53
Current Petaluma Home Depot Traffic	(308.88)	(266.66)
Total	1,961.45	1,921.87
Significance Threshold	***660 MT CO_2e/year***	***660 MT CO_2e/year***
Exceeds bright-line threshold?	*Yes*	*Yes*
Service Population Emissions (MT CO_{2e}/year/service population	14.19	13.68
Exceeds service population threshold?	*Yes*	*Yes*

Notes:
1. Energy consumption includes 7% mitigation from solar generation, as provided by the applicant.
2. Applicant provided solid waste to landfill value of 5,000 tons per year.
3. Applicant provided indoor and outdoor water usage of 985,500 gallons per year and 292,000 gallons per year, respectively.

GHG Reduction Measures

The project would implement measures to further reduce GHG emissions that were not included in the CalEEMod modeling. These measures and their estimated reduction in GHG emissions are as follows:

- SCP's EverGreen – a CO_2 intensity rate of 0 pounds of CO_2 per megawatt of electricity would be applied in CalEEMod in order to produce 100 percent renewable electricity.
    - The project would adopt SCP's EverGreen program. This would result in an annual GHG emissions reduction of 101 metric tons when compared to the existing plan to use PG&E as the project's electricity provider.

- Water conservation measures - a reduction of 20 percent water conservation would be applied in the CalEEMod water mitigation.
    - The project would include measures such as drought resistant plants, high efficiency and recycled wastewater irrigation system, and low flow and water efficient fixtures and appliances to meet the 20 percent water conservation requirement.

- Solid waste recycling measures - a reduction of 20 percent in waste disposed would applied in the CalEEMod solid waste mitigation.
    - The project would include recycling, composting, and reusable materials measures, as well as donate excess materials to charities, to meet the 20 percent water conservation requirement.

- Electric vehicle charging stations would be provided in 10 to 20 percent of the available parking. This would encourage the use of electric vehicles that have much lower emissions than assumed in the default vehicle emissions. The reduction in GHG emissions is difficult to compute since it would be based on the utilization of these available spaces and would have to compensate for the increased electricity usage. There would be an overall reduction in GHG emissions.

With these features included in the project, annual GHG emissions would be further reduced by at least 308 metric tons annually. Further reductions would occur in the future as California's vehicle fleet GHG emissions decrease with turnover of the fleet to more efficient vehicles and zero-emission vehicles.

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for 2030 uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the construction health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the construction MEI and project site receptors.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[28] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[29] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[30] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[28] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.
[29] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[30] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type* →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*
* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.					

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: The Home Depot in Petaluma

See Equipment Type TAB for type, horsepower and load factor

Complete ALL Portions in Yellow

Project Size	na	Dwelling Units	8.63 total project acres disturbed
	na	s.f. residential	
	107.891	s.f. retail - The Home Depot	
	28,216	s.f. retail - Garden Center	
	na	s.f. parking garage	spaces
	239,815	s.f. parking lot	454 spaces
Construction Hours	7 am	to	5 pm

Pile Driving? Y/N? N

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION? Y/N? __Y (emergency generator)__

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: ___300kw___

Fuel Type: _Gasoline_____

Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**8/16/2022**	**Total phase:**	**30**			**Overall Import/Export Volumes**
		End Date:	**9/26/2022**					
1	Concrete/Industrial Saws	81	0.73	8	4	1.06666667	1892	**Demolition Volume**
3	Excavators	158	0.38	8	12	3.2	17292	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	8	12	3.2	18970	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	90,453 square feet
	Other Equipment?							_5,000_ Hauling volume (tons)
								Pavement demolished and hauled? 5.5 acres
	Site Preparation	**Start Date:**	**9/27/2022**	**Total phase:**	**30**			
		End Date:	**11/7/2022**					
	Graders	187	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	8	10	2.66666667	23712	
4	Tractors/Loaders/Backhoes	97	0.37	8	20	5.33333333	22970	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**11/8/2022**	**Total phase:**	**30**			
		End Date:	**12/19/2022**					**Soil Hauling Volume**
1	Excavators	158	0.38	8	5	1.33333333	2402	Export volume = _1000_ cubic yards?
1	Graders	187	0.41	8	10	2.66666667	6134	Import volume = _1000_ cubic yards?
1	Rubber Tired Dozers	247	0.4	8	5	1.33333333	3952	
	Concrete/Industrial Saws	81	0.73			0	0	
3	Tractors/Loaders/Backhoes	97	0.37	8	10	2.66666667	8614	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**12/20/2022**	**Total phase:**	**20**			
		End Date:	**1/16/2023**					
1	Tractor/Loader/Backhoe	97	0.37	8	10	4	2871	
1	Excavators	158	0.38	8	10	4	4803	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**1/17/2023**	**Total phase:**	**230**			**Cement Trucks? _12_ Total Round-Trips**
		End Date:	**12/4/2023**					
1	Cranes	231	0.29	7	20	0.60869565	9379	Electric? (Y/N) ___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	180	6.26086957	76896	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	10	0.34782609	4973	Or temporary line power? (Y/N) ___
3	Tractors/Loaders/Backhoes	97	0.37	7	20	0.60869565	15074	
1	Welders	46	0.45	8	20	0.69565217	3312	
	Other Equipment?							
	Building - Interior/Architectural Coating	**Start Date:**	**12/5/2023**	**Total phase:**	**18**			
		End Date:	**12/28/2023**					
1	Air Compressors	78	0.48	8	2	0.88888889	599	
1	Aerial Lift	62	0.31	8	16	7.11111111	2460	
	Other Equipment?							
	Paving	**Start Date:**	**12/5/2023**	**Total phase:**	**18**			
		Start Date:	**12/28/2023**					
2	Cement and Mortar Mixers	9	0.56	8	18	8	1452	
1	Pavers	130	0.42	8	2	0.88888889	874	**Asphalt? _8,873_ cubic yards or ____ round trips?**
2	Paving Equipment	132	0.36	8	14	6.22222222	10644	
2	Rollers	80	0.38	8	2	0.88888889	973	
1	Tractors/Loaders/Backhoes	97	0.37	8	18	8	5168	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.04	0.43	0.02	0.02	52.61	
2023	0.81	0.43	0.02	0.02	66.26	
EMFAC						
2022	0.02	0.15	0.01	0.00	109.75	
2023	0.06	0.35	0.02	0.01	283.61	
Total Construction Emissions by Year						
2022	0.07	0.58	0.03	0.02	162.36	
2023	0.86	0.78	0.04	0.03	349.87	
	Total Construction Emissions					
Tons	0.93	1.36	0.07	0.05	512.23	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	1.32	11.78	0.58	0.45		**99**
2023	6.66	6.01	0.35	0.24		**259**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	7.98	17.79	0.93	0.69	0.00	
Average	5.19	7.61	0.41	0.30	0.00	358.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	4.63	2.07	1.90	0.49		
	Existing Use Emissions					
Total	0.00	0.00	0.00	0.00		
	Net Annual Operational Emissions					
Tons/year	4.63	2.07	1.90	0.49		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	25.37	11.36	10.40	2.71		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	0.01	0.00	0.01	0.00
Energy	101.32	0.00	101.32	0.00
Mobile	2,149.31	0.00	2,067.52	0.00
Waste	18.49	0.00	18.49	0.00
Water	1.20	0.00	1.20	0.00
TOTAL	2,270.33	0.00	2,188.53	0.00
Current Petaluma Home Depot Traffic	308.88	0.00	266.66	0.00
Net GHG Emissions		1,961.45		1,921.87
Service Population	160.00			
Per Capita Emissions		14.19		13.68

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	454.00	Space	0.00	239,815.00	0
Home Improvement Superstore	136.11	1000sqft	8.63	136,107.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Applicant provided PG&E as utility company

Land Use - Acreage, square footage, and parking spaces provided by applicant.

Construction Phase - added trenching. Phase lengths and demo start date provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Trips and VMT - All trips entered into EMFAC2021

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Demolition -

Grading -

Vehicle Trips - VMT provided by applicant

Vehicle Emission Factors - Emission factors from EMFAC2021

Energy Use - Applicant provided 1,000,000 kwhr annual electricity usage. No natural gas usage

Water And Wastewater - 100% aerobic. Water/sewer usage provided by applicant

Solid Waste - Solid waste to landfill provided by applicant

Construction Off-road Equipment Mitigation - All equipment t4i. BMP assumed.

Energy Mitigation - Applicant provided 1,000,000 kwhr annual electricity usage w/ 70,000 kwhr electricity provided by solar.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Emergency generator info provided by applicant. Assumed 50 hours per year for testing only.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	10.00	30.00
tblEnergyUse	LightingElect	5.25	0.00
tblEnergyUse	NT24E	2.68	0.00
tblEnergyUse	T24E	2.46	7.35
tblEnergyUse	T24NG	2.34	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LandUseSquareFeet	181,600.00	239,815.00
tblLandUse	LandUseSquareFeet	136,110.00	136,107.00
tblLandUse	LotAcreage	4.09	0.00

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tblLandUse	LotAcreage	3.12	8.63
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.10
tblOffRoadEquipment	UsageHours	8.00	3.20
tblOffRoadEquipment	UsageHours	8.00	3.20
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	7.00	0.60
tblOffRoadEquipment	UsageHours	8.00	6.30
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	7.00	0.60
tblOffRoadEquipment	UsageHours	8.00	0.70
tblOffRoadEquipment	UsageHours	8.00	0.90
tblOffRoadEquipment	UsageHours	8.00	6.20
tblOffRoadEquipment	UsageHours	8.00	0.90
tblOffRoadEquipment	UsageHours	6.00	0.90
tblSolidWaste	SolidWasteGenerationRate	1,509.35	36.76
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	400.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	411.00	0.00
tblTripsAndVMT	HaulingTripNumber	250.00	0.00
tblTripsAndVMT	VendorTripNumber	62.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00

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tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	144.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	29.00	0.00
tblVehicleEF	HHD	0.02	0.18
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	5.38	4.65
tblVehicleEF	HHD	0.44	0.59
tblVehicleEF	HHD	0.02	1.4200e-003
tblVehicleEF	HHD	907.14	764.98
tblVehicleEF	HHD	1,446.45	1,689.08
tblVehicleEF	HHD	0.17	0.05
tblVehicleEF	HHD	0.14	0.12
tblVehicleEF	HHD	0.23	0.27
tblVehicleEF	HHD	2.4000e-005	3.4000e-005
tblVehicleEF	HHD	4.84	3.95
tblVehicleEF	HHD	2.86	2.17
tblVehicleEF	HHD	2.79	2.75
tblVehicleEF	HHD	3.0250e-003	3.0650e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	2.8950e-003	2.9270e-003
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.4910e-003	8.4740e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006

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tblVehicleEF	HHD	1.1000e-005	5.2000e-004
tblVehicleEF	HHD	5.7100e-004	1.4800e-004
tblVehicleEF	HHD	0.37	0.30
tblVehicleEF	HHD	6.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	3.6900e-004	1.3560e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.4670e-003	6.7510e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	2.0000e-006	1.0000e-006
tblVehicleEF	HHD	1.1000e-005	5.2000e-004
tblVehicleEF	HHD	5.7100e-004	1.4800e-004
tblVehicleEF	HHD	0.42	0.51
tblVehicleEF	HHD	6.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.09
tblVehicleEF	HHD	3.6900e-004	1.3560e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	2.2540e-003	2.5930e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.60	0.76
tblVehicleEF	LDA	2.23	3.37
tblVehicleEF	LDA	249.66	256.66
tblVehicleEF	LDA	52.08	67.23
tblVehicleEF	LDA	4.6180e-003	5.0140e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.18	0.26
tblVehicleEF	LDA	0.04	8.4520e-003
tblVehicleEF	LDA	1.5410e-003	1.3470e-003

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tblVehicleEF	LDA	1.7740e-003	2.0370e-003
tblVehicleEF	LDA	0.02	2.9580e-003
tblVehicleEF	LDA	1.4220e-003	1.2420e-003
tblVehicleEF	LDA	1.6310e-003	1.8730e-003
tblVehicleEF	LDA	0.04	0.33
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	8.8980e-003	0.01
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.22	0.35
tblVehicleEF	LDA	2.4200e-003	2.5370e-003
tblVehicleEF	LDA	5.0500e-004	6.6500e-004
tblVehicleEF	LDA	0.04	0.33
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.24	0.38
tblVehicleEF	LDT1	6.1950e-003	9.2600e-003
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	1.25	1.97
tblVehicleEF	LDT1	2.57	7.47
tblVehicleEF	LDT1	306.44	335.44
tblVehicleEF	LDT1	65.56	93.02
tblVehicleEF	LDT1	8.4610e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.19
tblVehicleEF	LDT1	0.29	0.50
tblVehicleEF	LDT1	0.04	0.01

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tblVehicleEF	LDT1	2.1600e-003	2.4830e-003
tblVehicleEF	LDT1	2.5700e-003	3.6720e-003
tblVehicleEF	LDT1	0.02	3.7750e-003
tblVehicleEF	LDT1	1.9890e-003	2.2880e-003
tblVehicleEF	LDT1	2.3630e-003	3.3760e-003
tblVehicleEF	LDT1	0.12	0.88
tblVehicleEF	LDT1	0.26	0.24
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.14	0.72
tblVehicleEF	LDT1	0.42	0.76
tblVehicleEF	LDT1	2.9710e-003	3.3160e-003
tblVehicleEF	LDT1	6.3600e-004	9.2000e-004
tblVehicleEF	LDT1	0.12	0.88
tblVehicleEF	LDT1	0.26	0.24
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.14	0.72
tblVehicleEF	LDT1	0.46	0.84
tblVehicleEF	LDT2	3.9110e-003	3.3880e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.87	0.95
tblVehicleEF	LDT2	2.89	4.20
tblVehicleEF	LDT2	323.53	344.53
tblVehicleEF	LDT2	69.36	89.75
tblVehicleEF	LDT2	6.8600e-003	6.9940e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	0.29	0.38

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tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	1.5600e-003	1.4500e-003
tblVehicleEF	LDT2	1.8270e-003	2.2130e-003
tblVehicleEF	LDT2	0.02	3.5780e-003
tblVehicleEF	LDT2	1.4370e-003	1.3340e-003
tblVehicleEF	LDT2	1.6800e-003	2.0350e-003
tblVehicleEF	LDT2	0.07	0.35
tblVehicleEF	LDT2	0.16	0.10
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	0.08	0.27
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LDT2	3.1360e-003	3.4050e-003
tblVehicleEF	LDT2	6.7200e-004	8.8700e-004
tblVehicleEF	LDT2	0.07	0.35
tblVehicleEF	LDT2	0.16	0.10
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.27
tblVehicleEF	LDT2	0.38	0.48
tblVehicleEF	LHD1	4.0660e-003	4.3970e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.16	0.17
tblVehicleEF	LHD1	1.20	1.14
tblVehicleEF	LHD1	0.95	1.69
tblVehicleEF	LHD1	9.58	9.38
tblVehicleEF	LHD1	760.21	774.13
tblVehicleEF	LHD1	9.34	14.01

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tblVehicleEF	LHD1	9.7900e-004	8.9800e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.10	0.09
tblVehicleEF	LHD1	1.65	1.39
tblVehicleEF	LHD1	0.26	0.36
tblVehicleEF	LHD1	1.1410e-003	1.0330e-003
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.5300e-004	2.4100e-004
tblVehicleEF	LHD1	1.0920e-003	9.8800e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5570e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.3300e-004	2.2100e-004
tblVehicleEF	LHD1	2.1680e-003	0.13
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0570e-003	0.00
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	0.33	0.19
tblVehicleEF	LHD1	0.07	0.10
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	7.3840e-003	7.5210e-003
tblVehicleEF	LHD1	9.2000e-005	1.3800e-004
tblVehicleEF	LHD1	2.1680e-003	0.13
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.03	0.03

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tblVehicleEF	LHD1	1.0570e-003	0.00
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.33	0.19
tblVehicleEF	LHD1	0.08	0.11
tblVehicleEF	LHD2	2.8720e-003	2.9280e-003
tblVehicleEF	LHD2	7.8900e-003	8.1060e-003
tblVehicleEF	LHD2	8.0290e-003	0.01
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.77	0.65
tblVehicleEF	LHD2	0.53	1.04
tblVehicleEF	LHD2	14.87	14.53
tblVehicleEF	LHD2	771.37	842.13
tblVehicleEF	LHD2	6.79	8.61
tblVehicleEF	LHD2	1.9370e-003	1.8660e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.39	1.21
tblVehicleEF	LHD2	0.17	0.22
tblVehicleEF	LHD2	1.5220e-003	1.4750e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.0800e-004	8.7000e-005
tblVehicleEF	LHD2	1.4560e-003	1.4110e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7270e-003	2.7030e-003
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	9.9000e-005	8.0000e-005

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tblVehicleEF	LHD2	9.0300e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8900e-004	0.00
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.11	0.08
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	1.4200e-004	1.3900e-004
tblVehicleEF	LHD2	7.4310e-003	8.1000e-003
tblVehicleEF	LHD2	6.7000e-005	8.5000e-005
tblVehicleEF	LHD2	9.0300e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8900e-004	0.00
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.11	0.08
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	MCY	0.36	0.20
tblVehicleEF	MCY	0.27	0.22
tblVehicleEF	MCY	21.46	15.97
tblVehicleEF	MCY	9.19	8.76
tblVehicleEF	MCY	217.66	192.12
tblVehicleEF	MCY	63.40	56.26
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	0.01
tblVehicleEF	MCY	1.19	0.68
tblVehicleEF	MCY	0.28	0.18
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1330e-003	1.9930e-003

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tblVehicleEF	MCY	3.2060e-003	3.7350e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9970e-003	1.8700e-003
tblVehicleEF	MCY	3.0250e-003	3.5240e-003
tblVehicleEF	MCY	0.91	4.90
tblVehicleEF	MCY	0.88	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.49	1.39
tblVehicleEF	MCY	0.78	3.91
tblVehicleEF	MCY	2.08	1.69
tblVehicleEF	MCY	2.1540e-003	1.8990e-003
tblVehicleEF	MCY	6.2700e-004	5.5600e-004
tblVehicleEF	MCY	0.91	0.15
tblVehicleEF	MCY	0.88	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	3.05	1.64
tblVehicleEF	MCY	0.78	3.91
tblVehicleEF	MCY	2.26	1.83
tblVehicleEF	MDV	4.5840e-003	4.6000e-003
tblVehicleEF	MDV	0.09	0.12
tblVehicleEF	MDV	0.94	1.11
tblVehicleEF	MDV	3.34	4.72
tblVehicleEF	MDV	398.25	419.98
tblVehicleEF	MDV	84.78	108.54
tblVehicleEF	MDV	9.2130e-003	0.01
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.37	0.51
tblVehicleEF	MDV	0.04	0.01

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tblVehicleEF	MDV	1.6440e-003	1.5890e-003
tblVehicleEF	MDV	1.9450e-003	2.3660e-003
tblVehicleEF	MDV	0.02	3.6720e-003
tblVehicleEF	MDV	1.5180e-003	1.4680e-003
tblVehicleEF	MDV	1.7890e-003	2.1750e-003
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.08	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.36
tblVehicleEF	MDV	0.44	0.62
tblVehicleEF	MDV	3.8580e-003	4.1480e-003
tblVehicleEF	MDV	8.2200e-004	1.0730e-003
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.08	0.00
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.36
tblVehicleEF	MDV	0.48	0.68
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.41	1.46
tblVehicleEF	MH	2.09	2.40
tblVehicleEF	MH	1,530.18	1,636.44
tblVehicleEF	MH	17.84	21.01
tblVehicleEF	MH	0.07	0.08
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.90	2.00
tblVehicleEF	MH	0.24	0.28

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tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	2.5700e-004	2.9500e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3160e-003	3.3600e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	2.3600e-004	2.7200e-004
tblVehicleEF	MH	0.73	34.52
tblVehicleEF	MH	0.07	9.05
tblVehicleEF	MH	0.26	0.00
tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.11
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.7700e-004	2.0800e-004
tblVehicleEF	MH	0.73	34.52
tblVehicleEF	MH	0.07	9.05
tblVehicleEF	MH	0.26	0.00
tblVehicleEF	MH	0.12	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MHD	2.3920e-003	0.01
tblVehicleEF	MHD	1.7580e-003	7.8790e-003
tblVehicleEF	MHD	6.8540e-003	8.5060e-003
tblVehicleEF	MHD	0.33	0.68
tblVehicleEF	MHD	0.25	0.36
tblVehicleEF	MHD	0.87	1.07
tblVehicleEF	MHD	69.69	163.33

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tblVehicleEF	MHD	1,042.49	1,214.46
tblVehicleEF	MHD	6.53	8.25
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	4.6810e-003	5.5400e-003
tblVehicleEF	MHD	0.40	0.89
tblVehicleEF	MHD	1.57	1.06
tblVehicleEF	MHD	1.83	1.47
tblVehicleEF	MHD	3.4700e-004	2.1920e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	7.8910e-003	0.01
tblVehicleEF	MHD	8.9000e-005	1.1500e-004
tblVehicleEF	MHD	3.3200e-004	2.0970e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	7.5450e-003	0.01
tblVehicleEF	MHD	8.2000e-005	1.0500e-004
tblVehicleEF	MHD	3.6600e-004	0.03
tblVehicleEF	MHD	0.02	6.7300e-003
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	1.8500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	6.6000e-004	1.5280e-003
tblVehicleEF	MHD	9.9040e-003	0.01
tblVehicleEF	MHD	6.5000e-005	8.2000e-005
tblVehicleEF	MHD	3.6600e-004	0.03
tblVehicleEF	MHD	0.02	6.7300e-003
tblVehicleEF	MHD	0.02	0.04

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tblVehicleEF	MHD	1.8500e-004	0.00
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	OBUS	7.2230e-003	8.1960e-003
tblVehicleEF	OBUS	5.0090e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.63	0.58
tblVehicleEF	OBUS	0.60	0.81
tblVehicleEF	OBUS	2.20	2.73
tblVehicleEF	OBUS	99.59	88.64
tblVehicleEF	OBUS	1,342.68	1,521.11
tblVehicleEF	OBUS	16.40	20.31
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.14	0.14
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.41	0.37
tblVehicleEF	OBUS	1.51	1.18
tblVehicleEF	OBUS	1.07	0.86
tblVehicleEF	OBUS	1.3400e-004	4.8400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.9000e-003	0.02
tblVehicleEF	OBUS	1.7700e-004	2.1800e-004
tblVehicleEF	OBUS	1.2800e-004	4.6300e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5450e-003	0.02
tblVehicleEF	OBUS	1.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.4070e-003	0.10
tblVehicleEF	OBUS	0.02	0.02

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tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	6.0200e-004	0.00
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.10	0.13
tblVehicleEF	OBUS	9.4600e-004	8.4200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.6200e-004	2.0100e-004
tblVehicleEF	OBUS	1.4070e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	6.0200e-004	0.00
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.11	0.14
tblVehicleEF	SBUS	0.03	0.09
tblVehicleEF	SBUS	4.2900e-003	0.20
tblVehicleEF	SBUS	2.6150e-003	2.4670e-003
tblVehicleEF	SBUS	1.54	1.14
tblVehicleEF	SBUS	0.32	0.91
tblVehicleEF	SBUS	0.38	0.34
tblVehicleEF	SBUS	335.73	182.05
tblVehicleEF	SBUS	1,073.56	1,086.55
tblVehicleEF	SBUS	2.23	2.11
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.15	0.15
tblVehicleEF	SBUS	2.6560e-003	2.6520e-003
tblVehicleEF	SBUS	3.17	1.38
tblVehicleEF	SBUS	4.20	2.63

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tblVehicleEF	SBUS	1.02	0.44
tblVehicleEF	SBUS	2.6880e-003	1.1780e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.8000e-005	2.2000e-005
tblVehicleEF	SBUS	2.5720e-003	1.1250e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.8250e-003	2.7570e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.5000e-005	2.0000e-005
tblVehicleEF	SBUS	2.2700e-004	0.01
tblVehicleEF	SBUS	2.3150e-003	3.4230e-003
tblVehicleEF	SBUS	0.15	0.11
tblVehicleEF	SBUS	1.0500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	5.2190e-003	6.0400e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	3.1850e-003	1.5740e-003
tblVehicleEF	SBUS	0.01	9.7280e-003
tblVehicleEF	SBUS	2.2000e-005	2.1000e-005
tblVehicleEF	SBUS	2.2700e-004	0.01
tblVehicleEF	SBUS	2.3150e-003	3.4230e-003
tblVehicleEF	SBUS	0.21	0.23
tblVehicleEF	SBUS	1.0500e-004	0.00
tblVehicleEF	SBUS	0.08	0.25
tblVehicleEF	SBUS	5.2190e-003	6.0400e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	UBUS	2.91	0.59

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tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	22.44	9.62
tblVehicleEF	UBUS	0.84	2.65
tblVehicleEF	UBUS	1,754.72	1,284.51
tblVehicleEF	UBUS	8.50	20.82
tblVehicleEF	UBUS	0.30	0.18
tblVehicleEF	UBUS	6.7320e-003	0.03
tblVehicleEF	UBUS	0.61	0.31
tblVehicleEF	UBUS	0.08	0.21
tblVehicleEF	UBUS	0.08	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	4.3900e-003	2.5940e-003
tblVehicleEF	UBUS	7.7000e-005	1.2800e-004
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	7.7720e-003	6.3860e-003
tblVehicleEF	UBUS	4.1940e-003	2.4690e-003
tblVehicleEF	UBUS	7.1000e-005	1.1800e-004
tblVehicleEF	UBUS	2.5800e-004	0.04
tblVehicleEF	UBUS	3.7890e-003	0.02
tblVehicleEF	UBUS	1.5300e-004	0.00
tblVehicleEF	UBUS	0.04	0.03
tblVehicleEF	UBUS	9.5700e-004	0.04
tblVehicleEF	UBUS	0.05	0.10
tblVehicleEF	UBUS	8.1380e-003	6.7480e-003
tblVehicleEF	UBUS	8.4000e-005	2.0600e-004
tblVehicleEF	UBUS	2.5800e-004	0.04
tblVehicleEF	UBUS	3.7890e-003	0.02
tblVehicleEF	UBUS	1.5300e-004	0.00
tblVehicleEF	UBUS	2.97	0.63

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tblVehicleEF	UBUS	9.5700e-004	0.04
tblVehicleEF	UBUS	0.05	0.10
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	10,082,010.90	985,500.00
tblWater	OutdoorWaterUseRate	6,179,297.00	292,000.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0417	0.4291	0.3242	5.9000e-004	0.1628	0.0206	0.1834	0.0664	0.0190	0.0854	0.0000	52.2003	52.2003	0.0166	0.0000	52.6149
2023	0.8056	0.4258	0.5168	7.6000e-004	0.0000	0.0236	0.0236	0.0000	0.0219	0.0219	0.0000	65.7679	65.7679	0.0197	0.0000	66.2600
Maximum	**0.8056**	**0.4291**	**0.5168**	**7.6000e-004**	**0.1628**	**0.0236**	**0.1834**	**0.0664**	**0.0219**	**0.0854**	**0.0000**	**65.7679**	**65.7679**	**0.0197**	**0.0000**	**66.2600**

Mitigated Construction

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0103	0.2092	0.3828	5.9000e-004	0.0733	9.7000e-004	0.0742	0.0299	9.7000e-004	0.0309	0.0000	52.2002	52.2002	0.0166	0.0000	52.6148
2023	0.7751	0.3216	0.5429	7.6000e-004	0.0000	1.9200e-003	1.9200e-003	0.0000	1.9200e-003	1.9200e-003	0.0000	65.7678	65.7678	0.0197	0.0000	66.2599
Maximum	**0.7751**	**0.3216**	**0.5429**	**7.6000e-004**	**0.0733**	**1.9200e-003**	**0.0742**	**0.0299**	**1.9200e-003**	**0.0309**	**0.0000**	**65.7678**	**65.7678**	**0.0197**	**0.0000**	**66.2599**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.30**	**37.91**	**-10.07**	**0.00**	**55.00**	**93.47**	**63.22**	**55.00**	**92.93**	**69.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-16-2022**	**11-15-2022**	0.3933	0.1766
2	**11-16-2022**	**2-15-2023**	0.1242	0.0788
3	**2-16-2023**	**5-15-2023**	0.1112	0.0757
4	**5-16-2023**	**8-15-2023**	0.1150	0.0783
5	**8-16-2023**	**9-30-2023**	0.0575	0.0392
		Highest	0.3933	0.1766

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Area	0.6235	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	100.3255	100.3255	0.0162	1.9700e-003	101.3176
Mobile	3.9895	2.0282	16.7039	0.0227	1.8714	0.0244	1.8957	0.4684	0.0229	0.4913	0.0000	2,098.9732	2,098.9732	0.2260	0.1500	2,149.3123
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	7.4620	0.0000	7.4620	0.4410	0.0000	18.4867
Water						0.0000	0.0000		0.0000	0.0000	0.3487	0.5880	0.9366	1.3000e-003	7.7000e-004	1.1984
Total	**4.6294**	**2.0741**	**16.7511**	**0.0228**	**1.8714**	**0.0268**	**1.8982**	**0.4684**	**0.0253**	**0.4937**	**7.8106**	**2,207.5131**	**2,215.3237**	**0.6856**	**0.1527**	**2,277.9688**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6235	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	93.3028	93.3028	0.0151	1.8300e-003	94.2253
Mobile	3.9895	2.0282	16.7039	0.0227	1.8714	0.0244	1.8957	0.4684	0.0229	0.4913	0.0000	2,098.9732	2,098.9732	0.2260	0.1500	2,149.3123
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	7.4620	0.0000	7.4620	0.4410	0.0000	18.4867
Water						0.0000	0.0000		0.0000	0.0000	0.3487	0.5880	0.9366	1.3000e-003	7.7000e-004	1.1984

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**4.6294**	**2.0741**	**16.7511**	**0.0228**	**1.8714**	**0.0268**	**1.8982**	**0.4684**	**0.0253**	**0.4937**	**7.8106**	**2,200.4903**	**2,208.3010**	**0.6845**	**0.1526**	**2,270.8766**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.32**	**0.32**	**0.17**	**0.09**	**0.31**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/16/2022	9/26/2022	5	30	
2	Site Preparation	Site Preparation	9/27/2022	11/7/2022	5	30	
3	Grading	Grading	11/8/2022	12/19/2022	5	30	
4	Trenching	Trenching	12/20/2022	1/16/2023	5	20	
5	Building Construction	Building Construction	1/17/2023	12/4/2023	5	230	
6	Paving	Paving	12/5/2023	12/28/2023	5	18	
7	Architectural Coating	Architectural Coating	12/5/2023	12/28/2023	5	18	

Acres of Grading (Site Preparation Phase): 15.19

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 204,161; Non-Residential Outdoor: 68,054; Striped Parking Area: 14,389

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	1.10	81	0.73
Demolition	Excavators	3	3.20	158	0.38

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition	Rubber Tired Dozers	2	3.20	247	0.40
Site Preparation	Rubber Tired Dozers	3	2.70	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	5.30	97	0.37
Grading	Excavators	1	1.30	158	0.38
Grading	Graders	1	2.70	187	0.41
Grading	Rubber Tired Dozers	1	1.30	247	0.40
Grading	Tractors/Loaders/Backhoes	3	2.70	97	0.37
Trenching	Excavators	1	4.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Building Construction	Cranes	1	0.60	231	0.29
Building Construction	Forklifts	3	6.30	89	0.20
Building Construction	Generator Sets	1	0.40	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	0.60	97	0.37
Building Construction	Welders	1	0.70	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	1	0.90	130	0.42
Paving	Paving Equipment	2	6.20	132	0.36
Paving	Rollers	2	0.90	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Aerial Lifts	1	7.10	63	0.31
Architectural Coating	Air Compressors	1	0.90	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0445	0.0000	0.0445	6.7400e-003	0.0000	6.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1433	0.1091	2.1000e-004		6.8600e-003	6.8600e-003		6.3400e-003	6.3400e-003	0.0000	18.2771	18.2771	5.6100e-003	0.0000	18.4174
Total	**0.0144**	**0.1433**	**0.1091**	**2.1000e-004**	**0.0445**	**6.8600e-003**	**0.0514**	**6.7400e-003**	**6.3400e-003**	**0.0131**	**0.0000**	**18.2771**	**18.2771**	**5.6100e-003**	**0.0000**	**18.4174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0200	0.0000	0.0200	3.0300e-003	0.0000	3.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0500e-003	0.0726	0.1329	2.1000e-004		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	18.2771	18.2771	5.6100e-003	0.0000	18.4174
Total	**3.0500e-003**	**0.0726**	**0.1329**	**2.1000e-004**	**0.0200**	**3.4000e-004**	**0.0204**	**3.0300e-003**	**3.4000e-004**	**3.3700e-003**	**0.0000**	**18.2771**	**18.2771**	**5.6100e-003**	**0.0000**	**18.4174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0995	0.0000	0.0995	0.0511	0.0000	0.0511	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.2002	0.1434	2.5000e-004		9.9200e-003	9.9200e-003		9.1300e-003	9.1300e-003	0.0000	22.2576	22.2576	7.2000e-003	0.0000	22.4376
Total	**0.0193**	**0.2002**	**0.1434**	**2.5000e-004**	**0.0995**	**9.9200e-003**	**0.1094**	**0.0511**	**9.1300e-003**	**0.0603**	**0.0000**	**22.2576**	**22.2576**	**7.2000e-003**	**0.0000**	**22.4376**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0448	0.0000	0.0448	0.0230	0.0000	0.0230	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8800e-003	0.0880	0.1619	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	22.2576	22.2576	7.2000e-003	0.0000	22.4376
Total	**4.8800e-003**	**0.0880**	**0.1619**	**2.5000e-004**	**0.0448**	**4.1000e-004**	**0.0452**	**0.0230**	**4.1000e-004**	**0.0234**	**0.0000**	**22.2576**	**22.2576**	**7.2000e-003**	**0.0000**	**22.4376**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0188	0.0000	0.0188	8.5200e-003	0.0000	8.5200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0778	0.0594	1.1000e-004		3.4400e-003	3.4400e-003		3.1700e-003	3.1700e-003	0.0000	10.0300	10.0300	3.2400e-003	0.0000	10.1111
Total	**7.1400e-003**	**0.0778**	**0.0594**	**1.1000e-004**	**0.0188**	**3.4400e-003**	**0.0222**	**8.5200e-003**	**3.1700e-003**	**0.0117**	**0.0000**	**10.0300**	**10.0300**	**3.2400e-003**	**0.0000**	**10.1111**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.4500e-003	0.0000	8.4500e-003	3.8300e-003	0.0000	3.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	0.0404	0.0740	1.1000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.0300	10.0300	3.2400e-003	0.0000	10.1111
Total	**2.1000e-003**	**0.0404**	**0.0740**	**1.1000e-004**	**8.4500e-003**	**1.9000e-004**	**8.6400e-003**	**3.8300e-003**	**1.9000e-004**	**4.0200e-003**	**0.0000**	**10.0300**	**10.0300**	**3.2400e-003**	**0.0000**	**10.1111**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.3000e-004	7.7700e-003	0.0124	2.0000e-005		4.0000e-004	4.0000e-004		3.6000e-004	3.6000e-004	0.0000	1.6355	1.6355	5.3000e-004	0.0000	1.6487
Total	**8.3000e-004**	**7.7700e-003**	**0.0124**	**2.0000e-005**		**4.0000e-004**	**4.0000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**1.6355**	**1.6355**	**5.3000e-004**	**0.0000**	**1.6487**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0000e-004	8.1700e-003	0.0141	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.6355	1.6355	5.3000e-004	0.0000	1.6487
Total	**3.0000e-004**	**8.1700e-003**	**0.0141**	**2.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.6355**	**1.6355**	**5.3000e-004**	**0.0000**	**1.6487**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4000e-004	8.4800e-003	0.0151	2.0000e-005		4.2000e-004	4.2000e-004		3.8000e-004	3.8000e-004	0.0000	2.0000	2.0000	6.5000e-004	0.0000	2.0162
Total	**9.4000e-004**	**8.4800e-003**	**0.0151**	**2.0000e-005**		**4.2000e-004**	**4.2000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**2.0000**	**2.0000**	**6.5000e-004**	**0.0000**	**2.0162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7000e-004	9.9900e-003	0.0172	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.0000	2.0000	6.5000e-004	0.0000	2.0162
Total	**3.7000e-004**	**9.9900e-003**	**0.0172**	**2.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.0000**	**2.0000**	**6.5000e-004**	**0.0000**	**2.0162**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0391	0.3633	0.4226	6.1000e-004		0.0207	0.0207		0.0192	0.0192	0.0000	53.0807	53.0807	0.0159	0.0000	53.4770
Total	**0.0391**	**0.3633**	**0.4226**	**6.1000e-004**		**0.0207**	**0.0207**		**0.0192**	**0.0192**	**0.0000**	**53.0807**	**53.0807**	**0.0159**	**0.0000**	**53.4770**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0131	0.2609	0.4411	6.1000e-004		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	53.0806	53.0806	0.0159	0.0000	53.4769
Total	**0.0131**	**0.2609**	**0.4411**	**6.1000e-004**		**1.4200e-003**	**1.4200e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**53.0806**	**53.0806**	**0.0159**	**0.0000**	**53.4769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3100e-003	0.0480	0.0680	1.1000e-004		2.3000e-003	2.3000e-003		2.1300e-003	2.1300e-003	0.0000	9.1642	9.1642	2.7800e-003	0.0000	9.2337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3100e-003**	**0.0480**	**0.0680**	**1.1000e-004**		**2.3000e-003**	**2.3000e-003**		**2.1300e-003**	**2.1300e-003**	**0.0000**	**9.1642**	**9.1642**	**2.7800e-003**	**0.0000**	**9.2337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5100e-003	0.0418	0.0720	1.1000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	9.1642	9.1642	2.7800e-003	0.0000	9.2337
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5100e-003**	**0.0418**	**0.0720**	**1.1000e-004**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**9.1642**	**9.1642**	**2.7800e-003**	**0.0000**	**9.2337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Architectural Coating - 2023

Unmitigated Construction On-Site

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7597					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	6.0200e-003	0.0112	2.0000e-005		1.7000e-004	1.7000e-004		1.6000e-004	1.6000e-004	0.0000	1.5231	1.5231	4.0000e-004	0.0000	1.5331
Total	**0.7603**	**6.0200e-003**	**0.0112**	**2.0000e-005**		**1.7000e-004**	**1.7000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**1.5231**	**1.5231**	**4.0000e-004**	**0.0000**	**1.5331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7597					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-004	8.9700e-003	0.0127	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	1.5231	1.5231	4.0000e-004	0.0000	1.5331
Total	**0.7601**	**8.9700e-003**	**0.0127**	**2.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**1.5231**	**1.5231**	**4.0000e-004**	**0.0000**	**1.5331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

Home Depot Petaluma - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.9895	2.0282	16.7039	0.0227	1.8714	0.0244	1.8957	0.4684	0.0229	0.4913	0.0000	2,098.9732	2,098.9732	0.2260	0.1500	2,149.3123
Unmitigated	3.9895	2.0282	16.7039	0.0227	1.8714	0.0244	1.8957	0.4684	0.0229	0.4913	0.0000	2,098.9732	2,098.9732	0.2260	0.1500	2,149.3123

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	4,184.02	7,720.16	7594.94	5,538,651	5,538,651
Parking Lot	0.00	0.00	0.00		
Total	4,184.02	7,720.16	7,594.94	5,538,651	5,538,651

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Home Improvement Superstore	9.50	7.30	7.30	23.40	57.60	19.00	32	20	48
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.536774	0.058783	0.173424	0.127345	0.036375	0.008877	0.014453	0.006568	0.001093	0.000297	0.030119	0.001546	0.004347
Parking Lot	0.536774	0.058783	0.173424	0.127345	0.036375	0.008877	0.014453	0.006568	0.001093	0.000297	0.030119	0.001546	0.004347

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	93.3028	93.3028	0.0151	1.8300e-003	94.2253
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.3255	100.3255	0.0162	1.9700e-003	101.3176
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

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Home Improvement Superstore	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement Superstore	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement Superstore	1.00039e+006	92.5595	0.0150	1.8200e-003	93.4748

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Parking Lot	83935.3	7.7660	1.2600e-003	1.5000e-004	7.8428
Total		**100.3255**	**0.0162**	**1.9700e-003**	**101.3176**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement	930359	86.0804	0.0139	1.6900e-003	86.9315
Parking Lot	78059.8	7.2224	1.1700e-003	1.4000e-004	7.2938
Total		**93.3028**	**0.0151**	**1.8300e-003**	**94.2253**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Mitigated	0.6235	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Unmitigated	0.6235	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.6235**	**5.0000e-005**	**5.4100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Consumer Products	0.5471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.6235**	**5.0000e-005**	**5.4100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9366	1.3000e-003	7.7000e-004	1.1984
Unmitigated	0.9366	1.3000e-003	7.7000e-004	1.1984

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

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Home Improvement Guarantee	0.9855 / 0.292	0.9366	1.3000e-003	7.7000e-004	1.1984
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9366**	**1.3000e-003**	**7.7000e-004**	**1.1984**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement Guarantee	0.9855 / 0.292	0.9366	1.3000e-003	7.7000e-004	1.1984
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9366**	**1.3000e-003**	**7.7000e-004**	**1.1984**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	MT/yr			
Mitigated	7.4620	0.4410	0.0000	18.4867
Unmitigated	7.4620	0.4410	0.0000	18.4867

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	36.76	7.4620	0.4410	0.0000	18.4867
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4620**	**0.4410**	**0.0000**	**18.4867**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	36.76	7.4620	0.4410	0.0000	18.4867

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4620**	**0.4410**	**0.0000**	**18.4867**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	400	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (600 - 900 HP)	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426

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Total	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426

11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	454.00	Space	0.00	239,815.00	0
Home Improvement Superstore	136.11	1000sqft	8.63	136,107.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Applicant provided PG&E as utility company

Land Use - Acreage, square footage, and parking spaces provided by applicant.

Construction Phase - Operation only

Off-road Equipment - Construction equipment info provided by applicant.

Off-road Equipment - Construction equipment info provided by applicant.

Trips and VMT - All trips entered into EMFAC2021

Demolition -

Grading -

Vehicle Trips - VMT provided by applicant

Vehicle Emission Factors - Emission factors from EMFAC2021

Energy Use - Applicant provided 1,000,000 kwhr annual electricity usage. No nat gas

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water And Wastewater - 100% aerobic. Water/sewer usage provided by applicant

Solid Waste - Solid waste to landfill provided by applicant

Construction Off-road Equipment Mitigation - All equipment t4i. BMP assumed.

Energy Mitigation - Applicant provided 1,000,000 kwhr annual electricity usage w/ 70,000 kwhr electricity provided by solar.

Fleet Mix - Fleet mix from EMFAC2021

Stationary Sources - Emergency Generators and Fire Pumps - Emergency generator info provided by applicant. Assumed 50 hours per year for testing only.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	9/26/2022	9/12/2022
tblEnergyUse	LightingElect	5.25	0.00
tblEnergyUse	NT24E	2.68	0.00
tblEnergyUse	T24E	2.46	7.35
tblEnergyUse	T24NG	2.34	0.00
tblFleetMix	HHD	6.6660e-003	0.02
tblFleetMix	HHD	6.6660e-003	0.02
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDT1	0.05	0.03
tblFleetMix	LDT1	0.05	0.03
tblFleetMix	LDT2	0.16	0.21
tblFleetMix	LDT2	0.16	0.21
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD1	0.03	0.04
tblFleetMix	LHD2	7.4690e-003	0.01
tblFleetMix	LHD2	7.4690e-003	0.01
tblFleetMix	MCY	0.03	3.8050e-003
tblFleetMix	MCY	0.03	3.8050e-003

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tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MH	3.2790e-003	9.1400e-004
tblFleetMix	MH	3.2790e-003	9.1400e-004
tblFleetMix	MHD	0.02	0.02
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.0800e-003	1.4760e-003
tblFleetMix	OBUS	1.0800e-003	1.4760e-003
tblFleetMix	SBUS	1.4780e-003	1.0940e-003
tblFleetMix	SBUS	1.4780e-003	1.0940e-003
tblFleetMix	UBUS	2.7300e-004	1.1070e-003
tblFleetMix	UBUS	2.7300e-004	1.1070e-003
tblGrading	AcresOfGrading	0.00	15.19
tblLandUse	LandUseSquareFeet	181,600.00	239,815.00
tblLandUse	LandUseSquareFeet	136,110.00	136,107.00
tblLandUse	LotAcreage	4.09	0.00
tblLandUse	LotAcreage	3.12	8.63
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	5.30
tblSolidWaste	SolidWasteGenerationRate	1,509.35	36.76
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	400.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.02	0.16
tblVehicleEF	HHD	0.05	0.05
tblVehicleEF	HHD	5.32	4.50
tblVehicleEF	HHD	0.44	0.50

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tblVehicleEF	HHD	8.8140e-003	1.0180e-003
tblVehicleEF	HHD	799.72	667.01
tblVehicleEF	HHD	1,274.41	1,456.96
tblVehicleEF	HHD	0.10	0.01
tblVehicleEF	HHD	0.13	0.11
tblVehicleEF	HHD	0.20	0.23
tblVehicleEF	HHD	4.53	3.58
tblVehicleEF	HHD	2.56	1.63
tblVehicleEF	HHD	2.87	2.64
tblVehicleEF	HHD	2.1180e-003	1.9490e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0270e-003	1.8590e-003
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.4640e-003	8.4790e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	3.0000e-006	5.3000e-005
tblVehicleEF	HHD	1.6400e-004	1.5000e-005
tblVehicleEF	HHD	0.36	0.28
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	8.7000e-005	1.3400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	7.4340e-003	5.8090e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00

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tblVehicleEF	HHD	3.0000e-006	5.3000e-005
tblVehicleEF	HHD	1.6400e-004	1.5000e-005
tblVehicleEF	HHD	0.41	0.47
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.08	0.07
tblVehicleEF	HHD	8.7000e-005	1.3400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	1.2000e-003	1.4860e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.44	0.54
tblVehicleEF	LDA	1.82	2.36
tblVehicleEF	LDA	221.97	223.71
tblVehicleEF	LDA	46.14	58.17
tblVehicleEF	LDA	3.5250e-003	3.5720e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	8.2560e-003
tblVehicleEF	LDA	1.0760e-003	9.3000e-004
tblVehicleEF	LDA	1.3650e-003	1.5720e-003
tblVehicleEF	LDA	0.02	2.8900e-003
tblVehicleEF	LDA	9.9100e-004	8.5600e-004
tblVehicleEF	LDA	1.2550e-003	1.4450e-003
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	4.2650e-003	5.3610e-003
tblVehicleEF	LDA	0.03	0.20
tblVehicleEF	LDA	0.13	0.23

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tblVehicleEF	LDA	2.0530e-003	2.2110e-003
tblVehicleEF	LDA	4.2700e-004	5.7500e-004
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	6.1890e-003	7.8090e-003
tblVehicleEF	LDA	0.03	0.20
tblVehicleEF	LDA	0.15	0.25
tblVehicleEF	LDT1	2.6560e-003	5.0380e-003
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.69	1.23
tblVehicleEF	LDT1	2.02	4.98
tblVehicleEF	LDT1	271.84	305.46
tblVehicleEF	LDT1	57.89	82.23
tblVehicleEF	LDT1	4.8290e-003	8.0630e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	1.3010e-003	1.6080e-003
tblVehicleEF	LDT1	1.7030e-003	2.6360e-003
tblVehicleEF	LDT1	0.02	3.7400e-003
tblVehicleEF	LDT1	1.1960e-003	1.4790e-003
tblVehicleEF	LDT1	1.5660e-003	2.4240e-003
tblVehicleEF	LDT1	0.07	0.71
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.09	0.54

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tblVehicleEF	LDT1	0.22	0.50
tblVehicleEF	LDT1	2.5140e-003	3.0200e-003
tblVehicleEF	LDT1	5.3500e-004	8.1300e-004
tblVehicleEF	LDT1	0.07	0.71
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.09	0.54
tblVehicleEF	LDT1	0.25	0.55
tblVehicleEF	LDT2	2.1940e-003	2.1910e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.62	0.71
tblVehicleEF	LDT2	2.44	3.13
tblVehicleEF	LDT2	278.26	307.92
tblVehicleEF	LDT2	59.60	79.30
tblVehicleEF	LDT2	4.6490e-003	5.0580e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.20	0.28
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	1.1660e-003	1.0890e-003
tblVehicleEF	LDT2	1.4450e-003	1.7720e-003
tblVehicleEF	LDT2	0.02	3.5570e-003
tblVehicleEF	LDT2	1.0730e-003	1.0020e-003
tblVehicleEF	LDT2	1.3290e-003	1.6290e-003
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.7250e-003	8.3290e-003

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tblVehicleEF	LDT2	0.07	0.23
tblVehicleEF	LDT2	0.22	0.31
tblVehicleEF	LDT2	2.5730e-003	3.0440e-003
tblVehicleEF	LDT2	5.5100e-004	7.8400e-004
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.23
tblVehicleEF	LDT2	0.24	0.34
tblVehicleEF	LHD1	3.7420e-003	4.0020e-003
tblVehicleEF	LHD1	7.9950e-003	7.5020e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.16	0.17
tblVehicleEF	LHD1	0.79	0.78
tblVehicleEF	LHD1	0.86	1.72
tblVehicleEF	LHD1	9.02	8.78
tblVehicleEF	LHD1	706.55	705.59
tblVehicleEF	LHD1	8.92	13.80
tblVehicleEF	LHD1	9.1700e-004	8.2600e-004
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.95	0.87
tblVehicleEF	LHD1	0.22	0.32
tblVehicleEF	LHD1	1.1020e-003	9.4800e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8070e-003
tblVehicleEF	LHD1	0.01	0.02

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tblVehicleEF	LHD1	2.2300e-004	1.7500e-004
tblVehicleEF	LHD1	1.0540e-003	9.0700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5420e-003	2.4520e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.0500e-004	1.6100e-004
tblVehicleEF	LHD1	1.8450e-003	0.11
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4800e-004	0.00
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.36	0.16
tblVehicleEF	LHD1	0.05	0.08
tblVehicleEF	LHD1	8.7000e-005	8.5000e-005
tblVehicleEF	LHD1	6.8670e-003	6.8570e-003
tblVehicleEF	LHD1	8.8000e-005	1.3600e-004
tblVehicleEF	LHD1	1.8450e-003	0.11
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4800e-004	0.00
tblVehicleEF	LHD1	0.13	0.12
tblVehicleEF	LHD1	0.36	0.16
tblVehicleEF	LHD1	0.06	0.09
tblVehicleEF	LHD2	2.5350e-003	2.5990e-003
tblVehicleEF	LHD2	6.3230e-003	6.0210e-003
tblVehicleEF	LHD2	5.7120e-003	9.2620e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.63	0.50
tblVehicleEF	LHD2	0.46	0.99

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tblVehicleEF	LHD2	14.12	14.23
tblVehicleEF	LHD2	710.65	775.46
tblVehicleEF	LHD2	6.14	7.99
tblVehicleEF	LHD2	1.8570e-003	1.8460e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.86	0.89
tblVehicleEF	LHD2	0.14	0.19
tblVehicleEF	LHD2	1.5620e-003	1.5200e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	9.2000e-005	5.5000e-005
tblVehicleEF	LHD2	1.4950e-003	1.4550e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7310e-003	2.6810e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.5000e-005	5.1000e-005
tblVehicleEF	LHD2	7.2900e-004	0.05
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3600e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.08	0.07
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	1.3500e-004	1.3600e-004
tblVehicleEF	LHD2	6.8450e-003	7.4530e-003
tblVehicleEF	LHD2	6.1000e-005	7.9000e-005

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tblVehicleEF	LHD2	7.2900e-004	0.05
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3600e-004	0.00
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.08	0.07
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.35	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	19.65	13.63
tblVehicleEF	MCY	9.37	8.60
tblVehicleEF	MCY	216.84	188.90
tblVehicleEF	MCY	61.60	50.69
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3200e-003
tblVehicleEF	MCY	1.18	0.60
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.2560e-003	2.0090e-003
tblVehicleEF	MCY	2.8450e-003	3.3550e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.1060e-003	1.8780e-003
tblVehicleEF	MCY	2.6700e-003	3.1500e-003
tblVehicleEF	MCY	0.88	4.99
tblVehicleEF	MCY	0.79	3.56
tblVehicleEF	MCY	0.45	0.00
tblVehicleEF	MCY	2.37	1.14
tblVehicleEF	MCY	0.60	3.99
tblVehicleEF	MCY	2.00	1.45

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tblVehicleEF	MCY	2.1460e-003	1.8670e-003
tblVehicleEF	MCY	6.1000e-004	5.0100e-004
tblVehicleEF	MCY	0.88	0.13
tblVehicleEF	MCY	0.79	3.56
tblVehicleEF	MCY	0.45	0.00
tblVehicleEF	MCY	2.95	1.37
tblVehicleEF	MCY	0.60	3.99
tblVehicleEF	MCY	2.17	1.58
tblVehicleEF	MDV	2.3680e-003	2.6230e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.63	0.77
tblVehicleEF	MDV	2.59	3.42
tblVehicleEF	MDV	340.38	372.69
tblVehicleEF	MDV	72.41	95.79
tblVehicleEF	MDV	6.1680e-003	6.5790e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.23	0.34
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	1.1840e-003	1.1420e-003
tblVehicleEF	MDV	1.4920e-003	1.8440e-003
tblVehicleEF	MDV	0.02	3.6150e-003
tblVehicleEF	MDV	1.0920e-003	1.0530e-003
tblVehicleEF	MDV	1.3720e-003	1.6960e-003
tblVehicleEF	MDV	0.07	0.40
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	9.7310e-003	0.01
tblVehicleEF	MDV	0.08	0.30

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tblVehicleEF	MDV	0.26	0.40
tblVehicleEF	MDV	3.1500e-003	3.6820e-003
tblVehicleEF	MDV	6.7000e-004	9.4700e-004
tblVehicleEF	MDV	0.07	0.40
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.08	0.30
tblVehicleEF	MDV	0.29	0.43
tblVehicleEF	MH	6.5260e-003	7.6380e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.46	0.52
tblVehicleEF	MH	1.64	1.85
tblVehicleEF	MH	1,387.36	1,603.71
tblVehicleEF	MH	15.21	18.39
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.56	1.83
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.9100e-004	2.0800e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3360e-003	3.3960e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.7600e-004	1.9100e-004
tblVehicleEF	MH	0.45	25.26
tblVehicleEF	MH	0.04	6.00

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tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	9.4360e-003	0.15
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5100e-004	1.8200e-004
tblVehicleEF	MH	0.45	25.26
tblVehicleEF	MH	0.04	6.00
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	9.4360e-003	0.15
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	2.2510e-003	0.01
tblVehicleEF	MHD	9.3200e-004	7.5480e-003
tblVehicleEF	MHD	5.1670e-003	5.6670e-003
tblVehicleEF	MHD	0.33	0.63
tblVehicleEF	MHD	0.15	0.15
tblVehicleEF	MHD	0.58	0.64
tblVehicleEF	MHD	63.79	151.67
tblVehicleEF	MHD	948.94	1,064.95
tblVehicleEF	MHD	5.12	5.75
tblVehicleEF	MHD	9.5220e-003	0.02
tblVehicleEF	MHD	0.13	0.14
tblVehicleEF	MHD	4.3630e-003	3.9190e-003
tblVehicleEF	MHD	0.34	0.77
tblVehicleEF	MHD	1.53	0.62
tblVehicleEF	MHD	1.88	1.32
tblVehicleEF	MHD	1.5400e-004	6.5200e-004
tblVehicleEF	MHD	0.13	0.04

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tblVehicleEF	MHD	7.6150e-003	5.5090e-003
tblVehicleEF	MHD	6.5000e-005	7.0000e-005
tblVehicleEF	MHD	1.4700e-004	6.2300e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	7.2820e-003	5.2650e-003
tblVehicleEF	MHD	6.0000e-005	6.4000e-005
tblVehicleEF	MHD	2.1800e-004	0.02
tblVehicleEF	MHD	0.01	3.5590e-003
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	1.2500e-004	0.00
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	6.0400e-004	1.4070e-003
tblVehicleEF	MHD	9.0150e-003	0.01
tblVehicleEF	MHD	5.1000e-005	5.7000e-005
tblVehicleEF	MHD	2.1800e-004	0.02
tblVehicleEF	MHD	0.01	3.5590e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	1.2500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	OBUS	6.8350e-003	7.8960e-003
tblVehicleEF	OBUS	2.7460e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.72	0.67
tblVehicleEF	OBUS	0.35	0.49
tblVehicleEF	OBUS	1.76	2.16

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tblVehicleEF	OBUS	110.91	102.09
tblVehicleEF	OBUS	1,190.08	1,369.24
tblVehicleEF	OBUS	13.53	16.41
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.13	0.15
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.50	0.37
tblVehicleEF	OBUS	1.54	1.03
tblVehicleEF	OBUS	1.21	0.88
tblVehicleEF	OBUS	1.6700e-004	3.9200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	8.4550e-003	0.02
tblVehicleEF	OBUS	1.6400e-004	1.8800e-004
tblVehicleEF	OBUS	1.6000e-004	3.7500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	8.0770e-003	0.02
tblVehicleEF	OBUS	1.5100e-004	1.7300e-004
tblVehicleEF	OBUS	1.3560e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	6.0100e-004	0.00
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.08	0.11
tblVehicleEF	OBUS	1.0520e-003	9.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3400e-004	1.6200e-004
tblVehicleEF	OBUS	1.3560e-003	0.10
tblVehicleEF	OBUS	0.02	0.02

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tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	6.0100e-004	0.00
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.09	0.12
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	3.7660e-003	0.18
tblVehicleEF	SBUS	3.2710e-003	2.6840e-003
tblVehicleEF	SBUS	1.84	1.19
tblVehicleEF	SBUS	0.30	0.82
tblVehicleEF	SBUS	0.46	0.35
tblVehicleEF	SBUS	325.82	172.93
tblVehicleEF	SBUS	1,016.49	1,011.56
tblVehicleEF	SBUS	2.64	2.14
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	3.4900e-003	3.0390e-003
tblVehicleEF	SBUS	2.68	1.13
tblVehicleEF	SBUS	3.29	1.75
tblVehicleEF	SBUS	1.25	0.47
tblVehicleEF	SBUS	1.8010e-003	7.4900e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	3.6000e-005	2.4000e-005
tblVehicleEF	SBUS	1.7230e-003	7.1400e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7960e-003	2.7360e-003
tblVehicleEF	SBUS	0.02	9.8800e-003

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tblVehicleEF	SBUS	3.3000e-005	2.2000e-005
tblVehicleEF	SBUS	4.1400e-004	0.02
tblVehicleEF	SBUS	4.2990e-003	5.6150e-003
tblVehicleEF	SBUS	0.18	0.11
tblVehicleEF	SBUS	2.0100e-004	0.00
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	9.3040e-003	0.02
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	3.0940e-003	1.4800e-003
tblVehicleEF	SBUS	9.6770e-003	9.0480e-003
tblVehicleEF	SBUS	2.6000e-005	2.1000e-005
tblVehicleEF	SBUS	4.1400e-004	0.02
tblVehicleEF	SBUS	4.2990e-003	5.6150e-003
tblVehicleEF	SBUS	0.25	0.23
tblVehicleEF	SBUS	2.0100e-004	0.00
tblVehicleEF	SBUS	0.07	0.23
tblVehicleEF	SBUS	9.3040e-003	0.02
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	UBUS	1.71	0.64
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	12.99	7.76
tblVehicleEF	UBUS	0.84	2.45
tblVehicleEF	UBUS	1,646.36	1,027.95
tblVehicleEF	UBUS	7.79	19.10
tblVehicleEF	UBUS	0.27	0.13
tblVehicleEF	UBUS	6.8450e-003	0.02
tblVehicleEF	UBUS	0.67	0.20
tblVehicleEF	UBUS	0.08	0.17
tblVehicleEF	UBUS	0.08	0.13

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tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	4.8850e-003	3.3910e-003
tblVehicleEF	UBUS	8.8000e-005	1.2900e-004
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	7.7720e-003	0.01
tblVehicleEF	UBUS	4.6670e-003	3.2310e-003
tblVehicleEF	UBUS	8.1000e-005	1.1900e-004
tblVehicleEF	UBUS	2.4900e-004	0.03
tblVehicleEF	UBUS	3.6220e-003	9.4370e-003
tblVehicleEF	UBUS	1.4800e-004	0.00
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.6800e-004	0.03
tblVehicleEF	UBUS	0.05	0.08
tblVehicleEF	UBUS	0.01	7.6070e-003
tblVehicleEF	UBUS	7.7000e-005	1.8900e-004
tblVehicleEF	UBUS	2.4900e-004	0.03
tblVehicleEF	UBUS	3.6220e-003	9.4370e-003
tblVehicleEF	UBUS	1.4800e-004	0.00
tblVehicleEF	UBUS	1.75	0.69
tblVehicleEF	UBUS	8.6800e-004	0.03
tblVehicleEF	UBUS	0.05	0.09
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	10,082,010.90	985,500.00
tblWater	OutdoorWaterUseRate	6,179,297.00	292,000.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

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Percent Reduction	**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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6235	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	100.3255	100.3255	0.0162	1.9700e-003	101.3176
Mobile	2.0287	1.6937	9.9609	0.0217	1.8820	0.0195	1.9016	0.4718	0.0184	0.4902	0.0000	2,020.4601	2,020.4601	0.1416	0.1460	2,067.5176
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	7.4620	0.0000	7.4620	0.4410	0.0000	18.4867
Water						0.0000	0.0000		0.0000	0.0000	0.3487	0.5880	0.9366	1.3000e-003	7.7000e-004	1.1984
Total	**2.6686**	**1.7397**	**10.0082**	**0.0218**	**1.8820**	**0.0220**	**1.9040**	**0.4718**	**0.0208**	**0.4926**	**7.8106**	**2,129.0000**	**2,136.8107**	**0.6013**	**0.1488**	**2,196.1740**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Area	0.6235	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	93.3028	93.3028	0.0151	1.8300e-003	94.2253
Mobile	2.0287	1.6937	9.9609	0.0217	1.8820	0.0195	1.9016	0.4718	0.0184	0.4902	0.0000	2,020.4601	2,020.4601	0.1416	0.1460	2,067.5176
Stationary	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Waste						0.0000	0.0000		0.0000	0.0000	7.4620	0.0000	7.4620	0.4410	0.0000	18.4867
Water						0.0000	0.0000		0.0000	0.0000	0.3487	0.5880	0.9366	1.3000e-003	7.7000e-004	1.1984
Total	**2.6686**	**1.7397**	**10.0082**	**0.0218**	**1.8820**	**0.0220**	**1.9040**	**0.4718**	**0.0208**	**0.4926**	**7.8106**	**2,121.9773**	**2,129.7879**	**0.6001**	**0.1486**	**2,189.0818**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.33**	**0.33**	**0.19**	**0.09**	**0.32**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/13/2022	9/12/2022	5	0	

Acres of Grading (Site Preparation Phase): 15.19

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

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OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	2.70	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	5.30	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0287	1.6937	9.9609	0.0217	1.8820	0.0195	1.9016	0.4718	0.0184	0.4902	0.0000	2,020.4601	2,020.4601	0.1416	0.1460	2,067.5176
Unmitigated	2.0287	1.6937	9.9609	0.0217	1.8820	0.0195	1.9016	0.4718	0.0184	0.4902	0.0000	2,020.4601	2,020.4601	0.1416	0.1460	2,067.5176

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4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	4,184.02	7,720.16	7594.94	5,538,651	5,538,651
Parking Lot	0.00	0.00	0.00		
Total	4,184.02	7,720.16	7,594.94	5,538,651	5,538,651

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Home Improvement Superstore	9.50	7.30	7.30	23.40	57.60	19.00	32	20	48
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.518249	0.034481	0.214924	0.132556	0.038169	0.010517	0.021562	0.021147	0.001476	0.001107	0.003805	0.001094	0.000914
Parking Lot	0.518249	0.034481	0.214924	0.132556	0.038169	0.010517	0.021562	0.021147	0.001476	0.001107	0.003805	0.001094	0.000914

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	93.3028	93.3028	0.0151	1.8300e-003	94.2253
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	100.3255	100.3255	0.0162	1.9700e-003	101.3176
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement Superstore	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement Superstore	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement Superstore	1.00039e+006	92.5595	0.0150	1.8200e-003	93.4748
Parking Lot	83935.3	7.7660	1.2600e-003	1.5000e-004	7.8428
Total		**100.3255**	**0.0162**	**1.9700e-003**	**101.3176**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

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Home Improvement	930359	86.0804	0.0139	1.6900e-003	86.9315
Parking Lot	78059.8	7.2224	1.1700e-003	1.4000e-004	7.2938
Total		**93.3028**	**0.0151**	**1.8300e-003**	**94.2253**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6235	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Unmitigated	0.6235	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

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Architectural Coating	0.0760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9000e-004	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.6235**	**5.0000e-005**	**5.4000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9000e-004	5.0000e-005	5.4000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.6235**	**5.0000e-005**	**5.4000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9366	1.3000e-003	7.7000e-004	1.1984
Unmitigated	0.9366	1.3000e-003	7.7000e-004	1.1984

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.9855 / 0.292	0.9366	1.3000e-003	7.7000e-004	1.1984
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9366**	**1.3000e-003**	**7.7000e-004**	**1.1984**

Mitigated

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	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.9855 / 0.292	0.9366	1.3000e-003	7.7000e-004	1.1984
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9366**	**1.3000e-003**	**7.7000e-004**	**1.1984**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4620	0.4410	0.0000	18.4867
Unmitigated	7.4620	0.4410	0.0000	18.4867

8.2 Waste by Land Use

Unmitigated

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	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	36.76	7.4620	0.4410	0.0000	18.4867
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4620**	**0.4410**	**0.0000**	**18.4867**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement Superstore	36.76	7.4620	0.4410	0.0000	18.4867
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4620**	**0.4410**	**0.0000**	**18.4867**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	400	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel	0.0164	0.0459	0.0418	8.0000e-005		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	7.6159	7.6159	1.0700e-003	0.0000	7.6426
Total	**0.0164**	**0.0459**	**0.0418**	**8.0000e-005**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**7.6159**	**7.6159**	**1.0700e-003**	**0.0000**	**7.6426**

11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Home Improvement Superstore	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - traffic only

Construction Phase - traffic only

Off-road Equipment - traffic only

Vehicle Trips - Existing traffic estimate

Vehicle Emission Factors - Emfac2021

Vehicle Emission Factors - x

Vehicle Emission Factors - x

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	0.00
tblGrading	AcresOfGrading	0.00	0.50

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleEF	HHD	0.02	0.18
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	5.38	4.65
tblVehicleEF	HHD	0.44	0.59
tblVehicleEF	HHD	0.02	1.4200e-003
tblVehicleEF	HHD	907.14	764.98
tblVehicleEF	HHD	1,446.45	1,689.08
tblVehicleEF	HHD	0.17	0.05
tblVehicleEF	HHD	0.14	0.12
tblVehicleEF	HHD	0.23	0.27
tblVehicleEF	HHD	2.4000e-005	3.4000e-005
tblVehicleEF	HHD	4.84	3.95
tblVehicleEF	HHD	2.86	2.17
tblVehicleEF	HHD	2.79	2.75
tblVehicleEF	HHD	3.0250e-003	3.0650e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	2.8950e-003	2.9270e-003
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.4910e-003	8.4740e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.0000e-006
tblVehicleEF	HHD	1.1000e-005	5.2000e-004
tblVehicleEF	HHD	5.7100e-004	1.4800e-004
tblVehicleEF	HHD	0.37	0.30

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tblVehicleEF	HHD	6.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	3.6900e-004	1.3560e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.4670e-003	6.7510e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	2.0000e-006	1.0000e-006
tblVehicleEF	HHD	1.1000e-005	5.2000e-004
tblVehicleEF	HHD	5.7100e-004	1.4800e-004
tblVehicleEF	HHD	0.42	0.51
tblVehicleEF	HHD	6.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.09
tblVehicleEF	HHD	3.6900e-004	1.3560e-003
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	2.2540e-003	2.5930e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.59	0.76
tblVehicleEF	LDA	2.22	3.37
tblVehicleEF	LDA	244.65	256.66
tblVehicleEF	LDA	51.03	67.23
tblVehicleEF	LDA	4.6180e-003	5.0140e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.18	0.26
tblVehicleEF	LDA	0.04	8.4520e-003
tblVehicleEF	LDA	1.5340e-003	1.3470e-003
tblVehicleEF	LDA	1.7650e-003	2.0370e-003
tblVehicleEF	LDA	0.02	2.9580e-003
tblVehicleEF	LDA	1.4150e-003	1.2420e-003

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tblVehicleEF	LDA	1.6230e-003	1.8730e-003
tblVehicleEF	LDA	0.04	0.33
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	8.8880e-003	0.01
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.22	0.35
tblVehicleEF	LDA	2.4200e-003	2.5370e-003
tblVehicleEF	LDA	5.0500e-004	6.6500e-004
tblVehicleEF	LDA	0.04	0.33
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.24	0.38
tblVehicleEF	LDA	0.68	0.69
tblVehicleEF	LDA	1.74	1.74
tblVehicleEF	LDA	260.64	265.98
tblVehicleEF	LDA	50.13	51.17
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	1.5340e-003	1.5410e-003
tblVehicleEF	LDA	1.7650e-003	1.7740e-003
tblVehicleEF	LDA	1.4150e-003	1.4220e-003
tblVehicleEF	LDA	1.6230e-003	1.6310e-003
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	9.7090e-003	9.7200e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.20	0.20
tblVehicleEF	LDA	0.58	0.59
tblVehicleEF	LDA	2.61	2.62
tblVehicleEF	LDA	241.93	246.87
tblVehicleEF	LDA	51.74	52.81
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.20	0.20
tblVehicleEF	LDA	1.5340e-003	1.5410e-003
tblVehicleEF	LDA	1.7650e-003	1.7740e-003
tblVehicleEF	LDA	1.4150e-003	1.4220e-003
tblVehicleEF	LDA	1.6230e-003	1.6310e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	8.6370e-003	8.6460e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.25	0.25
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.03

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	LDA	0.27	0.27
tblVehicleEF	LDT1	6.1950e-003	9.2600e-003
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	1.24	1.97
tblVehicleEF	LDT1	2.56	7.47
tblVehicleEF	LDT1	300.23	335.44
tblVehicleEF	LDT1	64.23	93.02
tblVehicleEF	LDT1	8.4610e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.19
tblVehicleEF	LDT1	0.29	0.50
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	2.1490e-003	2.4830e-003
tblVehicleEF	LDT1	2.5560e-003	3.6720e-003
tblVehicleEF	LDT1	0.02	3.7750e-003
tblVehicleEF	LDT1	1.9800e-003	2.2880e-003
tblVehicleEF	LDT1	2.3510e-003	3.3760e-003
tblVehicleEF	LDT1	0.12	0.88
tblVehicleEF	LDT1	0.26	0.24
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.14	0.72
tblVehicleEF	LDT1	0.42	0.76
tblVehicleEF	LDT1	2.9710e-003	3.3160e-003
tblVehicleEF	LDT1	6.3600e-004	9.2000e-004
tblVehicleEF	LDT1	0.12	0.88
tblVehicleEF	LDT1	0.26	0.24
tblVehicleEF	LDT1	0.09	0.00
tblVehicleEF	LDT1	0.04	0.06

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tblVehicleEF	LDT1	0.14	0.72
tblVehicleEF	LDT1	0.46	0.84
tblVehicleEF	LDT1	1.40	1.41
tblVehicleEF	LDT1	2.00	2.01
tblVehicleEF	LDT1	317.02	323.58
tblVehicleEF	LDT1	63.09	64.39
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	2.1490e-003	2.1600e-003
tblVehicleEF	LDT1	2.5560e-003	2.5700e-003
tblVehicleEF	LDT1	1.9800e-003	1.9890e-003
tblVehicleEF	LDT1	2.3510e-003	2.3630e-003
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.34	0.35
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.38	0.38
tblVehicleEF	LDT1	1.23	1.23
tblVehicleEF	LDT1	3.02	3.03
tblVehicleEF	LDT1	297.29	303.44
tblVehicleEF	LDT1	65.16	66.51
tblVehicleEF	LDT1	0.13	0.13

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tblVehicleEF	LDT1	0.32	0.32
tblVehicleEF	LDT1	2.1490e-003	2.1600e-003
tblVehicleEF	LDT1	2.5560e-003	2.5700e-003
tblVehicleEF	LDT1	1.9800e-003	1.9890e-003
tblVehicleEF	LDT1	2.3510e-003	2.3630e-003
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.27	0.27
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.48	0.48
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.27	0.27
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.52	0.53
tblVehicleEF	LDT2	3.9110e-003	3.3880e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.87	0.95
tblVehicleEF	LDT2	2.88	4.20
tblVehicleEF	LDT2	317.01	344.53
tblVehicleEF	LDT2	67.96	89.75
tblVehicleEF	LDT2	6.8600e-003	6.9940e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	0.29	0.38
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	1.5530e-003	1.4500e-003

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tblVehicleEF	LDT2	1.8180e-003	2.2130e-003
tblVehicleEF	LDT2	0.02	3.5780e-003
tblVehicleEF	LDT2	1.4300e-003	1.3340e-003
tblVehicleEF	LDT2	1.6720e-003	2.0350e-003
tblVehicleEF	LDT2	0.07	0.35
tblVehicleEF	LDT2	0.16	0.10
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	0.08	0.27
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LDT2	3.1360e-003	3.4050e-003
tblVehicleEF	LDT2	6.7200e-004	8.8700e-004
tblVehicleEF	LDT2	0.07	0.35
tblVehicleEF	LDT2	0.16	0.10
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.27
tblVehicleEF	LDT2	0.38	0.48
tblVehicleEF	LDT2	0.99	1.00
tblVehicleEF	LDT2	2.25	2.26
tblVehicleEF	LDT2	333.21	340.06
tblVehicleEF	LDT2	66.75	68.14
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.26	0.26
tblVehicleEF	LDT2	1.5530e-003	1.5600e-003
tblVehicleEF	LDT2	1.8180e-003	1.8270e-003
tblVehicleEF	LDT2	1.4300e-003	1.4370e-003
tblVehicleEF	LDT2	1.6720e-003	1.6800e-003
tblVehicleEF	LDT2	0.17	0.17

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tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.28	0.28
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.31	0.31
tblVehicleEF	LDT2	0.86	0.86
tblVehicleEF	LDT2	3.39	3.41
tblVehicleEF	LDT2	314.22	320.67
tblVehicleEF	LDT2	68.92	70.35
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.32	0.32
tblVehicleEF	LDT2	1.5530e-003	1.5600e-003
tblVehicleEF	LDT2	1.8180e-003	1.8270e-003
tblVehicleEF	LDT2	1.4300e-003	1.4370e-003
tblVehicleEF	LDT2	1.6720e-003	1.6800e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.16	0.16
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.39	0.39
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.16	0.16

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tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.43	0.43
tblVehicleEF	LHD1	4.0660e-003	4.3970e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.16	0.17
tblVehicleEF	LHD1	1.20	1.14
tblVehicleEF	LHD1	0.95	1.69
tblVehicleEF	LHD1	9.58	9.38
tblVehicleEF	LHD1	760.21	774.13
tblVehicleEF	LHD1	9.34	14.01
tblVehicleEF	LHD1	9.7900e-004	8.9800e-004
tblVehicleEF	LHD1	0.06	0.06
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.10	0.09
tblVehicleEF	LHD1	1.65	1.39
tblVehicleEF	LHD1	0.26	0.36
tblVehicleEF	LHD1	1.1410e-003	1.0330e-003
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.5300e-004	2.4100e-004
tblVehicleEF	LHD1	1.0920e-003	9.8800e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5570e-003	2.5000e-003
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.3300e-004	2.2100e-004

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tblVehicleEF	LHD1	2.1680e-003	0.13
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0570e-003	0.00
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	0.33	0.19
tblVehicleEF	LHD1	0.07	0.10
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	7.3840e-003	7.5210e-003
tblVehicleEF	LHD1	9.3000e-005	1.3800e-004
tblVehicleEF	LHD1	2.1680e-003	0.13
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0570e-003	0.00
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.33	0.19
tblVehicleEF	LHD1	0.08	0.11
tblVehicleEF	LHD2	2.8720e-003	2.9280e-003
tblVehicleEF	LHD2	7.8900e-003	8.1060e-003
tblVehicleEF	LHD2	8.0290e-003	0.01
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.77	0.65
tblVehicleEF	LHD2	0.53	1.04
tblVehicleEF	LHD2	14.87	14.53
tblVehicleEF	LHD2	771.37	842.13
tblVehicleEF	LHD2	6.79	8.61
tblVehicleEF	LHD2	1.9370e-003	1.8660e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.01	0.02

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tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.39	1.21
tblVehicleEF	LHD2	0.17	0.22
tblVehicleEF	LHD2	1.5220e-003	1.4750e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.0800e-004	8.7000e-005
tblVehicleEF	LHD2	1.4560e-003	1.4110e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7270e-003	2.7030e-003
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	9.9000e-005	8.0000e-005
tblVehicleEF	LHD2	9.0300e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8900e-004	0.00
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.11	0.08
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	1.4200e-004	1.3900e-004
tblVehicleEF	LHD2	7.4310e-003	8.1000e-003
tblVehicleEF	LHD2	6.7000e-005	8.5000e-005
tblVehicleEF	LHD2	9.0300e-004	0.05
tblVehicleEF	LHD2	0.04	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.8900e-004	0.00
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.11	0.08

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tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	MCY	0.36	0.20
tblVehicleEF	MCY	0.27	0.22
tblVehicleEF	MCY	21.46	15.97
tblVehicleEF	MCY	9.19	8.76
tblVehicleEF	MCY	217.66	192.12
tblVehicleEF	MCY	63.40	56.26
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	0.01
tblVehicleEF	MCY	1.19	0.68
tblVehicleEF	MCY	0.28	0.18
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1330e-003	1.9930e-003
tblVehicleEF	MCY	3.2060e-003	3.7350e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9970e-003	1.8700e-003
tblVehicleEF	MCY	3.0250e-003	3.5240e-003
tblVehicleEF	MCY	0.91	4.90
tblVehicleEF	MCY	0.88	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.49	1.39
tblVehicleEF	MCY	0.78	3.91
tblVehicleEF	MCY	2.08	1.69
tblVehicleEF	MCY	2.1540e-003	1.8990e-003
tblVehicleEF	MCY	6.2700e-004	5.5600e-004
tblVehicleEF	MCY	0.91	0.15
tblVehicleEF	MCY	0.88	3.55
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	3.05	1.64

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tblVehicleEF	MCY	0.78	3.91
tblVehicleEF	MCY	2.26	1.83
tblVehicleEF	MDV	4.5840e-003	4.6000e-003
tblVehicleEF	MDV	0.09	0.12
tblVehicleEF	MDV	0.93	1.11
tblVehicleEF	MDV	3.33	4.72
tblVehicleEF	MDV	390.40	419.98
tblVehicleEF	MDV	83.06	108.54
tblVehicleEF	MDV	9.2130e-003	0.01
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.37	0.51
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	1.6360e-003	1.5890e-003
tblVehicleEF	MDV	1.9350e-003	2.3660e-003
tblVehicleEF	MDV	0.02	3.6720e-003
tblVehicleEF	MDV	1.5110e-003	1.4680e-003
tblVehicleEF	MDV	1.7800e-003	2.1750e-003
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.08	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.09	0.36
tblVehicleEF	MDV	0.44	0.62
tblVehicleEF	MDV	3.8580e-003	4.1480e-003
tblVehicleEF	MDV	8.2200e-004	1.0730e-003
tblVehicleEF	MDV	0.09	0.46
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.08	0.00

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tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.36
tblVehicleEF	MDV	0.48	0.68
tblVehicleEF	MDV	1.06	1.07
tblVehicleEF	MDV	2.60	2.61
tblVehicleEF	MDV	407.10	415.29
tblVehicleEF	MDV	81.64	83.33
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.32	0.32
tblVehicleEF	MDV	1.6360e-003	1.6440e-003
tblVehicleEF	MDV	1.9350e-003	1.9450e-003
tblVehicleEF	MDV	1.5110e-003	1.5180e-003
tblVehicleEF	MDV	1.7800e-003	1.7890e-003
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.36	0.37
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.40	0.40
tblVehicleEF	MDV	0.92	0.93
tblVehicleEF	MDV	3.93	3.94
tblVehicleEF	MDV	387.50	395.29
tblVehicleEF	MDV	84.21	85.96

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tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.40	0.40
tblVehicleEF	MDV	1.6360e-003	1.6440e-003
tblVehicleEF	MDV	1.9350e-003	1.9450e-003
tblVehicleEF	MDV	1.5110e-003	1.5180e-003
tblVehicleEF	MDV	1.7800e-003	1.7890e-003
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.50	0.50
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.55	0.55
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.41	1.46
tblVehicleEF	MH	2.09	2.40
tblVehicleEF	MH	1,530.18	1,636.44
tblVehicleEF	MH	17.84	21.01
tblVehicleEF	MH	0.07	0.08
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.90	2.00
tblVehicleEF	MH	0.24	0.28
tblVehicleEF	MH	0.13	0.04

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tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	2.5700e-004	2.9500e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3160e-003	3.3600e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	2.3600e-004	2.7200e-004
tblVehicleEF	MH	0.73	34.52
tblVehicleEF	MH	0.07	9.05
tblVehicleEF	MH	0.26	0.00
tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.11
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.7700e-004	2.0800e-004
tblVehicleEF	MH	0.73	34.52
tblVehicleEF	MH	0.07	9.05
tblVehicleEF	MH	0.26	0.00
tblVehicleEF	MH	0.12	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MHD	2.3920e-003	0.01
tblVehicleEF	MHD	1.7580e-003	7.8790e-003
tblVehicleEF	MHD	6.8540e-003	8.5060e-003
tblVehicleEF	MHD	0.33	0.68
tblVehicleEF	MHD	0.25	0.36
tblVehicleEF	MHD	0.87	1.07
tblVehicleEF	MHD	69.69	163.33
tblVehicleEF	MHD	1,042.49	1,214.46

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tblVehicleEF	MHD	6.53	8.25
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	4.6810e-003	5.5400e-003
tblVehicleEF	MHD	0.40	0.89
tblVehicleEF	MHD	1.57	1.06
tblVehicleEF	MHD	1.83	1.47
tblVehicleEF	MHD	3.4700e-004	2.1920e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	7.8910e-003	0.01
tblVehicleEF	MHD	8.9000e-005	1.1500e-004
tblVehicleEF	MHD	3.3200e-004	2.0970e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	7.5450e-003	0.01
tblVehicleEF	MHD	8.2000e-005	1.0500e-004
tblVehicleEF	MHD	3.6600e-004	0.03
tblVehicleEF	MHD	0.02	6.7300e-003
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	1.8500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	6.6000e-004	1.5280e-003
tblVehicleEF	MHD	9.9040e-003	0.01
tblVehicleEF	MHD	6.5000e-005	8.2000e-005
tblVehicleEF	MHD	3.6600e-004	0.03
tblVehicleEF	MHD	0.02	6.7300e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.8500e-004	0.00

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tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	OBUS	7.2230e-003	8.1960e-003
tblVehicleEF	OBUS	5.0090e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.63	0.58
tblVehicleEF	OBUS	0.60	0.81
tblVehicleEF	OBUS	2.20	2.73
tblVehicleEF	OBUS	99.59	88.64
tblVehicleEF	OBUS	1,342.68	1,521.11
tblVehicleEF	OBUS	16.40	20.31
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.14	0.14
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.41	0.37
tblVehicleEF	OBUS	1.51	1.18
tblVehicleEF	OBUS	1.07	0.86
tblVehicleEF	OBUS	1.3400e-004	4.8400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.9000e-003	0.02
tblVehicleEF	OBUS	1.7700e-004	2.1800e-004
tblVehicleEF	OBUS	1.2800e-004	4.6300e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5450e-003	0.02
tblVehicleEF	OBUS	1.6300e-004	2.0000e-004
tblVehicleEF	OBUS	1.4070e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05

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tblVehicleEF	OBUS	6.0200e-004	0.00
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.10	0.13
tblVehicleEF	OBUS	9.4600e-004	8.4200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.6200e-004	2.0100e-004
tblVehicleEF	OBUS	1.4070e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	6.0200e-004	0.00
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.11	0.14
tblVehicleEF	SBUS	0.03	0.09
tblVehicleEF	SBUS	4.2900e-003	0.20
tblVehicleEF	SBUS	2.6150e-003	2.4670e-003
tblVehicleEF	SBUS	1.54	1.14
tblVehicleEF	SBUS	0.32	0.91
tblVehicleEF	SBUS	0.38	0.34
tblVehicleEF	SBUS	335.73	182.05
tblVehicleEF	SBUS	1,073.56	1,086.55
tblVehicleEF	SBUS	2.23	2.11
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.15	0.15
tblVehicleEF	SBUS	2.6560e-003	2.6520e-003
tblVehicleEF	SBUS	3.17	1.38
tblVehicleEF	SBUS	4.20	2.63
tblVehicleEF	SBUS	1.02	0.44

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tblVehicleEF	SBUS	2.6880e-003	1.1780e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.8000e-005	2.2000e-005
tblVehicleEF	SBUS	2.5720e-003	1.1250e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.8250e-003	2.7570e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	2.5000e-005	2.0000e-005
tblVehicleEF	SBUS	2.2700e-004	0.01
tblVehicleEF	SBUS	2.3150e-003	3.4230e-003
tblVehicleEF	SBUS	0.15	0.11
tblVehicleEF	SBUS	1.0500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	5.2190e-003	6.0400e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	3.1850e-003	1.5740e-003
tblVehicleEF	SBUS	0.01	9.7280e-003
tblVehicleEF	SBUS	2.2000e-005	2.1000e-005
tblVehicleEF	SBUS	2.2700e-004	0.01
tblVehicleEF	SBUS	2.3150e-003	3.4230e-003
tblVehicleEF	SBUS	0.21	0.23
tblVehicleEF	SBUS	1.0500e-004	0.00
tblVehicleEF	SBUS	0.08	0.25
tblVehicleEF	SBUS	5.2190e-003	6.0400e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	UBUS	2.91	0.59
tblVehicleEF	UBUS	0.01	0.02

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tblVehicleEF	UBUS	22.44	9.62
tblVehicleEF	UBUS	0.84	2.65
tblVehicleEF	UBUS	1,754.72	1,284.51
tblVehicleEF	UBUS	8.50	20.82
tblVehicleEF	UBUS	0.30	0.18
tblVehicleEF	UBUS	6.7320e-003	0.03
tblVehicleEF	UBUS	0.61	0.31
tblVehicleEF	UBUS	0.08	0.21
tblVehicleEF	UBUS	0.08	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	4.3900e-003	2.5940e-003
tblVehicleEF	UBUS	7.7000e-005	1.2800e-004
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	7.7720e-003	6.3860e-003
tblVehicleEF	UBUS	4.1940e-003	2.4690e-003
tblVehicleEF	UBUS	7.1000e-005	1.1800e-004
tblVehicleEF	UBUS	2.5800e-004	0.04
tblVehicleEF	UBUS	3.7890e-003	0.02
tblVehicleEF	UBUS	1.5300e-004	0.00
tblVehicleEF	UBUS	0.04	0.03
tblVehicleEF	UBUS	9.5700e-004	0.04
tblVehicleEF	UBUS	0.05	0.10
tblVehicleEF	UBUS	8.1380e-003	6.7480e-003
tblVehicleEF	UBUS	8.4000e-005	2.0600e-004
tblVehicleEF	UBUS	2.5800e-004	0.04
tblVehicleEF	UBUS	3.7890e-003	0.02
tblVehicleEF	UBUS	1.5300e-004	0.00
tblVehicleEF	UBUS	2.97	0.63
tblVehicleEF	UBUS	9.5700e-004	0.04

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tblVehicleEF	UBUS	0.05	0.10
tblVehicleTrips	CC_TL	7.30	13.60
tblVehicleTrips	CNW_TL	7.30	13.60
tblVehicleTrips	CW_TL	9.50	13.60
tblVehicleTrips	ST_TR	56.72	446.00
tblVehicleTrips	SU_TR	55.80	446.00
tblVehicleTrips	WD_TR	30.74	446.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	1.0862	1.0862	1.6000e-004	2.0000e-005	1.0964
Mobile	0.3678	0.2489	1.9676	3.2700e-003	0.2787	3.3400e-003	0.2820	0.0697	3.1400e-003	0.0729	0.0000	302.8910	302.8910	0.0232	0.0182	308.8806
Waste						0.0000	0.0000		0.0000	0.0000	2.2512	0.0000	2.2512	0.1330	0.0000	5.5772
Water						0.0000	0.0000		0.0000	0.0000	0.0235	0.0518	0.0753	2.4200e-003	6.0000e-005	0.1531
Total	**0.3722**	**0.2490**	**1.9678**	**3.2700e-003**	**0.2787**	**3.3500e-003**	**0.2820**	**0.0697**	**3.1500e-003**	**0.0729**	**2.2747**	**304.0290**	**306.3037**	**0.1588**	**0.0182**	**315.7074**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	1.0862	1.0862	1.6000e-004	2.0000e-005	1.0964
Mobile	0.3678	0.2489	1.9676	3.2700e-003	0.2787	3.3400e-003	0.2820	0.0697	3.1400e-003	0.0729	0.0000	302.8910	302.8910	0.0232	0.0182	308.8806
Waste						0.0000	0.0000		0.0000	0.0000	2.2512	0.0000	2.2512	0.1330	0.0000	5.5772
Water						0.0000	0.0000		0.0000	0.0000	0.0235	0.0518	0.0753	2.4200e-003	6.0000e-005	0.1531
Total	**0.3722**	**0.2490**	**1.9678**	**3.2700e-003**	**0.2787**	**3.3500e-003**	**0.2820**	**0.0697**	**3.1500e-003**	**0.0729**	**2.2747**	**304.0290**	**306.3037**	**0.1588**	**0.0182**	**315.7074**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3678	0.2489	1.9676	3.2700e-003	0.2787	3.3400e-003	0.2820	0.0697	3.1400e-003	0.0729	0.0000	302.8910	302.8910	0.0232	0.0182	308.8806
Unmitigated	0.3678	0.2489	1.9676	3.2700e-003	0.2787	3.3400e-003	0.2820	0.0697	3.1400e-003	0.0729	0.0000	302.8910	302.8910	0.0232	0.0182	308.8806

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	446.00	446.00	446.00	824,708	824,708
Total	446.00	446.00	446.00	824,708	824,708

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Home Improvement Superstore	13.60	13.60	13.60	23.40	57.60	19.00	32	20	48

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.536774	0.058783	0.173424	0.127345	0.036375	0.008877	0.014453	0.006568	0.001093	0.000297	0.030119	0.001546	0.004347

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.9613	0.9613	1.6000e-004	2.0000e-005	0.9708
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.9613	0.9613	1.6000e-004	2.0000e-005	0.9708
NaturalGas Mitigated	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
NaturalGas Unmitigated	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement	2340	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
Total		**1.0000e-005**	**1.1000e-004**	**1.0000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1249**	**0.1249**	**0.0000**	**0.0000**	**0.1256**

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement	2340	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
Total		**1.0000e-005**	**1.1000e-004**	**1.0000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1249**	**0.1249**	**0.0000**	**0.0000**	**0.1256**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement	10390	0.9613	1.6000e-004	2.0000e-005	0.9708
Total		**0.9613**	**1.6000e-004**	**2.0000e-005**	**0.9708**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Home Depot Current Petaluma Traffic - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	kWh/yr	MT/yr			
Home Improvement	10390	0.9613	1.6000e-004	2.0000e-005	0.9708
Total		**0.9613**	**1.6000e-004**	**2.0000e-005**	**0.9708**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

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Architectural Coating	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.4300e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.4300e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

Home Depot Current Petaluma Traffic - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0753	2.4200e-003	6.0000e-005	0.1531
Unmitigated	0.0753	2.4200e-003	6.0000e-005	0.1531

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.0740725 /	0.0753	2.4200e-003	6.0000e-005	0.1531
Total		**0.0753**	**2.4200e-003**	**6.0000e-005**	**0.1531**

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.0740725 /	0.0753	2.4200e-003	6.0000e-005	0.1531
Total		**0.0753**	**2.4200e-003**	**6.0000e-005**	**0.1531**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.2512	0.1330	0.0000	5.5772
Unmitigated	2.2512	0.1330	0.0000	5.5772

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	tons	MT/yr			
Home Improvement	11.09	2.2512	0.1330	0.0000	5.5772
Total		**2.2512**	**0.1330**	**0.0000**	**5.5772**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement	11.09	2.2512	0.1330	0.0000	5.5772
Total		**2.2512**	**0.1330**	**0.0000**	**5.5772**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Home Depot Current Petaluma Traffic

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Home Improvement Superstore	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - traffic only

Construction Phase - traffic only

Off-road Equipment - traffic only

Vehicle Trips - Existing traffic estimate

Vehicle Emission Factors - Emfac2021

Vehicle Emission Factors - x

Vehicle Emission Factors - x

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	0.00
tblGrading	AcresOfGrading	0.00	0.50

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleEF	HHD	0.02	0.16
tblVehicleEF	HHD	0.05	0.05
tblVehicleEF	HHD	5.32	4.50
tblVehicleEF	HHD	0.44	0.50
tblVehicleEF	HHD	8.8140e-003	1.0180e-003
tblVehicleEF	HHD	799.72	667.01
tblVehicleEF	HHD	1,274.41	1,456.96
tblVehicleEF	HHD	0.10	0.01
tblVehicleEF	HHD	0.13	0.11
tblVehicleEF	HHD	0.20	0.23
tblVehicleEF	HHD	4.53	3.58
tblVehicleEF	HHD	2.56	1.63
tblVehicleEF	HHD	2.87	2.64
tblVehicleEF	HHD	2.1180e-003	1.9490e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0270e-003	1.8590e-003
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	8.4640e-003	8.4790e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	3.0000e-006	5.3000e-005
tblVehicleEF	HHD	1.6400e-004	1.5000e-005
tblVehicleEF	HHD	0.36	0.28
tblVehicleEF	HHD	2.0000e-006	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	8.7000e-005	1.3400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	7.4340e-003	5.8090e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	3.0000e-006	5.3000e-005
tblVehicleEF	HHD	1.6400e-004	1.5000e-005
tblVehicleEF	HHD	0.41	0.47
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.08	0.07
tblVehicleEF	HHD	8.7000e-005	1.3400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	1.2000e-003	1.4860e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.44	0.54
tblVehicleEF	LDA	1.80	2.36
tblVehicleEF	LDA	207.56	223.71
tblVehicleEF	LDA	43.11	58.17
tblVehicleEF	LDA	3.5250e-003	3.5720e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.13	0.20
tblVehicleEF	LDA	0.04	8.2560e-003
tblVehicleEF	LDA	1.0620e-003	9.3000e-004
tblVehicleEF	LDA	1.3450e-003	1.5720e-003
tblVehicleEF	LDA	0.02	2.8900e-003
tblVehicleEF	LDA	9.7700e-004	8.5600e-004
tblVehicleEF	LDA	1.2370e-003	1.4450e-003

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tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	4.2500e-003	5.3610e-003
tblVehicleEF	LDA	0.02	0.20
tblVehicleEF	LDA	0.13	0.23
tblVehicleEF	LDA	2.0530e-003	2.2110e-003
tblVehicleEF	LDA	4.2700e-004	5.7500e-004
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	6.1670e-003	7.8090e-003
tblVehicleEF	LDA	0.02	0.20
tblVehicleEF	LDA	0.15	0.25
tblVehicleEF	LDA	0.50	0.51
tblVehicleEF	LDA	1.41	1.43
tblVehicleEF	LDA	221.04	236.40
tblVehicleEF	LDA	42.42	45.40
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	1.0620e-003	1.0760e-003
tblVehicleEF	LDA	1.3450e-003	1.3650e-003
tblVehicleEF	LDA	9.7700e-004	9.9100e-004
tblVehicleEF	LDA	1.2370e-003	1.2550e-003
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	4.6470e-003	4.6630e-003
tblVehicleEF	LDA	0.02	0.02

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	6.7460e-003	6.7700e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.43	0.44
tblVehicleEF	LDA	2.11	2.14
tblVehicleEF	LDA	205.25	219.50
tblVehicleEF	LDA	43.67	46.74
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.0620e-003	1.0760e-003
tblVehicleEF	LDA	1.3450e-003	1.3650e-003
tblVehicleEF	LDA	9.7700e-004	9.9100e-004
tblVehicleEF	LDA	1.2370e-003	1.2550e-003
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	4.1260e-003	4.1410e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	5.9860e-003	6.0080e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.17	0.17

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	LDT1	2.6560e-003	5.0380e-003
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.68	1.23
tblVehicleEF	LDT1	1.99	4.98
tblVehicleEF	LDT1	254.02	305.46
tblVehicleEF	LDT1	54.09	82.23
tblVehicleEF	LDT1	4.8290e-003	8.0630e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	1.2820e-003	1.6080e-003
tblVehicleEF	LDT1	1.6790e-003	2.6360e-003
tblVehicleEF	LDT1	0.02	3.7400e-003
tblVehicleEF	LDT1	1.1790e-003	1.4790e-003
tblVehicleEF	LDT1	1.5440e-003	2.4240e-003
tblVehicleEF	LDT1	0.07	0.71
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.09	0.54
tblVehicleEF	LDT1	0.22	0.50
tblVehicleEF	LDT1	2.5140e-003	3.0200e-003
tblVehicleEF	LDT1	5.3500e-004	8.1300e-004
tblVehicleEF	LDT1	0.07	0.71
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.09	0.54

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tblVehicleEF	LDT1	0.24	0.55
tblVehicleEF	LDT1	0.78	0.79
tblVehicleEF	LDT1	1.56	1.59
tblVehicleEF	LDT1	268.15	286.97
tblVehicleEF	LDT1	53.28	57.02
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	1.2820e-003	1.3010e-003
tblVehicleEF	LDT1	1.6790e-003	1.7030e-003
tblVehicleEF	LDT1	1.1790e-003	1.1960e-003
tblVehicleEF	LDT1	1.5440e-003	1.5660e-003
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.17	0.17
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.20	0.20
tblVehicleEF	LDT1	0.67	0.68
tblVehicleEF	LDT1	2.34	2.38
tblVehicleEF	LDT1	251.56	269.22
tblVehicleEF	LDT1	54.75	58.59
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.21

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tblVehicleEF	LDT1	1.2820e-003	1.3010e-003
tblVehicleEF	LDT1	1.6790e-003	1.7030e-003
tblVehicleEF	LDT1	1.1790e-003	1.1960e-003
tblVehicleEF	LDT1	1.5440e-003	1.5660e-003
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.25	0.26
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.28	0.28
tblVehicleEF	LDT2	2.1940e-003	2.1910e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.61	0.71
tblVehicleEF	LDT2	2.40	3.13
tblVehicleEF	LDT2	260.16	307.92
tblVehicleEF	LDT2	55.69	79.30
tblVehicleEF	LDT2	4.6490e-003	5.0580e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.19	0.28
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	1.1500e-003	1.0890e-003
tblVehicleEF	LDT2	1.4250e-003	1.7720e-003

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tblVehicleEF	LDT2	0.02	3.5570e-003
tblVehicleEF	LDT2	1.0590e-003	1.0020e-003
tblVehicleEF	LDT2	1.3100e-003	1.6290e-003
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6940e-003	8.3290e-003
tblVehicleEF	LDT2	0.07	0.23
tblVehicleEF	LDT2	0.22	0.31
tblVehicleEF	LDT2	2.5730e-003	3.0440e-003
tblVehicleEF	LDT2	5.5100e-004	7.8400e-004
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.23
tblVehicleEF	LDT2	0.24	0.34
tblVehicleEF	LDT2	0.70	0.72
tblVehicleEF	LDT2	1.88	1.91
tblVehicleEF	LDT2	273.30	292.33
tblVehicleEF	LDT2	54.74	58.58
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	1.1500e-003	1.1660e-003
tblVehicleEF	LDT2	1.4250e-003	1.4450e-003
tblVehicleEF	LDT2	1.0590e-003	1.0730e-003
tblVehicleEF	LDT2	1.3100e-003	1.3290e-003
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.13	0.13

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tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	9.5090e-003	9.5430e-003
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.18	0.18
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.20	0.20
tblVehicleEF	LDT2	0.61	0.61
tblVehicleEF	LDT2	2.82	2.86
tblVehicleEF	LDT2	257.89	275.84
tblVehicleEF	LDT2	56.46	60.42
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.1500e-003	1.1660e-003
tblVehicleEF	LDT2	1.4250e-003	1.4450e-003
tblVehicleEF	LDT2	1.0590e-003	1.0730e-003
tblVehicleEF	LDT2	1.3100e-003	1.3290e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	8.4500e-003	8.4810e-003
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.25	0.25
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.02	0.02

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tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.27	0.27
tblVehicleEF	LHD1	3.7420e-003	4.0020e-003
tblVehicleEF	LHD1	7.9950e-003	7.5020e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.16	0.17
tblVehicleEF	LHD1	0.79	0.78
tblVehicleEF	LHD1	0.86	1.72
tblVehicleEF	LHD1	9.02	8.78
tblVehicleEF	LHD1	706.55	705.59
tblVehicleEF	LHD1	8.92	13.80
tblVehicleEF	LHD1	9.1700e-004	8.2600e-004
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.95	0.87
tblVehicleEF	LHD1	0.22	0.32
tblVehicleEF	LHD1	1.1020e-003	9.4800e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8070e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.2300e-004	1.7500e-004
tblVehicleEF	LHD1	1.0540e-003	9.0700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5420e-003	2.4520e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.0500e-004	1.6100e-004
tblVehicleEF	LHD1	1.8450e-003	0.11

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tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4800e-004	0.00
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.36	0.16
tblVehicleEF	LHD1	0.05	0.08
tblVehicleEF	LHD1	8.7000e-005	8.5000e-005
tblVehicleEF	LHD1	6.8670e-003	6.8570e-003
tblVehicleEF	LHD1	8.8000e-005	1.3600e-004
tblVehicleEF	LHD1	1.8450e-003	0.11
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.4800e-004	0.00
tblVehicleEF	LHD1	0.13	0.12
tblVehicleEF	LHD1	0.36	0.16
tblVehicleEF	LHD1	0.06	0.09
tblVehicleEF	LHD2	2.5350e-003	2.5990e-003
tblVehicleEF	LHD2	6.3230e-003	6.0210e-003
tblVehicleEF	LHD2	5.7120e-003	9.2620e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.63	0.50
tblVehicleEF	LHD2	0.46	0.99
tblVehicleEF	LHD2	14.12	14.23
tblVehicleEF	LHD2	710.65	775.46
tblVehicleEF	LHD2	6.14	7.99
tblVehicleEF	LHD2	1.8570e-003	1.8460e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.11

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tblVehicleEF	LHD2	0.86	0.89
tblVehicleEF	LHD2	0.14	0.19
tblVehicleEF	LHD2	1.5620e-003	1.5200e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	9.2000e-005	5.5000e-005
tblVehicleEF	LHD2	1.4950e-003	1.4550e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7310e-003	2.6810e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.5000e-005	5.1000e-005
tblVehicleEF	LHD2	7.2900e-004	0.05
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3600e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.08	0.07
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	1.3500e-004	1.3600e-004
tblVehicleEF	LHD2	6.8450e-003	7.4530e-003
tblVehicleEF	LHD2	6.1000e-005	7.9000e-005
tblVehicleEF	LHD2	7.2900e-004	0.05
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3600e-004	0.00
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.08	0.07
tblVehicleEF	LHD2	0.03	0.05

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tblVehicleEF	MCY	0.35	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	19.65	13.63
tblVehicleEF	MCY	9.37	8.60
tblVehicleEF	MCY	216.84	188.90
tblVehicleEF	MCY	61.60	50.69
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3200e-003
tblVehicleEF	MCY	1.18	0.60
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.2560e-003	2.0090e-003
tblVehicleEF	MCY	2.8450e-003	3.3550e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.1060e-003	1.8780e-003
tblVehicleEF	MCY	2.6700e-003	3.1500e-003
tblVehicleEF	MCY	0.88	4.99
tblVehicleEF	MCY	0.79	3.56
tblVehicleEF	MCY	0.45	0.00
tblVehicleEF	MCY	2.37	1.14
tblVehicleEF	MCY	0.60	3.99
tblVehicleEF	MCY	2.00	1.45
tblVehicleEF	MCY	2.1460e-003	1.8670e-003
tblVehicleEF	MCY	6.1000e-004	5.0100e-004
tblVehicleEF	MCY	0.88	0.13
tblVehicleEF	MCY	0.79	3.56
tblVehicleEF	MCY	0.45	0.00
tblVehicleEF	MCY	2.95	1.37
tblVehicleEF	MCY	0.60	3.99

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tblVehicleEF	MCY	2.17	1.58
tblVehicleEF	MDV	2.3680e-003	2.6230e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.62	0.77
tblVehicleEF	MDV	2.55	3.42
tblVehicleEF	MDV	318.76	372.69
tblVehicleEF	MDV	67.66	95.79
tblVehicleEF	MDV	6.1680e-003	6.5790e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.23	0.34
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	1.1690e-003	1.1420e-003
tblVehicleEF	MDV	1.4710e-003	1.8440e-003
tblVehicleEF	MDV	0.02	3.6150e-003
tblVehicleEF	MDV	1.0780e-003	1.0530e-003
tblVehicleEF	MDV	1.3520e-003	1.6960e-003
tblVehicleEF	MDV	0.07	0.40
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	9.6960e-003	0.01
tblVehicleEF	MDV	0.08	0.30
tblVehicleEF	MDV	0.26	0.40
tblVehicleEF	MDV	3.1500e-003	3.6820e-003
tblVehicleEF	MDV	6.7000e-004	9.4700e-004
tblVehicleEF	MDV	0.07	0.40
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.01	0.02

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tblVehicleEF	MDV	0.08	0.30
tblVehicleEF	MDV	0.29	0.43
tblVehicleEF	MDV	0.71	0.72
tblVehicleEF	MDV	1.99	2.02
tblVehicleEF	MDV	331.91	354.47
tblVehicleEF	MDV	66.63	71.30
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	1.1690e-003	1.1840e-003
tblVehicleEF	MDV	1.4710e-003	1.4920e-003
tblVehicleEF	MDV	1.0780e-003	1.0920e-003
tblVehicleEF	MDV	1.3520e-003	1.3720e-003
tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.14	0.14
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.22	0.22
tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.16	0.16
tblVehicleEF	MDV	0.14	0.14
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.24	0.24
tblVehicleEF	MDV	0.61	0.62
tblVehicleEF	MDV	3.00	3.04
tblVehicleEF	MDV	316.48	337.95
tblVehicleEF	MDV	68.49	73.30
tblVehicleEF	MDV	0.05	0.05

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tblVehicleEF	MDV	0.25	0.25
tblVehicleEF	MDV	1.1690e-003	1.1840e-003
tblVehicleEF	MDV	1.4710e-003	1.4920e-003
tblVehicleEF	MDV	1.0780e-003	1.0920e-003
tblVehicleEF	MDV	1.3520e-003	1.3720e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	9.4240e-003	9.4580e-003
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.30	0.30
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.33	0.33
tblVehicleEF	MH	6.5260e-003	7.6380e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.46	0.52
tblVehicleEF	MH	1.64	1.85
tblVehicleEF	MH	1,387.36	1,603.71
tblVehicleEF	MH	15.21	18.39
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.56	1.83
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01

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tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.9100e-004	2.0800e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3360e-003	3.3960e-003
tblVehicleEF	MH	0.03	0.04
tblVehicleEF	MH	1.7600e-004	1.9100e-004
tblVehicleEF	MH	0.45	25.26
tblVehicleEF	MH	0.04	6.00
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	9.4360e-003	0.15
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5100e-004	1.8200e-004
tblVehicleEF	MH	0.45	25.26
tblVehicleEF	MH	0.04	6.00
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	9.4360e-003	0.15
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	2.2510e-003	0.01
tblVehicleEF	MHD	9.3200e-004	7.5480e-003
tblVehicleEF	MHD	5.1670e-003	5.6670e-003
tblVehicleEF	MHD	0.33	0.63
tblVehicleEF	MHD	0.15	0.15
tblVehicleEF	MHD	0.58	0.64
tblVehicleEF	MHD	63.79	151.67
tblVehicleEF	MHD	948.94	1,064.95
tblVehicleEF	MHD	5.12	5.75

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tblVehicleEF	MHD	9.5220e-003	0.02
tblVehicleEF	MHD	0.13	0.14
tblVehicleEF	MHD	4.3630e-003	3.9190e-003
tblVehicleEF	MHD	0.34	0.77
tblVehicleEF	MHD	1.53	0.62
tblVehicleEF	MHD	1.88	1.32
tblVehicleEF	MHD	1.5400e-004	6.5200e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.6150e-003	5.5090e-003
tblVehicleEF	MHD	6.5000e-005	7.0000e-005
tblVehicleEF	MHD	1.4700e-004	6.2300e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	7.2820e-003	5.2650e-003
tblVehicleEF	MHD	6.0000e-005	6.4000e-005
tblVehicleEF	MHD	2.1800e-004	0.02
tblVehicleEF	MHD	0.01	3.5590e-003
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	1.2500e-004	0.00
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	6.0400e-004	1.4070e-003
tblVehicleEF	MHD	9.0150e-003	0.01
tblVehicleEF	MHD	5.1000e-005	5.7000e-005
tblVehicleEF	MHD	2.1800e-004	0.02
tblVehicleEF	MHD	0.01	3.5590e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	1.2500e-004	0.00
tblVehicleEF	MHD	0.01	0.02

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tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	OBUS	6.8350e-003	7.8960e-003
tblVehicleEF	OBUS	2.7460e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.72	0.67
tblVehicleEF	OBUS	0.35	0.49
tblVehicleEF	OBUS	1.76	2.16
tblVehicleEF	OBUS	110.91	102.09
tblVehicleEF	OBUS	1,190.08	1,369.24
tblVehicleEF	OBUS	13.53	16.41
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.13	0.15
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.50	0.37
tblVehicleEF	OBUS	1.54	1.03
tblVehicleEF	OBUS	1.21	0.88
tblVehicleEF	OBUS	1.6700e-004	3.9200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	8.4550e-003	0.02
tblVehicleEF	OBUS	1.6400e-004	1.8800e-004
tblVehicleEF	OBUS	1.6000e-004	3.7500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	8.0770e-003	0.02
tblVehicleEF	OBUS	1.5100e-004	1.7300e-004
tblVehicleEF	OBUS	1.3560e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	6.0100e-004	0.00

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tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.08	0.11
tblVehicleEF	OBUS	1.0520e-003	9.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3400e-004	1.6200e-004
tblVehicleEF	OBUS	1.3560e-003	0.10
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	6.0100e-004	0.00
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.09	0.12
tblVehicleEF	SBUS	0.04	0.09
tblVehicleEF	SBUS	3.7660e-003	0.18
tblVehicleEF	SBUS	3.2710e-003	2.6840e-003
tblVehicleEF	SBUS	1.84	1.19
tblVehicleEF	SBUS	0.30	0.82
tblVehicleEF	SBUS	0.46	0.35
tblVehicleEF	SBUS	325.82	172.93
tblVehicleEF	SBUS	1,016.49	1,011.56
tblVehicleEF	SBUS	2.64	2.14
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	3.4900e-003	3.0390e-003
tblVehicleEF	SBUS	2.68	1.13
tblVehicleEF	SBUS	3.29	1.75
tblVehicleEF	SBUS	1.25	0.47
tblVehicleEF	SBUS	1.8010e-003	7.4900e-004

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tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	3.6000e-005	2.4000e-005
tblVehicleEF	SBUS	1.7230e-003	7.1400e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7960e-003	2.7360e-003
tblVehicleEF	SBUS	0.02	9.8800e-003
tblVehicleEF	SBUS	3.3000e-005	2.2000e-005
tblVehicleEF	SBUS	4.1400e-004	0.02
tblVehicleEF	SBUS	4.2990e-003	5.6150e-003
tblVehicleEF	SBUS	0.18	0.11
tblVehicleEF	SBUS	2.0100e-004	0.00
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	9.3040e-003	0.02
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	3.0940e-003	1.4800e-003
tblVehicleEF	SBUS	9.6770e-003	9.0480e-003
tblVehicleEF	SBUS	2.6000e-005	2.1000e-005
tblVehicleEF	SBUS	4.1400e-004	0.02
tblVehicleEF	SBUS	4.2990e-003	5.6150e-003
tblVehicleEF	SBUS	0.25	0.23
tblVehicleEF	SBUS	2.0100e-004	0.00
tblVehicleEF	SBUS	0.07	0.23
tblVehicleEF	SBUS	9.3040e-003	0.02
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	UBUS	1.71	0.64
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	12.99	7.76

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleEF	UBUS	0.84	2.45
tblVehicleEF	UBUS	1,646.36	1,027.95
tblVehicleEF	UBUS	7.79	19.10
tblVehicleEF	UBUS	0.27	0.13
tblVehicleEF	UBUS	6.8450e-003	0.02
tblVehicleEF	UBUS	0.67	0.20
tblVehicleEF	UBUS	0.08	0.17
tblVehicleEF	UBUS	0.08	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	4.8850e-003	3.3910e-003
tblVehicleEF	UBUS	8.8000e-005	1.2900e-004
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	7.7720e-003	0.01
tblVehicleEF	UBUS	4.6670e-003	3.2310e-003
tblVehicleEF	UBUS	8.1000e-005	1.1900e-004
tblVehicleEF	UBUS	2.4900e-004	0.03
tblVehicleEF	UBUS	3.6220e-003	9.4370e-003
tblVehicleEF	UBUS	1.4800e-004	0.00
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.6800e-004	0.03
tblVehicleEF	UBUS	0.05	0.08
tblVehicleEF	UBUS	0.01	7.6070e-003
tblVehicleEF	UBUS	7.7000e-005	1.8900e-004
tblVehicleEF	UBUS	2.4900e-004	0.03
tblVehicleEF	UBUS	3.6220e-003	9.4370e-003
tblVehicleEF	UBUS	1.4800e-004	0.00
tblVehicleEF	UBUS	1.75	0.69
tblVehicleEF	UBUS	8.6800e-004	0.03
tblVehicleEF	UBUS	0.05	0.09

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	CC_TL	7.30	13.60
tblVehicleTrips	CNW_TL	7.30	13.60
tblVehicleTrips	CW_TL	9.50	13.60
tblVehicleTrips	ST_TR	56.72	446.00
tblVehicleTrips	SU_TR	55.80	446.00
tblVehicleTrips	WD_TR	30.74	446.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	1.0862	1.0862	1.6000e-004	2.0000e-005	1.0964
Mobile	0.2755	0.1600	1.4119	2.8300e-003	0.2777	2.2600e-003	0.2800	0.0694	2.1200e-003	0.0715	0.0000	261.9460	261.9460	0.0164	0.0144	266.6550
Waste						0.0000	0.0000		0.0000	0.0000	2.2512	0.0000	2.2512	0.1330	0.0000	5.5772
Water						0.0000	0.0000		0.0000	0.0000	0.0235	0.0518	0.0753	2.4200e-003	6.0000e-005	0.1531
Total	**0.2799**	**0.1601**	**1.4120**	**2.8300e-003**	**0.2777**	**2.2700e-003**	**0.2800**	**0.0694**	**2.1300e-003**	**0.0716**	**2.2747**	**263.0840**	**265.3587**	**0.1520**	**0.0145**	**273.4818**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	1.0862	1.0862	1.6000e-004	2.0000e-005	1.0964
Mobile	0.2755	0.1600	1.4119	2.8300e-003	0.2777	2.2600e-003	0.2800	0.0694	2.1200e-003	0.0715	0.0000	261.9460	261.9460	0.0164	0.0144	266.6550
Waste						0.0000	0.0000		0.0000	0.0000	2.2512	0.0000	2.2512	0.1330	0.0000	5.5772
Water						0.0000	0.0000		0.0000	0.0000	0.0235	0.0518	0.0753	2.4200e-003	6.0000e-005	0.1531
Total	**0.2799**	**0.1601**	**1.4120**	**2.8300e-003**	**0.2777**	**2.2700e-003**	**0.2800**	**0.0694**	**2.1300e-003**	**0.0716**	**2.2747**	**263.0840**	**265.3587**	**0.1520**	**0.0145**	**273.4818**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	tons/yr										MT/yr					
Mitigated	0.2755	0.1600	1.4119	2.8300e-003	0.2777	2.2600e-003	0.2800	0.0694	2.1200e-003	0.0715	0.0000	261.9460	261.9460	0.0164	0.0144	266.6550
Unmitigated	0.2755	0.1600	1.4119	2.8300e-003	0.2777	2.2600e-003	0.2800	0.0694	2.1200e-003	0.0715	0.0000	261.9460	261.9460	0.0164	0.0144	266.6550

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Home Improvement Superstore	446.00	446.00	446.00	824,708	824,708
Total	446.00	446.00	446.00	824,708	824,708

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Home Improvement Superstore	13.60	13.60	13.60	23.40	57.60	19.00	32	20	48

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Home Improvement Superstore	0.578487	0.054091	0.163601	0.113178	0.027971	0.007469	0.015619	0.006666	0.001080	0.000273	0.026807	0.001478	0.003279

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.9613	0.9613	1.6000e-004	2.0000e-005	0.9708
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.9613	0.9613	1.6000e-004	2.0000e-005	0.9708
NaturalGas Mitigated	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
NaturalGas Unmitigated	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement	2340	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
Total		**1.0000e-005**	**1.1000e-004**	**1.0000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1249**	**0.1249**	**0.0000**	**0.0000**	**0.1256**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	kBTU/yr	tons/yr										MT/yr					
Home Improvement	2340	1.0000e-005	1.1000e-004	1.0000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1249	0.1249	0.0000	0.0000	0.1256
Total		**1.0000e-005**	**1.1000e-004**	**1.0000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1249**	**0.1249**	**0.0000**	**0.0000**	**0.1256**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement	10390	0.9613	1.6000e-004	2.0000e-005	0.9708
Total		**0.9613**	**1.6000e-004**	**2.0000e-005**	**0.9708**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Home Improvement	10390	0.9613	1.6000e-004	2.0000e-005	0.9708
Total		**0.9613**	**1.6000e-004**	**2.0000e-005**	**0.9708**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	4.4300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	**4.4300e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.4300e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated	0.0753	2.4200e-003	6.0000e-005	0.1531
Unmitigated	0.0753	2.4200e-003	6.0000e-005	0.1531

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.0740725 /	0.0753	2.4200e-003	6.0000e-005	0.1531
Total		**0.0753**	**2.4200e-003**	**6.0000e-005**	**0.1531**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Home Improvement	0.0740725 /	0.0753	2.4200e-003	6.0000e-005	0.1531
Total		**0.0753**	**2.4200e-003**	**6.0000e-005**	**0.1531**

Home Depot Current Petaluma Traffic - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.2512	0.1330	0.0000	5.5772
Unmitigated	2.2512	0.1330	0.0000	5.5772

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement	11.09	2.2512	0.1330	0.0000	5.5772
Total		**2.2512**	**0.1330**	**0.0000**	**5.5772**

Home Depot Current Petaluma Traffic - Sonoma-San Francisco County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Home Improvement	11.09	2.2512	0.1330	0.0000	5.5772
Total		**2.2512**	**0.1330**	**0.0000**	**5.5772**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 Calculations

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2022	0.0236	0.1538	0.2574	0.0011	0.0495	0.0082	0.0577	0.0074	0.0035	0.0109	105.9701	0.0043	0.0123	109.7474
2023	0.0573	0.3529	0.6264	0.0028	0.1299	0.0211	0.1510	0.0195	0.0088	0.0284	273.8754	0.0108	0.0318	283.6114
Toxic Air Contaminants (1.0 Mile Trip Length)														
2022	0.0192	0.0423	0.0921	0.0001	0.0048	0.0008	0.0056	0.0007	0.0004	0.0011	13.6070	0.0018	0.0020	14.2378
2023	0.0478	0.1047	0.2285	0.0004	0.0126	0.0022	0.0147	0.0019	0.0010	0.0029	35.0873	0.0046	0.0050	36.7072

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	450	0	411	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4860	0	8220
Site Preparation	18	0	540	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5832	0	0
Grading	15	0	450	0	250	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4860	0	5000
Trenching/Foundation	5	0	100	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1080	0	0
Paving	20	0	360	0	2130	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3888	0	42600
Building Construction	144	62	33120	14260	24	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	357696	104098	480
Architectural Coating	29	0	522	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5637.6	0	0

Number of Days Per Year					
2022	8/16/22	12/31/22	138	99	
2023	1/1/23	12/28/23	362	259	
			500	**358**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	8/16/2022	9/26/2022	5	30
Site Preparation	9/27/2022	11/7/2022	5	30
Grading	11/8/2022	12/19/2022	5	30
Trenching/Foundation	12/20/2022	1/16/2023	5	20
Paving	12/5/2023	12/28/2023	5	18
Building Construction	1/17/2023	12/4/2023	5	230
Architectural Coating	12/5/2023	12/28/2023	5	18

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Sonoma
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Sonoma	2022	HHDT	Aggregate	Aggregate	Gasoline	2.471308	70.89571	70.89571	0	49.44594	0	19.09586	0	1.349856	0.006593	0	0.002186	0.005	0.039547	0.00717	0	0.002378	0.02	0.11299	2692.062	0	50.37484	0.698856	0	5.11E-05	0.437881	0	0.024682	4.599289	0	0.000277	0.143834	1.316047	10.12584	6.711272	0	0.000304	0.143834	1.316047	10.12584	0.039476	157.6574	0	0.943025	0.026614	0	0.000498
Sonoma	2022	HHDT	Aggregate	Aggregate	Diesel	2287.78	226779.1	226779.1	0	26995.73	0	2.724809	52.11206	2.581892	0.025888	0.04283	0	0.008449	0.028066	0.027059	0.044766	0	0.033797	0.080189	1748.692	9294.644	0	0.001532	0.173525	0	0.275507	1.464375	0	0.032976	3.735953	0	0	0	0	0.03754	4.253099	0	0	0	0	0.201677	0.137723	50.71933	0	0.016559	0.088015	0
Sonoma	2022	HHDT	Aggregate	Aggregate	Natural Ga	148.453	10070.99	10070.99	0	1156.095	0	1.00621	11.12652	0	0.002422	0.018704	0	0.009	0.048912	0.002634	0.020343	0	0.036	0.13975	1411.961	8910.949	0	1.524823	29.01133	0	0.287837	1.816555	0	0.053693	0.477282	0	0	0	0	1.592545	29.67457	0	0	0	0	0.840116	10.42963	65.43314	0	0	0	0
Sonoma	2022	LDA	Aggregate	Aggregate	Gasoline	140195.7	5196180	5196180	0	644257.9	0	0.067838	0	0.317285	0.00135	0	0.002167	0.002	0.00311	0.001468	0	0.002357	0.008	0.008887	288.5123	0	75.0293	0.003646	0	0.09061	0.006295	0	0.036732	0.015085	0	0.437809	0.112495	0.300375	1.761024	0.022001	0	0.479343	0.112495	0.300375	1.761024	0.032512	0.984166	0	4.186514	0.002852	0	0.000742
Sonoma	2022	LDA	Aggregate	Aggregate	Diesel	1048.668	31689.52	31689.52	0	4438.866	0	0.381028	0	0	0.02488	0	0	0.002	0.003155	0.026005	0	0	0.008	0.009014	244.709	0	0	0.001883	0	0	0.038554	0	0	0.040547	0	0	0	0	0	0.04616	0	0	0	0	0	0.0031	0.431304	0	0.002319	0	0	0
Sonoma	2022	LDA	Aggregate	Aggregate	Electricity	6062.237	269657.9	0	269657.9	30214.9	104110.2	0	0	0	0	0	0	0.002	0.00153	0	0	0	0	0.004371	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	2815.694	129033.6	67150.17	61883.42	11642.9	18690.64	0.003601	0	0.117556	0.000723	0	0.002222	0.002	0.001443	0.000786	0	0.002416	0.008	0.004123	148.7316	0	67.3255	0.00049	0	0.044077	0.000656	0	0.021383	0.001548	0	0.178908	0.040438	0.035571	0.444842	0.002258	0	0.195881	0.040438	0.035571	0.444842	0.019517	0.231328	0	1.393531	0.00147	0	0.000666
Sonoma	2022	LDT1	Aggregate	Aggregate	Gasoline	20067.23	610046.8	610046.8	0	86138.2	0	0.236345	0	0.553658	0.00248	0	0.00382	0.002	0.003775	0.002697	0	0.004154	0.008	0.010785	344.6795	0	97.04366	0.011322	0	0.157736	0.015352	0	0.046661	0.052668	0	0.874941	0.25623	0.787016	4.020918	0.076783	0	0.95794	0.25623	0.787016	4.020918	0.037177	2.338869	0	8.581733	0.003408	0	0.000959
Sonoma	2022	LDT1	Aggregate	Aggregate	Diesel	25.41835	319.0855	319.0855	0	74.62415	0	1.639883	0	0	0.246633	0	0	0	0.004258	0.257785	0	0	0.008	0.012166	422.344	0	0	0.014425	0	0	0.06654	0	0	0.310556	0	0	0	0	0	0.353547	0	0	0	0	0	0.0031	1.634118	0	0.004002	0	0	0
Sonoma	2022	LDT1	Aggregate	Aggregate	Electricity	29.69266	1079.715	0	1079.715	138.8667	416.8591	0	0	0	0	0	0	0.002	0.001541	0	0	0	0	0.004402	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	5.011973	249.6941	119.9258	129.7684	20.72451	39.19392	0.003323	0	0.117544	0.000446	0	0.001504	0.002	0.001445	0.000485	0	0.001636	0.008	0.004128	137.2778	0	73.69466	0.000453	0	0.044097	0.000605	0	0.021406	0.001429	0	0.178876	0.025003	0.023389	0.296523	0.020085	0	0.195847	0.025003	0.023389	0.296523	0.020172	0.213562	0	1.39323	0.001357	0	0.000729
Sonoma	2022	LDT2	Aggregate	Aggregate	Gasoline	68707.44	2513548	2513548	0	318060.6	0	0.108957	0	0.441335	0.001413	0	0.002168	0.002	0.003599	0.001536	0	0.002358	0.008	0.010282	360.9379	0	94.68131	0.004136	0	0.104329	0.008062	0	0.042908	0.01732	0	0.509995	0.103404	0.282102	1.674735	0.025264	0	0.558379	0.103404	0.282102	1.674735	0.034046	1.105711	0	4.791121	0.003568	0	0.000936
Sonoma	2022	LDT2	Aggregate	Aggregate	Diesel	295.5345	11380.62	11380.62	0	1392.155	0	0.081259	0	0	0.008303	0	0	0.002	0.003576	0.008678	0	0	0.008	0.010219	331.5312	0	0	0.000865	0	0	0.052233	0	0	0.018621	0	0	0	0	0	0.021199	0	0	0	0	0	0.0031	0.165493	0	0	0.003141	0	0
Sonoma	2022	LDT2	Aggregate	Aggregate	Electricity	130.2975	4907.462	0	4907.462	669.2734	1894.685	0	0	0	0	0	0	0.002	0.001524	0	0	0	0	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	260.5062	12555.57	6249.268	6306.304	1077.193	1904.692	0.003443	0	0.117542	0.000595	0	0.001837	0.002	0.001443	0.000647	0	0.002107	0.008	0.004123	142.2641	0	80.14275	0.000469	0	0.044109	0.000628	0	0.021418	0.00148	0	0.178872	0.026741	0.025625	0.326849	0.00216	0	0.195842	0.026741	0.025625	0.326849	0.020822	0.221327	0	1.29319	0.001406	0	0.000792
Sonoma	2022	LHDT1	Aggregate	Aggregate	Gasoline	8676.835	308164.6	308164.6	0	129271.9	0	0.312352	0.039613	0.690714	0.002036	0	0.000455	0.002	0.0273	0.002215	0	0.000495	0.008	0.078	936.0824	122.4308	25.95258	0.01505	0.119429	0.039261	0.016801	0.003025	0.052007	0.077228	0.453208	0.201528	0.063774	0.358285	3.596475	0.112691	0.661321	0.220648	0.063774	0.358285	3.596475	0.044813	1.723451	3.736462	3.090885	0.009254	0.00121	0.000257
Sonoma	2022	LHDT1	Aggregate	Aggregate	Diesel	8815.809	317378.1	317378.1	0	110891.8	0	2.778483	2.367072	0	0.053407	0.0273	0	0.003	0.0273	0.055822	0.028535	0	0.012	0.078	643.875	137.9421	0	0.011403	0.005098	0	0.101443	0.021733	0	0.245498	0.10976	0	0	0	0	0.279484	0.124954	0	0	0	0	0.133945	0.742731	0.909745	0	0.006101	0.001307	0
Sonoma	2022	LHDT2	Aggregate	Aggregate	Gasoline	1324.51	50670.47	50670.47	0	19733.22	0	0.190949	0.038508	0.66167	0.001461	0	0.000273	0.002	0.03185	0.001589	0	0.000297	0.008	0.091	1013.099	139.9094	25.92176	0.007917	0.120851	0.034888	0.011336	0.003156	0.052849	0.03799	0.441455	0.171688	0.043729	0.230479	2.402551	0.055435	0.64417	0.187977	0.043729	0.230479	2.402551	0.044961	1.059566	3.759962	3.129578	0.010016	0.001383	0.000256
Sonoma	2022	LHDT2	Aggregate	Aggregate	Diesel	3001.308	116890.4	116890.4	0	37752.68	0	1.805916	2.270836	0	0.041999	0.026712	0	0.003	0.03185	0.043898	0.02792	0	0.012	0.091	785.7659	218.1018	0	0.009127	0.005098	0	0.123798	0.034362	0	0.19649	0.10976	0	0	0	0	0.223691	0.124954	0	0	0	0	0.165029	0.538689	0.909745	0	0.007446	0.002067	0
Sonoma	2022	MCY	Aggregate	Aggregate	Gasoline	10364.83	56210.01	56210.01	0	20729.66	0	0.716623	0	0.188538	0.001925	0	0.004046	0.001	0.0042	0.002048	0	0.004278	0.004	0.012	193.4033	0	58.29918	0.212174	0	0.230249	0.045964	0	0.010676	1.486322	0	1.770554	3.547365	3.862136	4.776188	1.744506	0	1.923569	3.547365	3.862136	4.776188	0.088414	16.9132	0	8.823297	0.001912	0	0.000576
Sonoma	2022	MDV	Aggregate	Aggregate	Gasoline	48744.11	1685912	1685912	0	221042.9	0	0.167234	0	0.616188	0.001496	0	0.002535	0.002	0.003704	0.001627	0	0.002756	0.008	0.010584	439.9052	0	116.5657	0.0061	0	0.140639	0.011059	0	0.049912	0.027398	0	0.751904	0.131123	0.377266	2.151416	0.039869	0	0.823224	0.131123	0.377266	2.151416	0.033691	1.395285	0	5.678498	0.004349	0	0.001152
Sonoma	2022	MDV	Aggregate	Aggregate	Diesel	1049.043	40501.82	40501.82	0	4936.496	0	0.094277	0	0	0.007902	0	0	0.002	0.003628	0.008259	0	0	0.008	0.010366	427.7817	0	0	0.000738	0	0	0.067397	0	0	0.015881	0	0	0	0	0	0.018079	0	0	0	0	0	0.0031	0.243114	0	0	0.004053	0	0
Sonoma	2022	MDV	Aggregate	Aggregate	Electricity	125.795	4767.31	0	4767.31	647.7021	1840.575	0	0	0	0	0	0	0.002	0.001523	0	0	0	0	0.004351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2022	MDV	Aggregate	Aggregate	Plug-in Hyb	201.4859	9375.848	4855.061	4520.787	833.1444	1365.413	0.003583	0	0.117552	0.0008	0	0.002506	0.002	0.001443	0.00087	0	0.002726	0.008	0.004124	147.9988	0	100.6204	0.000488	0	0.044139	0.000654	0	0.021441	0.00154	0	0.178897	0.030927	0.030826	0.384476	0.002247	0	0.19587	0.030927	0.030826	0.384476	0.021749	0.230209	0	1.393429	0.001463	0	0.000995
Sonoma	2022	MH	Aggregate	Aggregate	Gasoline	1283.068	10944.58	10944.58	0	128.3581	0	0.616656	0	0.412675	0.001972	0	0.000459	0.003	0.015758	0.002145	0	0.0005	0.012	0.045024	1949.987	0	32.29824	0.022966	0	0.039629	0.033977	0	0.040861	0.106527	0	0.174212	14.74037	0.346337	5.342593	0.155444	0	0.19074	14.74037	0.346337	5.342593	0.044586	2.78755	0	3.873502	0.019278	0	0.000319
Sonoma	2022	MH	Aggregate	Aggregate	Diesel	593.8208	5721.925	5721.925	0	59.38208	0	4.772874	0	0	0.126685	0	0	0.004	0.01668	0.133168	0	0	0.016	0.044799	1080.236	0	0	0.006416	0	0	0.170192	0	0	0.138127	0	0	0	0	0	0.157248	0	0	0	0	0	0.128357	0.472665	0	0	0.010236	0	0
Sonoma	2022	MHDT	Aggregate	Aggregate	Gasoline	701.6346	34038.65	34038.65	0	14038.3	0	0.752833	0.087473	0.460177	0.001604	0	0.000703	0.003	0.015757	0.001745	0	0.000765	0.012	0.045021	1831.015	541.9388	48.43629	0.025892	0.248268	0.050669	0.033186	0.006715	0.031401	0.134641	1.004615	0.293461	0.045399	0.383891	3.567518	0.196468	1.465932	0.321303	0.045399	0.383891	3.567518	0.044806	2.889619	15.23893	6.595645	0.018101	0.005358	0.000479
Sonoma	2022	MHDT	Aggregate	Aggregate	Diesel	5030.17	221959.6	221959.6	0	59095.14	0	1.535437	14.65201	1.559192	0.018108	0.043833	0	0.003	0.015841	0.018927	0.045815	0	0.012	0.04526	1145.885	2316.49	0	0.002053	0.013766	0	0.180535	0.364964	0	0.044198	0.296384	0	0	0	0	0.050316	0.337411	0	0	0	0	0.201178	0.14918	7.404128	0	0.010851	0.021936	0
Sonoma	2022	MHDT	Aggregate	Aggregate	Natural Ga	30.9017	1550.925	1550.925	0	334.6292	0	0.161486	5.968651	0	0.000958	0.014679	0	0.003	0.015899	0.001042	0.015964	0	0.012	0.045425	977.3657	4797.171	0	0.674793	16.61564	0	0.199242	0.977935	0	0.009641	0.233405	0	0	0	0	0.688676	16.95748	0	0	0	0	1.06	2.910683	27.52755	0	0	0	0
Sonoma	2022	OBUS	Aggregate	Aggregate	Gasoline	184.6616	8733.208	8733.208	0	3694.709	0	0.720423	0.064788	0.421322	0.001047	0	0.000345	0.003	0.015684	0.001139	0	0.000375	0.012	0.04481	1798.609	382.6123	32.54339	0.019583	0.192642	0.037837	0.031371	0.005165	0.030271	0.097965	0.742148	0.204756	0.035276	0.160956	2.83029	0.14295	1.082941	0.224182	0.035276	0.160956	2.83029	0.044882	2.204736	5.74988	4.420133	0.017781	0.003783	0.000322
Sonoma	2022	OBUS	Aggregate	Aggregate	Diesel	164.2136	12484.06	12484.06	0	1879.236	0	1.736559	12.54801	1.53036	0.032335	0.016817	0	0.003	0.019581	0.033797	0.017578	0	0.012	0.055944	1379.752	2460.248	0	0.003285	0.037198	0	0.21738	0.387613	0	0.070722	0.800858	0	0	0	0	0.080512	0.911715	0	0	0	0	0.209252	0.221488	11.80751	0	0.013065	0.023297	0
Sonoma	2022	OBUS	Aggregate	Aggregate	Natural Ga	0.905192	61.88965	61.88965	0	8.05621	0	0.230238	1.552296	0	0.000873	0.003544	0	0.003	0.016148	0.00095	0.003855	0	0.012	0.046137	1042.524	1211.531	0	0.768315	4.420632	0	0.212525	0.246979	0	0.010978	0.063162	0	0	0	0	0.784121	4.51158	0	0	0	0	1.06	3.196451	6.552734	0	0	0	0
Sonoma	2022	SBUS	Aggregate	Aggregate	Gasoline	57.62532	2953.316	2953.316	0	230.5013	0	0.208907	0.9263	0.67829	0.000793	0	0.000531	0.002	0.015721	0.000862	0	0.000578	0.008	0.044917	815.3215	2606.378	56.32398	0.004274	2.501307	0.064263	0.015938	0.091197	0.066652	0.019716	10.63814	0.353503	0.080847	0.145342	1.00991	0.028769	15.52315	0.387041	0.080847	0.145342	1.00991	0.045	0.464858	82.22039	9.197426	0.00806	0.025767	0.000557
Sonoma	2022	SBUS	Aggregate	Aggregate	Diesel	388.3854	9106.626	9106.626	0	5623.821	0	3.925207	22.60304	0.435056	0.020368	0.019406	0	0.003	0.015721	0.021289	0.020284	0	0.012	0.044917	1178.868	2285.257	0	0.002937	0.008213	0	0.185731	0.360043	0	0.063235	0.176814	0	0	0	0	0.071988	0.20129	0	0	0	0	0.136635	0.18745	4.414081	0	0.011163	0.02164	0
Sonoma	2022	SBUS	Aggregate	Aggregate	Natural Ga	26.43423	684.6986	684.6986	0	382.7677	0	0.663423	5.330636	0	0.003378	0.009932	0	0.003	0.015721	0.003674	0.010802	0	0.012	0.044917	1281.367	3938.131	0	3.696321	15.99425	0	0.261215	0.802814	0	0.052813	0.228526	0	0	0	0	3.772367	16.32331	0	0	0	0	1.06	12.87089	17.53407	0	0	0	0
Sonoma	2022	UBUS	Aggregate	Aggregate	Gasoline	48.86513	3610.695	3610.695	0	195.4605	0	0.087007	0	0.659944	0.000847	0	0.000298	0.002288	0.033765	0.000921	0	0.000325	0.009152	0.096472	1225.124	0	60.05891	0.002751	0	0.074244	0.009175	0	0.08084	0.008405	0	0.292656	0.055736	0.106447	0.615848	0.012265	0	0.320422	0.055736	0.106447	0.615848	0.045	0.502862	0	7.354541	0.012112	0	0.000594
Sonoma	2022	UBUS	Aggregate	Aggregate	Diesel	43.18297	3856.33	3856.33	0	172.7319	0	0.352703	0	0	0.006409	0	0	0.007663	0.0385	0.006699	0	0	0.030651	0.11	1164.162	0	0	0.002997	0	0	0.183414	0	0	0.064535	0	0	0	0	0	0.073468	0	0	0	0	0	0.22	0.072549	0	0	0.011031	0	0
Sonoma	2022	UBUS	Aggregate	Aggregate	Electricity	1.009351	26.88826	0	26.88826	4.037406	46.8728	0	0	0	0	0	0	0.003	0.01925	0	0	0	0.012	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2022	UBUS	Aggregate	Aggregate	Natural Ga	45.39372	5656.307	5656.307	0	181.5749	0	0.443655	0	0	0.000154	0	0	0.008125	0.0385	0.000161	0	0	0.032501	0.11	1474.124	0	0	1.362794	0	0	0.30051	0	0	0.019472	0	0	0	0	0	1.390831	0	0	0	0	0	0.97	22.70682	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Sonoma
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Sonoma	2023	HHDT	Aggregate	Aggregate	Gasoline	2.141088	64.14979	64.14979	0	42.83888	0	19.37457	0	1.966145	0.006267	0	0.002171	0.005	0.038744	0.006816	0	0.002361	0.02	0.110698	2630.84	0	50.44989	0.651889	0	5.88E-05	0.433617	0	0.035297	4.293194	0	0.000319	0.142497	1.30458	9.983974	0.039278	149.6621	0	1.065876	0.026009	0	0.000499
Sonoma	2023	HHDT	Aggregate	Aggregate	Diesel	2320.139	228314.9	228314.9	0	27466	0	2.330147	48.96902	2.835808	0.024797	0.038402	0	0.008449	0.027656	0.025918	0.040138	0	0.033796	0.079018	1728.768	9030.512	0	0.000318	0.173775	0	0.272368	1.422761	0	0.021921	3.741321	0	0	0	0	0.024955	4.259209	0	0	0	0	0.210382	0.107523	53.12134	0	0.01637	0.085514	0
Sonoma	2023	HHDT	Aggregate	Aggregate	Electricity	1.429585	82.30065	0	82.30065	19.6434	151.6834	0	0	0	0	0	0	0.008514	0.012976	0	0	0	0.034058	0.037075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	HHDT	Aggregate	Aggregate	Natural Ga	161.9892	10833.92	10833.92	0	1287.202	0	0.903632	11.15328	0	0.002247	0.019616	0	0.009	0.048901	0.002444	0.021334	0	0.036	0.139717	1391.284	9052.592	0	1.426623	29.29621	0	0.283622	1.84543	0	0.047284	0.467016	0	0	0	0	1.486622	29.95411	0	0	0	0	0.839097	10.20041	65.66352	0	0	0	0
Sonoma	2023	LDA	Aggregate	Aggregate	Gasoline	140201.8	5262439	5262439	0	644521.6	0	0.059295	0	0.298414	0.001297	0	0.002079	0.002	0.003109	0.00141	0	0.002261	0.008	0.008884	283.822	0	73.43119	0.003214	0	0.084911	0.005776	0	0.035708	0.01303	0	0.403668	0.1081	0.288581	1.706309	0.019006	0	0.441964	0.1081	0.288581	1.706309	0.019006	0	0.389936	0.002806	0	0.000726
Sonoma	2023	LDA	Aggregate	Aggregate	Diesel	988.5041	29470.85	29470.85	0	4150.248	0	0.348209	0	0	0.023129	0	0	0.002	0.003165	0.024174	0	0	0.008	0.009044	243.1248	0	0	0.001765	0	0	0	0	0	0	0.038304	0	0	0.037998	0	0	0	0.043258	0	0	0	0	0.0031	0.418295	0	0	0.002304	0	0
Sonoma	2023	LDA	Aggregate	Aggregate	Electricity	7093.829	326993.1	0	326993.1	35219.64	126246.3	0	0	0	0	0	0	0.002	0.00153	0	0	0	0.008	0.004373	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	3231.76	148549.2	75529.18	73020.03	13363.33	22054.22	0.003518	0	0.117555	0.000668	0	0.002106	0.002	0.001446	0.000727	0	0.00029	0.008	0.004132	145.3185	0	66.59465	0.000478	0	0.043969	0.000638	0	0.021285	0.001512	0	0.178903	0.041374	0.036838	0.447202	0.002207	0	0.195877	0.041374	0.036838	0.447202	0.002207	0	1.393491	0.001437	0	0.000658
Sonoma	2023	LDT1	Aggregate	Aggregate	Gasoline	19002.79	581600.4	581600.4	0	81413.11	0	0.214532	0	0.531559	0.002328	0	0.003594	0.002	0.00378	0.002531	0	0.003908	0.008	0.0108	340.723	0	95.13331	0.01025	0	0.149079	0.014183	0	0.045489	0.04733	0	0.819082	0.248036	0.75551	3.91471	0.069041	0	0.896789	0.248036	0.75551	3.91471	0.03709	2.144812	0	8.002679	0.003368	0	0.00094
Sonoma	2023	LDT1	Aggregate	Aggregate	Diesel	22.87057	279.8337	279.8337	0	65.83652	0	1.639477	0	0	0.246551	0	0	0.002	0.004257	0.257699	0	0	0.008	0.012163	422.4502	0	0	0.014401	0	0	0.066557	0	0	0.310042	0	0	0	0	0	0	0.352962	0	0	0	0	0.0031	1.629464	0	0	0.004003	0	0
Sonoma	2023	LDT1	Aggregate	Aggregate	Electricity	32.19966	1244.43	0	1244.43	151.0795	480.4528	0	0	0	0	0	0	0.002	0.001539	0	0	0	0.008	0.004398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	8.801713	439.4297	202.9572	236.4725	36.39509	71.42176	0.003195	0	0.117545	0.000407	0	0.001429	0.002	0.001449	0.000443	0	0.001554	0.008	0.00414	132.016	0	72.57405	0.000433	0	0.0439	0.000577	0	0.021227	0.001374	0	0.178878	0.024509	0.021944	0.281269	0.002005	0	0.195848	0.024509	0.021944	0.281269	0.019398	0.205393	0	1.393244	0.001305	0	0.000717
Sonoma	2023	LDT2	Aggregate	Aggregate	Gasoline	68762.84	2538989	2538989	0	318047.7	0	0.096569	0	0.409699	0.001367	0	0.002108	0.002	0.003602	0.001486	0	0.002292	0.008	0.01029	354.3607	0	92.63473	0.003763	0	0.098861	0.007416	0	0.041318	0.015538	0	0.477377	0.10059	0.27602	1.65078	0.02267	0	0.522667	0.10059	0.27602	1.65078	0.034848	1.027786	0	4.510024	0.003503	0	0.000916
Sonoma	2023	LDT2	Aggregate	Aggregate	Diesel	299.0973	11473.63	11473.63	0	1402.417	0	0.073359	0	0	0.00763	0	0	0.002	0.003599	0.007975	0	0	0.008	0.010284	327.8415	0	0	0.000819	0	0	0.051652	0	0	0.017643	0	0	0	0	0	0	0.020085	0	0	0	0	0.0031	0.162792	0	0	0.003106	0	0
Sonoma	2023	LDT2	Aggregate	Aggregate	Electricity	217.5584	8209.676	0	8209.676	1114.714	3169.612	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	348.4227	16752.69	8071.665	8681.024	1440.728	2621.928	0.003333	0	0.117544	0.000531	0	0.001783	0.002	0.001447	0.000577	0	0.001939	0.008	0.004135	137.7195	0	79.13986	0.000452	0	0.043923	0.000603	0	0.021249	0.001433	0	0.178875	0.026108	0.024613	0.312324	0.002091	0	0.195846	0.026108	0.024613	0.312324	0.020177	0.214274	0	1.393223	0.001361	0	0.000782
Sonoma	2023	LHDT1	Aggregate	Aggregate	Gasoline	8377.036	299542.4	299542.4	0	124805.4	0	0.290217	0.038975	0.680294	0.001966	0	0.000433	0.002	0.0273	0.002138	0	0.000471	0.008	0.078	922.5457	121.7775	25.99916	0.014115	0.118106	0.038158	0.01561	0.003014	0.051683	0.072464	0.44597	0.195168	0.062801	0.35795	3.617907	0.105739	0.650758	0.213684	0.062801	0.35795	3.617907	0.044827	1.65865	3.738799	3.108324	0.00912	0.001204	0.000257
Sonoma	2023	LHDT1	Aggregate	Aggregate	Diesel	8519.397	304773.3	304773.3	0	107163.3	0	2.646871	2.32973	0	0.052217	0.027122	0	0.003	0.0273	0.054578	0.028349	0	0.012	0.078	643.1304	137.3153	0	0.011147	0.005098	0	0.101325	0.021634	0	0.239984	0.10976	0	0	0	0	0.273206	0.124954	0	0	0	0	0.138237	0.723708	0.909745	0	0.006094	0.001301	0	0
Sonoma	2023	LHDT2	Aggregate	Aggregate	Gasoline	1284.776	48628.54	48628.54	0	19141.24	0	0.177759	0.037957	0.652357	0.001412	0	0.000254	0.002	0.03185	0.001536	0	0.000276	0.008	0.091	1004.818	139.3689	25.76474	0.007195	0.119472	0.03399	0.010641	0.003132	0.052198	0.034284	0.435228	0.166581	0.04334	0.23012	2.436474	0.050027	0.635084	0.182386	0.04334	0.23012	2.436474	0.044965	0.996769	3.762493	3.095596	0.009934	0.001378	0.000255
Sonoma	2023	LHDT2	Aggregate	Aggregate	Diesel	2964.586	114169.6	114169.6	0	37290.76	0	1.725429	2.226171	0	0.041495	0.026706	0	0.003	0.03185	0.043371	0.027913	0	0.012	0.091	782.5806	217.0069	0	0.008967	0.005098	0	0.123296	0.03419	0	0.193063	0.10976	0	0	0	0	0.21979	0.124954	0	0	0	0	0.168066	0.530448	0.909745	0	0.007415	0.002056	0
Sonoma	2023	MCY	Aggregate	Aggregate	Gasoline	10151.85	54897.63	54897.63	0	20303.69	0	0.699628	0	0.182585	0.001897	0	0.003789	0.001	0.0042	0.00202	0	0.004011	0.004	0.012	192.7474	0	57.26244	0.206325	0	0.225191	0.045236	0	0.010361	1.43511	0	1.727266	3.55027	3.890255	4.853921	1.68944	0	1.876677	3.55027	3.890255	4.853921	0.008471	16.43081	0	8.789149	0.001906	0	0.000566
Sonoma	2023	MDV	Aggregate	Aggregate	Gasoline	47948.72	1673482	1673482	0	217256.9	0	0.146165	0	0.569656	0.001421	0	0.002384	0.002	0.003705	0.001545	0	0.002592	0.008	0.010586	432.743	0	114.2267	0.005398	0	0.131552	0.009998	0	0.047794	0.023869	0	0.694406	0.128056	0.374318	2.15406	0.034768	0	0.760277	0.128056	0.374318	2.15406	0.03436	1.266239	0	5.277119	0.004278	0	0.001129
Sonoma	2023	MDV	Aggregate	Aggregate	Diesel	1034.813	39273.07	39273.07	0	4829.975	0	0.087411	0	0	0.007538	0	0	0.002	0.003676	0.007879	0	0	0.008	0.010502	425.3579	0	0	0.000712	0	0	0.067015	0	0	0.015336	0	0	0	0	0	0	0.017459	0	0	0	0	0.0031	0.244654	0	0	0.00403	0	0
Sonoma	2023	MDV	Aggregate	Aggregate	Electricity	227.351	8624.233	0	8624.233	1167.1	3329.666	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	MDV	Aggregate	Aggregate	Plug-in Hyb	240.1999	11159.57	5611.933	5547.638	993.2267	1675.552	0.003479	0	0.117551	0.000715	0	0.002305	0.002	0.001447	0.000778	0	0.002507	0.008	0.004134	143.7327	0	99.28385	0.000473	0	0.043974	0.000631	0	0.021292	0.001496	0	0.178895	0.030696	0.029376	0.365444	0.002182	0	0.195868	0.030696	0.029376	0.365444	0.021121	0.223594	0	1.393412	0.001421	0	0.000982
Sonoma	2023	MH	Aggregate	Aggregate	Gasoline	1193.561	10262.58	10262.58	0	119.4039	0	0.562263	0	0.422772	0.001857	0	0.000431	0.003	0.015758	0.002019	0	0.000469	0.012	0.045024	1949.172	0	32.08554	0.020216	0	0.039334	0.031846	0	0.042449	0.091863	0	0.170596	14.20297	0.335756	5.277113	0.134046	0	0.186781	14.20297	0.335756	5.277113	0.044472	2.316872	0	3.747105	0.01927	0	0.000317
Sonoma	2023	MH	Aggregate	Aggregate	Diesel	585.8022	5566.106	5566.106	0	58.58022	0	0.708088	0	0	0.123218	0	0	0.004	0.01568	0.128789	0	0	0.016	0.044799	1080.322	0	0	0.006393	0	0	0.170205	0	0	0.137635	0	0	0	0	0	0	0.156688	0	0	0	0	0.130942	0.470191	0	0	0.010237	0	0
Sonoma	2023	MHDT	Aggregate	Aggregate	Gasoline	672.6531	33092.13	33092.13	0	13458.44	0	0.647929	0.087754	0.452484	0.001526	0	0.000646	0.003	0.015757	0.00166	0	0.000703	0.012	0.045021	1815.986	538.9668	47.76696	0.021621	0.25248	0.04965	0.02935	0.006946	0.031624	0.111045	1.008612	0.28464	0.04186	0.352633	3.356943	0.162036	1.471764	0.311645	0.04186	0.352633	3.356943	0.044896	2.372906	15.27703	6.335091	0.017953	0.005328	0.000472
Sonoma	2023	MHDT	Aggregate	Aggregate	Diesel	5073.931	223350.4	223350.4	0	59664.4	0	1.21362	13.05844	1.686033	0.014847	0.036157	0	0.003	0.015841	0.015518	0.037791	0	0.012	0.04526	1140.088	2263.282	0	0.001472	0.012563	0	0.179621	0.356581	0	0.031686	0.270484	0	0	0	0	0.036072	0.307925	0	0	0	0	0.211459	0.119351	7.657894	0	0.010796	0.021432	0
Sonoma	2023	MHDT	Aggregate	Aggregate	Electricity	1.942294	44.56289	0	44.56289	23.07529	47.64584	0	0	0	0	0	0	0.003	0.007924	0	0	0	0.012	0.022639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	MHDT	Aggregate	Aggregate	Natural Ga	30.61999	1584.177	1584.177	0	322.9517	0	0.142518	6.002312	0	0.001057	0.015993	0	0.003	0.01589	0.00115	0.017394	0	0.012	0.045401	965.0919	4864.204	0	0.688581	16.2618	0	0.19674	0.9916	0	0.009838	0.232349	0	0	0	0	0.702748	16.59636	0	0	0	0	1.06	2.908672	30.41557	0	0	0	0
Sonoma	2023	OBUS	Aggregate	Aggregate	Gasoline	175.9246	8189.992	8189.992	0	3519.9	0	0.671387	0.064853	0.41813	0.001042	0	0.000331	0.003	0.015684	0.001133	0	0.00036	0.012	0.044811	1786.995	381.2393	32.36634	0.017847	0.19334	0.037738	0.029526	0.005207	0.030312	0.088806	0.743141	0.204225	0.035481	0.164054	2.930525	0.129585	1.084389	0.223601	0.035481	0.164054	2.930525	0.044927	1.983247	5.755825	4.368305	0.017666	0.003769	0.00032
Sonoma	2023	OBUS	Aggregate	Aggregate	Diesel	166.0528	12485.04	12485.04	0	1898.862	0	1.563977	11.43515	1.605992	0.031899	0.015795	0	0.003	0.019487	0.033341	0.016509	0	0.012	0.055678	1380.127	2402.406	0	0.00303	0.036946	0	0.21744	0.3785	0	0.065244	0.795442	0	0	0	0	0.074275	0.90555	0	0	0	0	0.213853	0.208233	12.38702	0	0.013069	0.022749	0
Sonoma	2023	OBUS	Aggregate	Aggregate	Natural Ga	1.006981	68.10798	68.10798	0	8.962128	0	0.212165	1.545028	0	0.000959	0.003718	0	0.003	0.016148	0.001043	0.004043	0	0.012	0.046137	1037.042	1216.052	0	0.77819	4.330901	0	0.211408	0.2479	0	0.011119	0.06188	0	0	0	0	0.7942	4.420002	0	0	0	0	1.06	3.223057	6.943588	0	0	0	0
Sonoma	2023	SBUS	Aggregate	Aggregate	Gasoline	58.98136	3054.818	3054.818	0	235.9254	0	0.213389	0.926353	0.705531	0.000798	0	0.000537	0.002	0.015721	0.000868	0	0.000584	0.008	0.044917	812.6628	2598.494	56.07477	0.004134	2.505189	0.064799	0.016251	0.09044	0.06867	0.019032	10.63893	0.355997	0.090213	0.158514	1.104106	0.027771	15.5243	0.389772	0.090213	0.158514	1.104106	0.045	0.450305	82.22516	9.118099	0.008034	0.025689	0.000554
Sonoma	2023	SBUS	Aggregate	Aggregate	Diesel	392.462	9102.481	9102.481	0	5682.849	0	3.772994	22.20989	0.448307	0.019663	0.018494	0	0.003	0.015721	0.020552	0.019237	0	0.012	0.044917	1174.814	2276.374	0	0.002898	0.008166	0	0.185092	0.358644	0	0.062389	0.175804	0	0	0	0	0.071025	0.20014	0	0	0	0	0.139921	0.185909	4.491344	0	0.011125	0.021556	0
Sonoma	2023	SBUS	Aggregate	Aggregate	Electricity	0.088846	1.032148	0	1.032148	1.286494	1.087322	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.012	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	SBUS	Aggregate	Aggregate	Natural Ga	26.87638	687.8114	687.8114	0	389.17	0	0.653469	5.324535	0	0.003378	0.010078	0	0.003	0.015721	0.003674	0.010961	0	0.012	0.044917	1276.873	3943.681	0	3.668975	15.91893	0	0.260299	0.803945	0	0.052422	0.22745	0	0	0	0	3.744458	16.24643	0	0	0	0	1.06	12.7422	17.86217	0	0	0	0
Sonoma	2023	UBUS	Aggregate	Aggregate	Gasoline	49.01023	3621.417	3621.417	0	196.0409	0	0.089606	0	0.615787	0.001012	0	0.000315	0.002	0.002288	0.033765	0.001101	0	0.000343	0.009152	0.096472	1192.443	0	59.36216	0.00254	0	0.070823	0.009238	0	0.075307	0.00772	0	0.279322	0.04654	0.100799	0.524579	0.011265	0	0.305822	0.04654	0.100799	0.524579	0.045	0.502829	0	7.460654	0.017189	0	0.000587
Sonoma	2023	UBUS	Aggregate	Aggregate	Diesel	43.37245	3876.507	3876.507	0	173.4898	0	0.352774	0	0.006411	0	0	0	0.007664	0.0385	0.006701	0	0	0.030656	0.11	1164.167	0	0	0.002998	0	0	0.183415	0	0	0.064545	0	0	0	0	0	0.07348	0	0	0	0	0.22	0.072564	0	0	0.010331	0	0
Sonoma	2023	UBUS	Aggregate	Aggregate	Electricity	1.009351	26.88826	0	26.88826	4.037406	46.8728	0	0	0	0	0	0	0.003	0.01925	0	0	0	0.012	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2023	UBUS	Aggregate	Aggregate	Natural Ga	45.47028	5664.459	5664.459	0	181.8811	0	0.443098	0	0	0.000154	0	0	0.008125	0.0385	0.000161	0	0	0.0325	0.11	1473.841	0	0	1.366821	0	0	0.300452	0	0	0.019529	0	0	0	0	0	1.394941	0	0	0	0	0.97	22.74258	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Sonoma
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Sonoma	2024	HHDT	Aggregate	Aggregate	Gasoline	1.60E+24	54.77772	54.77772	0	32.17734	0	17.0318	0	1.710583	0.00528	0	0.002014	0.005	0.037656	0.005742	0	0.00219	0.02	0.107587	2518.174	0	50.60987	0.536698	0	6.64E-05	0.391695	0	0.0312	3.477915	0	0.00036	0.136397	1.24959	9.587823	5.074965	0	0.000395	0.136397	1.24959	9.587823	0.040424	121.4007	0	1.308573	0.024895	0	0.0005
Sonoma	2024	HHDT	Aggregate	Aggregate	Diesel	2371.664	230054.8	2300054.8	0	28188.22	0	2.242603	48.56909	2.892769	0.02449	0.035161	0	0.008449	0.027536	0.025598	0.03675	0	0.033795	0.078674	1708.226	8911.709	0	0.000977	0.17379	0	0.269132	1.404043	0	0.021032	3.741653	0	0	0	0	0.023943	4.259587	0	0	0	0	0.211174	0.102628	53.40066	0	0.016176	0.084389	0
Sonoma	2024	HHDT	Aggregate	Aggregate	Electricity	6.196545	584.9342	0	584.9342	72.70847	1085.436	0	0	0	0	0	0	0.008418	0.01408	0	0	0	0.033671	0.040229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	HHDT	Aggregate	Aggregate	Natural Ga	171.2577	11229.14	11229.14	0	1352.875	0	0.825217	10.83035	0	0.002141	0.019848	0	0.009	0.049647	0.002329	0.021587	0	0.036	0.141848	1380.874	9009.978	0	1.351381	28.38005	0	0.2815	1.836743	0	0.042918	0.447167	0	0	0	0	1.406082	29.0114	0	0	0	0	0.831267	9.982727	65.61282	0	0	0	0
Sonoma	2024	LDA	Aggregate	Aggregate	Gasoline	140284	5304989	5304989	0	645118	0	0.052317	0	0.281941	0.00125	0	0.001998	0.002	0.003109	0.00136	0	0.002173	0.008	0.008882	279.0788	0	71.87062	0.002854	0	0.079694	0.005349	0	0.034745	0.011333	0	0.37321	0.102801	0.275207	1.638256	0.016537	0	0.408618	0.102801	0.275207	1.638256	0.034296	0.839731	0	3.645336	0.002759	0	0.000711
Sonoma	2024	LDA	Aggregate	Aggregate	Diesel	922.4281	27127.11	27127.11	0	3848.774	0	0.316542	0	0.021217	0	0	0	0.002	0.003175	0.022176	0	0	0.008	0.009071	241.4597	0	0	0.001636	0	0	0.035217	0	0	0.040093	0	0	0	0	0	0	0	0	0	0	0	0.0031	0.405291	0	0	0.002288	0	0
Sonoma	2024	LDA	Aggregate	Aggregate	Electricity	8159.075	387247	0	387247	40349.51	149509.3	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	LDA	Aggregate	Aggregate	Plug-in Hyb	3637.796	166766	82861.11	83904.92	1504229	25341.79	0.003438	0	0.117553	0.000623	0	0.002012	0.002	0.001449	0.000677	0	0.002188	0.008	0.00414	142.0154	0	65.86801	0.000466	0	0.043832	0.00062	0	0.021161	0.001478	0	0.17789	0.041577	0.038208	0.444471	0.002156	0	0.195873	0.041577	0.038208	0.444471	0.019278	0.220923	0	1.393458	0.001404	0	0.000651
Sonoma	2024	LDT1	Aggregate	Aggregate	Gasoline	18023.11	552905.4	552905.4	0	77083.14	0	0.194865	0	0.505278	0.002188	0	0.003388	0.002	0.003784	0.00238	0	0.003684	0.008	0.010811	336.55	0	93.30549	0.009293	0	0.140804	0.013106	0	0.044434	0.042673	0	0.766864	0.238553	0.71921	3.773489	0.062259	0	0.839618	0.238553	0.71921	3.773489	0.037068	1.981456	0	7.499655	0.003327	0	0.000922
Sonoma	2024	LDT1	Aggregate	Aggregate	Diesel	20.60225	244.6154	244.6154	0	58.14214	0	1.636843	0	0	0.246171	0	0	0.002	0.004256	0.257302	0	0	0.008	0.012159	422.3585	0	0	0.014377	0	0	0.066543	0	0	0.309523	0	0	0	0	0	0	0	0	0	0	0	0.0031	1.627624	0	0	0.004002	0	0
Sonoma	2024	LDT1	Aggregate	Aggregate	Electricity	35.63983	1465.823	0	1465.823	168.144	565.9287	0	0	0	0	0	0	0.002	0.001538	0	0	0	0.008	0.004393	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	LDT1	Aggregate	Aggregate	Plug-in Hyb	13.64134	678.1406	303.6026	374.538	56.40696	113.1216	0.003097	0	0.117545	0.000385	0	0.001393	0.002	0.001453	0.000419	0	0.001515	0.008	0.00415	127.9709	0	71.52982	0.000418	0	0.043712	0.000555	0	0.021056	0.001332	0	0.178878	0.023998	0.021067	0.274527	0.001943	0	0.195849	0.023998	0.021067	0.274527	0.018803	0.199115	0	1.393249	0.001265	0	0.000707
Sonoma	2024	LDT2	Aggregate	Aggregate	Gasoline	68818.2	2551279	2551279	0	318009.1	0	0.086324	0	0.382873	0.001326	0	0.002056	0.002	0.003605	0.001442	0	0.002236	0.008	0.010299	347.9168	0	90.66289	0.00344	0	0.093686	0.006881	0	0.039889	0.014017	0	0.447511	0.097176	0.269155	1.619053	0.020454	0	0.489968	0.097176	0.269155	1.619053	0.035633	0.96156	0	4.255963	0.00344	0	0.000896
Sonoma	2024	LDT2	Aggregate	Aggregate	Diesel	298.8811	11433.07	11433.07	0	1399.326	0	0.063065	0	0	0.006168	0	0	0.002	0.003617	0.006447	0	0	0.008	0.010335	323.6061	0	0	0.000722	0	0	0.050984	0	0	0.015549	0	0	0	0	0	0	0.017701	0	0	0	0	0.0031	0.1571	0	0	0.003066	0	0
Sonoma	2024	LDT2	Aggregate	Aggregate	Electricity	315.211	11817.29	0	11817.29	1608.99	4562.451	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	LDT2	Aggregate	Aggregate	Plug-in Hyb	431.6497	20544.47	9645.648	10898.83	1784.872	3291.77	0.003248	0	0.117545	0.000491	0	0.001693	0.002	0.001451	0.000535	0	0.001841	0.008	0.004145	134.2042	0	78.26704	0.000439	0	0.043732	0.000583	0	0.021074	0.001396	0	0.178878	0.025853	0.023854	0.303829	0.002038	0	0.195849	0.025853	0.023854	0.303829	0.019674	0.20882	0	1.393248	0.001327	0	0.000774
Sonoma	2024	LHDT1	Aggregate	Aggregate	Gasoline	8082.811	289644	289644	0	120421.8	0	0.268988	0.038318	0.670281	0.0019	0	0.000411	0.002	0.0273	0.002066	0	0.000447	0.008	0.078	909.4114	121.0914	26.04851	0.013118	0.116649	0.037152	0.014465	0.002997	0.051346	0.067245	0.438523	0.189505	0.060996	0.351825	3.572821	0.098123	0.639891	0.207484	0.060996	0.351825	3.572821	0.044853	1.587332	3.741131	3.136721	0.00899	0.001197	0.000258
Sonoma	2024	LHDT1	Aggregate	Aggregate	Diesel	8213.836	290995.1	290995.1	0	103319.7	0	2.513428	2.291347	0	0.050901	0.026946	0	0.003	0.0273	0.053202	0.028165	0	0.012	0.078	642.3917	136.6595	0	0.010859	0.005098	0	0.101209	0.021531	0	0.233791	0.10976	0	0	0	0	0.266156	0.124954	0	0	0	0	0.142603	0.702644	0.909745	0	0.006087	0.001295	0
Sonoma	2024	LHDT1	Aggregate	Aggregate	Electricity	14.0715	1093.441	0	1093.441	196.57	715.0156	0	0	0	0	0	0	0.002	0.001365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	LHDT2	Aggregate	Aggregate	Gasoline	1245.302	46513.27	46513.27	0	18553.14	0	0.165586	0.037406	0.644856	0.001371	0	0.000237	0.002	0.03185	0.001491	0	0.000258	0.008	0.091	996.3305	138.8077	25.63666	0.006534	0.117957	0.033234	0.009994	0.0031	0.051677	0.030855	0.428984	0.162329	0.042294	0.226336	2.421357	0.045024	0.625973	0.177729	0.042294	0.226336	2.421357	0.044972	0.944855	3.764715	3.083285	0.00985	0.001372	0.000253
Sonoma	2024	LHDT2	Aggregate	Aggregate	Diesel	2917.809	110729.5	110729.5	0	36702.36	0	1.647269	2.182286	0	0.040887	0.02672	0	0.003	0.03185	0.042736	0.027928	0	0.012	0.091	779.3962	215.8985	0	0.008786	0.005098	0	0.122794	0.034015	0	0.189148	0.10976	0	0	0	0	0.215332	0.124954	0	0	0	0	0.171008	0.52097	0.909745	0	0.007385	0.002046	0
Sonoma	2024	LHDT2	Aggregate	Aggregate	Electricity	3.642145	268.1505	0	268.1505	48.21097	172.66	0	0	0	0	0	0	0.002	0.001592	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	MCY	Aggregate	Aggregate	Gasoline	9945.696	53457.73	53457.73	0	19891.39	0	0.683414	0	0.176824	0.00187	0	0.003524	0.001	0.0042	0.001993	0	0.003735	0.004	0.012	192.1219	0	56.25802	0.200724	0	0.220225	0.044539	0	0.010054	1.386222	0	1.685032	3.55202	3.910604	4.895034	1.636862	0	1.830926	3.55202	3.910604	4.895034	0.008524	15.97023	0	8.756079	0.001899	0	0.000556
Sonoma	2024	MDV	Aggregate	Aggregate	Gasoline	47129.64	1652297	1652297	0	213400.9	0	0.127353	0	0.526478	0.00135	0	0.002241	0.002	0.003705	0.001468	0	0.002437	0.008	0.010587	425.4376	0	111.8727	0.004758	0	0.122775	0.00905	0	0.045764	0.020663	0	0.639832	0.123934	0.368907	2.13872	0.030136	0	0.700533	0.123934	0.368907	2.13872	0.035029	1.146297	0	4.88379	0.004206	0	0.001106
Sonoma	2024	MDV	Aggregate	Aggregate	Diesel	1017.345	37734.35	37734.35	0	4706.261	0	0.08223	0	0	0.007415	0	0	0.002	0.003719	0.00775	0	0	0.008	0.010625	422.7238	0	0	0.000703	0	0	0.0666	0	0	0.015129	0	0	0	0	0	0	0.017223	0	0	0	0	0.0031	0.246667	0	0	0.004006	0	0
Sonoma	2024	MDV	Aggregate	Aggregate	Electricity	336.2868	12653.18	0	12653.18	1718.806	4885.172	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	MDV	Aggregate	Aggregate	Plug-in Hyb	291.6522	13545.32	6577.775	6967.549	1205.982	2104.408	0.00336	0	0.117551	0.000633	0	0.002113	0.002	0.00145	0.000689	0	0.002299	0.008	0.004144	138.8017	0	97.65693	0.000454	0	0.043786	0.000604	0	0.021121	0.001444	0	0.178893	0.031669	0.028155	0.349107	0.002108	0	0.195865	0.031669	0.028155	0.349107	0.020396	0.215941	0	1.393391	0.001372	0	0.000965
Sonoma	2024	MH	Aggregate	Aggregate	Gasoline	1113.896	9613.321	9613.321	0	111.4342	0	0.520865	0	0.432494	0.001775	0	0.000413	0.003	0.015758	0.00193	0	0.000449	0.012	0.045024	1948.651	0	31.90724	0.018343	0	0.038978	0.030171	0	0.043939	0.082191	0	0.167009	13.74302	0.328438	5.243128	0.119934	0	0.182854	13.74302	0.328438	5.243128	0.044787	2.017338	0	3.642321	0.019264	0	0.000315
Sonoma	2024	MH	Aggregate	Aggregate	Diesel	577.6919	5397.988	5397.988	0	57.76919	0	4.643384	0	0	0.120736	0	0	0.004	0.015668	0.126195	0	0	0.016	0.044799	1080.422	0	0	0.008366	0	0	0.170221	0	0	0.137067	0	0	0	0	0	0	0.156041	0	0	0	0	0.133498	0.467429	0	0	0.010238	0	0
Sonoma	2024	MHDT	Aggregate	Aggregate	Gasoline	646.6174	31951.97	31951.97	0	12937.52	0	0.5641	0.087987	0.440036	0.00147	0	0.000602	0.003	0.015757	0.001599	0	0.000655	0.012	0.045021	1801.526	535.9975	47.13884	0.018277	0.255712	0.048607	0.026263	0.007123	0.031656	0.092782	1.011968	0.275753	0.038456	0.321996	3.121864	0.135387	1.476662	0.301915	0.038456	0.321996	3.121864	0.044953	1.967229	15.31105	6.098532	0.01781	0.005299	0.000466
Sonoma	2024	MHDT	Aggregate	Aggregate	Diesel	5140.295	224256.9	224256.9	0	60492.94	0	1.135698	12.70178	1.702469	0.013059	0.030055	0	0.003	0.015841	0.01365	0.031414	0	0.012	0.04526	1136.212	2250.187	0	0.0013	0.011775	0	0.179011	0.354518	0	0.027997	0.253516	0	0	0	0	0.031872	0.288608	0	0	0	0	0.212621	0.110056	7.617781	0	0.010759	0.021308	0
Sonoma	2024	MHDT	Aggregate	Aggregate	Electricity	12.12558	648.3102	0	648.3102	149.1578	706.4402	0	0	0	0	0	0	0.003	0.00792	0	0	0	0.012	0.022628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	MHDT	Aggregate	Aggregate	Natural Ga	33.03412	1667.859	1667.859	0	347.4564	0	0.134524	5.994809	0	0.001102	0.016523	0	0.003	0.015896	0.001199	0.017797	0	0.012	0.045419	960.9456	4884.12	0	0.696297	16.04141	0	0.195895	0.99566	0	0.009949	0.2292	0	0	0	0	0.710622	16.37144	0	0	0	0	1.06	2.910031	31.59913	0	0	0	0
Sonoma	2024	OBUS	Aggregate	Aggregate	Gasoline	167.1966	7628.652	7628.652	0	3345.27	0	0.628615	0.064919	0.422292	0.001038	0	0.000317	0.003	0.015684	0.001129	0	0.000345	0.012	0.044811	1775.12	379.8341	32.19998	0.016157	0.193774	0.037707	0.02786	0.005233	0.030598	0.079758	0.744136	0.204104	0.035195	0.166816	3.022436	0.116382	1.085842	0.223469	0.035195	0.166816	3.022436	0.044974	1.772212	5.761782	4.323706	0.017549	0.003755	0.000318
Sonoma	2024	OBUS	Aggregate	Aggregate	Diesel	169.8632	12489.36	12489.36	0	1943.154	0	1.530294	11.39189	1.611163	0.030802	0.014417	0	0.003	0.019498	0.032195	0.015069	0	0.012	0.055707	1371.362	2385.042	0	0.002915	0.036798	0	0.216059	0.375764	0	0.062758	0.792256	0	0	0	0	0.071445	0.901923	0	0	0	0	0.214082	0.2015	12.39254	0	0.012986	0.022585	0
Sonoma	2024	OBUS	Aggregate	Aggregate	Electricity	0.21605	19.19194	0	19.19194	4.322737	21.26729	0	0	0	0	0	0	0.003	0.007843	0	0	0	0.012	0.022408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	OBUS	Aggregate	Aggregate	Natural Ga	1.146219	76.54844	76.54844	0	10.20135	0	0.186674	1.534396	0	0.00108	0.003971	0	0.003	0.016148	0.001175	0.004319	0	0.012	0.046137	1020.927	1214.117	0	0.79212	4.199637	0	0.208123	0.247506	0	0.011318	0.060005	0	0	0	0	0.808416	4.286038	0	0	0	0	1.06	3.260585	7.515352	0	0	0	0
Sonoma	2024	SBUS	Aggregate	Aggregate	Gasoline	60.18335	3134.506	3134.506	0	240.7334	0	0.217513	0.926391	0.727682	0.000805	0	0.000542	0.002	0.015721	0.000875	0	0.00059	0.008	0.044917	810.244	2591.316	55.88573	0.004015	2.507274	0.065376	0.016502	0.089878	0.070254	0.018449	10.63948	0.358983	0.090708	0.160025	1.111555	0.026921	15.5251	0.393041	0.090708	0.160025	1.111555	0.045	0.438725	82.22848	9.068189	0.00801	0.025618	0.000552
Sonoma	2024	SBUS	Aggregate	Aggregate	Diesel	395.7844	9082.046	9082.046	0	5730.958	0	3.624019	21.80504	0.461047	0.018976	0.017428	0	0.003	0.015721	0.019834	0.018216	0	0.012	0.044917	1170.823	2267.537	0	0.002859	0.008127	0	0.184464	0.357251	0	0.061545	0.174971	0	0	0	0	0.070065	0.199191	0	0	0	0	0.143132	0.184331	4.569413	0	0.011087	0.021472	0
Sonoma	2024	SBUS	Aggregate	Aggregate	Electricity	0.874713	25.42456	0	25.42456	11.42416	26.78365	0	0	0	0	0	0	0.002	0.002758	0.00786	0	0	0	0.011032	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	SBUS	Aggregate	Aggregate	Natural Ga	27.30406	690.0046	690.0046	0	395.3628	0	0.644021	5.318822	0	0.003378	0.010214	0	0.003	0.015721	0.003674	0.011109	0	0.012	0.044917	1272.607	3948.877	0	3.643017	15.84838	0	0.259429	0.805004	0	0.052052	0.226442	0	0	0	0	3.717966	16.17444	0	0	0	0	1.06	12.62004	18.16945	0	0	0	0
Sonoma	2024	UBUS	Aggregate	Aggregate	Gasoline	49.15534	3632.14	3632.14	0	196.6214	0	0.093381	0	0.588913	0.001111	0	0.000335	0.002	0.002288	0.033765	0.001209	0	0.000364	0.009152	0.096472	1168.196	0	58.98479	0.002397	0	0.068502	0.009393	0	0.071842	0.007256	0	0.269888	0.043207	0.102047	0.498698	0.010587	0	0.295493	0.043207	0.102047	0.498698	0.045	0.507024	0	7.501409	0.011549	0	0.000583
Sonoma	2024	UBUS	Aggregate	Aggregate	Diesel	47.15633	4260.635	4260.635	0	188.6253	0	0.358846	0	0	0.006522	0	0	0.002	0.007779	0.0385	0.006816	0	0	0.031118	0.11	1172.051	0	0.003037	0	0	0.184657	0	0	0.065391	0	0	0	0	0	0.074442	0	0	0	0	0	0.22	0.073798	0	0	0.011106	0	0
Sonoma	2024	UBUS	Aggregate	Aggregate	Electricity	1.009351	26.88826	0	26.88826	4.037406	46.8728	0	0	0	0	0	0	0.003	0.01925	0	0	0	0.012	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2024	UBUS	Aggregate	Aggregate	Natural Ga	41.95244	5308.66	5308.66	0	167.8098	0	0.424471	0	0	0.000158	0	0	0.008065	0.0385	0.000165	0	0	0.032259	0.11	1460.863	0	0	1.468537	0	0	0.297806	0	0	0.020982	0	0	0	0	0	1.49875	0	0	0	0	0	0.97	23.55344	0	0	0	0	0

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004397	0.002928	0.010223	0.177847834	0.008196	0	0	0.092003	0
A	CH4_RUNEX	0.002593	0.00926	0.003388	0.0046	0.011963	0.008106	0.007879	0.063776212	0.010898	0.590975229	0.200724	0.197359	0.014036
A	CH4_STREX	0.073928	0.140322	0.092537	0.118776	0.019978	0.011159	0.008506	7.20466E-08	0.023787	0.024177279	0.220225	0.002467	0.02567
A	CO_IDLEX	0	0	0	0	0.168401	0.132886	0.67772	4.651055228	0.580244	0	0	1.137166	0
A	CO_RUNEX	0.764951	1.973893	0.947677	1.110723	1.141808	0.645257	0.357378	0.588440089	0.805679	9.615218982	15.97023	0.909155	1.460002
A	CO_STREX	3.368502	7.473267	4.200471	4.722781	1.68676	1.035275	1.067266	0.001420307	2.727533	2.647556059	8.756079	0.342247	2.398764
A	CO2_NBIO_IDLEX	0	0	0	0	9.383208	14.52901	163.3306	764.9807225	88.63551	0	0	182.0544	0
A	CO2_NBIO_RUNEX	256.6616	335.4447	344.5335	419.9791	774.1331	842.1304	1214.46	1689.084791	1521.111	1284.513259	192.1219	1086.553	1636.44
A	CO2_NBIO_STREX	67.23257	93.01671	89.74943	108.5432	14.00748	8.608021	8.249476	0.054931262	20.31278	20.81816269	56.25802	2.109212	21.01351
A	NOX_IDLEX	0	0	0	0	0.085427	0.11608	0.886628	3.948066894	0.367282	0	0	1.384511	0
A	NOX_RUNEX	0.048708	0.194752	0.085171	0.124443	1.391199	1.206921	1.055745	2.174739638	1.18346	0.311563219	0.683414	2.632209	2.003301
A	NOX_STREX	0.260738	0.503517	0.377838	0.508943	0.360441	0.216523	1.470102	2.752381935	0.856772	0.207851604	0.176824	0.441707	0.284832
A	PM10_IDLEX	0	0	0	0	0.001033	0.001475	0.002192	0.003064719	0.000484	0	0	0.001178	0
A	PM10_PMBW	0.008452	0.010786	0.010223	0.010491	0.077927	0.090923	0.045174	0.08152029	0.051527	0.106340589	0.012	0.044873	0.044943
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.010001	0.010812	0.012	0.033894235	0.012	0.025542012	0.004	0.011029	0.013438
A	PM10_RUNEX	0.001347	0.002483	0.00145	0.001589	0.027642	0.030484	0.012046	0.0244512	0.020323	0.002593691	0.001993	0.014338	0.046615
A	PM10_STREX	0.002037	0.003672	0.002213	0.002366	0.000241	8.67E-05	0.000115	2.37688E-06	0.000218	0.000128456	0.003735	2.23E-05	0.000295
A	PM25_IDLEX	0	0	0	0	0.000988	0.001411	0.002097	0.002927492	0.000463	0	0	0.001125	0
A	PM25_PMBW	0.002958	0.003775	0.003578	0.003672	0.027274	0.031823	0.015811	0.028532102	0.018034	0.037219206	0.0042	0.015706	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025	0.002703	0.003	0.008473559	0.003	0.006385503	0.001	0.002757	0.00336
A	PM25_RUNEX	0.001242	0.002288	0.001334	0.001468	0.026408	0.029149	0.011517	0.023389374	0.019427	0.002469117	0.00187	0.013702	0.044552
A	PM25_STREX	0.001873	0.003376	0.002035	0.002175	0.000221	7.97E-05	0.000105	2.18545E-06	0.0002	0.000118111	0.003524	2.05E-05	0.000272
A	ROG_DIURN	0.32858	0.879119	0.345572	0.45649	0.128957	0.05457	0.027306	0.000520117	0.095294	0.044002802	4.895034	0.010488	34.51645
A	ROG_HTSK	0.095043	0.237699	0.095876	0.119828	0.0328	0.014201	0.00673	0.000148043	0.022202	0.015249413	3.55202	0.003423	9.050894
A	ROG_IDLEX	0	0	0	0	0.019854	0.015464	0.026581	0.301913519	0.048852	0	0	0.112214	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.010418	0.042627	0.01386	0.020237	0.150428	0.142081	0.035817	0.022779673	0.068919	0.031473951	1.386222	0.050472	0.101924
A	ROG_RUNLS	0.252876	0.716597	0.265291	0.356324	0.189193	0.075997	0.05635	0.001356288	0.105233	0.036016464	3.910604	0.00604	0.216303
A	ROG_STREX	0.345641	0.764193	0.441855	0.618718	0.101906	0.054505	0.048258	3.91133E-07	0.128756	0.095254529	1.685032	0.013549	0.109989
A	SO2_IDLEX	0	0	0	0	9.07E-05	0.000139	0.001528	0.006751042	0.000842	0	0	0.001574	0
A	SO2_RUNEX	0.002537	0.003316	0.003405	0.004148	0.007521	0.0081	0.011534	0.015387922	0.014647	0.006747987	0.001899	0.009728	0.016018
A	SO2_STREX	0.000665	0.00092	0.000887	0.001073	0.000138	8.51E-05	8.16E-05	5.43051E-07	0.000201	0.000205809	0.000556	2.09E-05	0.000208
A	TOG_DIURN	0.32858	0.879119	0.345572	0.45649	0.128957	0.05457	0.027306	0.000520117	0.095294	0.044002802	0.146997	0.010488	34.51645
A	TOG_HTSK	0.095043	0.237699	0.095876	0.119828	0.0328	0.014201	0.00673	0.000148043	0.022202	0.015249413	3.55202	0.003423	9.050894
A	TOG_IDLEX	0	0	0	0	0.027679	0.020706	0.040299	0.508356685	0.064052	0	0	0.228082	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.01515	0.062149	0.020203	0.029409	0.181992	0.164673	0.048965	0.089182446	0.091127	0.628347151	1.636862	0.254109	0.132918
A	TOG_RUNLS	0.252876	0.716597	0.265291	0.356324	0.189193	0.075997	0.05635	0.001356288	0.105233	0.036016464	3.910604	0.00604	0.216303
A	TOG_STREX	0.378434	0.836693	0.483775	0.677416	0.111574	0.059676	0.052836	4.28241E-07	0.140971	0.104291719	1.830926	0.014834	0.120424
A	N2O_IDLEX	0	0	0	0	0.000898	0.001866	0.025158	0.122933188	0.012255	0	0	0.026461	0
A	N2O_RUNEX	0.005014	0.01308	0.006994	0.010182	0.057829	0.089275	0.159792	0.269082832	0.144798	0.181567063	0.044539	0.14739	0.080532
A	N2O_STREX	0.032275	0.044194	0.039413	0.0443	0.027611	0.017352	0.00554	3.38646E-05	0.019302	0.02535604	0.010054	0.002652	0.028937

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.486165	0.045865	0.21434	0.141752	0.048048	0.01301	0.021353	0.019982	0.00167	0.001093	0.004415	0.001068	0.00124

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Sonoma
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Sonoma	2030	HHDT	Aggregate	Aggregate	Gasoline	0.413995	42.11769	42.11769	0	8.283209	0	3.894982	0	0.013127	0.001645	0	0.000654	0.005	0.032961	0.00179	0	0.000711	0.02	0.094173	1980.532	0	49.57901	0.12306	0	0.000156	0.144233	0	0.000497	0.625235	0	0.000843	0.059411	0.544129	4.324643	0.912342	0	0.000923	0.059411	0.544129	4.324643	0.045	26.7312	0	4.140578	0.01958	0	0.00049
Sonoma	2030	HHDT	Aggregate	Aggregate	Diesel	2531.088	230058.1	230058.1	0	30502.97	0	1.797338	46.86979	2.913492	0.023188	0.023038	0	0.008471	0.027953	0.024237	0.02408	0	0.033884	0.07866	1557.17	8168.68	0	0.000778	0.174071	0	0.245333	1.286979	0	0.016748	3.747694	0	0	0	0	0.019067	4.266465	0	0	0	0	0.214858	0.078325	54.54121	0	0.014745	0.077353	0
Sonoma	2030	HHDT	Aggregate	Aggregate	Electricity	150.6212	14705.17	0	14705.17	1610.428	27319.99	0	0	0	0	0	0	0.008174	0.014886	0	0	0	0.032696	0.042533	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	HHDT	Aggregate	Aggregate	Natural Ga	206.7115	12409.7	12409.7	0	1581.181	0	0.493118	9.197225	0	0.001758	0.021084	0	0.009	0.053724	0.001912	0.022931	0	0.036	0.153496	1323.966	8728.987	0	0.979602	23.63665	0	0.269899	1.779461	0	0.025336	0.356045	0	0	0	0	0.791639	8.864507	65.7216	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	LDA	Aggregate	Aggregate	Gasoline	142725.9	5430197	5430197	0	656692.8	0	0.031585	0	0.220415	0.000953	0	0.001593	0.002	0.003106	0.001036	0	0.001732	0.008	0.008875	253.5562	0	64.06943	0.001705	0	0.05686	0.004032	0	0.030321	0.006117	0	0.250385	0.07795	0.227958	1.368444	0.008926	0	0.27414	0.07795	0.227958	1.368444	0.038932	0.620367	0	2.644025	0.002507	0	0.000633
Sonoma	2030	LDA	Aggregate	Aggregate	Diesel	473.972	13717.09	13717.09	0	1994.109	0	0.155082	0	0	0.009189	0	0	0.002	0.003212	0.009605	0	0	0.008	0.009178	227.8699	0	0	0.000883	0	0	0.000537	0	0	0.019	0	0	0	0	0	0.021631	0	0	0	0	0	0.00031	0.311844	0	0	0.002159	0	0
Sonoma	2030	LDA	Aggregate	Aggregate	Electricity	13755.14	624521.5	0	624521.5	66276.01	241116.9	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	LDA	Aggregate	Aggregate	Plug-in Hyb	5522.463	234980	105414.8	129565.2	22835.38	39132.55	0.003104	0	0.117546	0.000416	0	0.001528	0.002	0.001463	0.000452	0	0.001662	0.008	0.00418	128.2417	0	62.28463	0.000411	0	0.042883	0.000537	0	0.0203	0.001334	0	0.178881	0.041226	0.051809	0.522406	0.001947	0	0.195852	0.041226	0.051809	0.522406	0.018297	0.199572	0	1.393277	0.001268	0	0.000616
Sonoma	2030	LDT1	Aggregate	Aggregate	Gasoline	13477.03	412493.8	412493.8	0	57417.71	0	0.105603	0	0.36813	0.001502	0	0.002447	0.002	0.003777	0.001613	0	0.002662	0.008	0.010792	309.7482	0	82.88501	0.00512	0	0.098471	0.008194	0	0.037704	0.022639	0	0.508741	0.183951	0.550875	3.055465	0.033034	0	0.557008	0.183951	0.550875	3.055465	0.038255	1.252944	0	5.034164	0.003062	0	0.000819
Sonoma	2030	LDT1	Aggregate	Aggregate	Diesel	0.058128	2.32042	2.32042	0	0.26867	0	0.092126	0	0	0.01286	0	0	0.002	0.003452	0.013442	0	0	0.008	0.009862	365.2716	0	0	0.001244	0	0	0.057549	0	0	0.026778	0	0	0	0	0	0.030485	0	0	0	0	0	0.0031	0.213074	0	0	0.003461	0	0
Sonoma	2030	LDT1	Aggregate	Aggregate	Electricity	85.45005	4055.881	0	4055.881	416.4733	1565.905	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	LDT1	Aggregate	Aggregate	Plug-in Hyb	60.94763	2831.598	1171.787	1659.811	252.0184	501.3124	0.002863	0	0.117545	0.000247	0	0.000989	0.002	0.001464	0.000269	0	0.001075	0.008	0.004182	118.3043	0	67.8439	0.00038	0	0.04292	0.000496	0	0.020334	0.001231	0	0.178878	0.022869	0.020158	0.272167	0.001796	0	0.195849	0.022869	0.020158	0.272167	0.017381	0.184134	0	1.393247	0.00117	0	0.000671
Sonoma	2030	LDT2	Aggregate	Aggregate	Gasoline	69031.68	2525220	2525220	0	316825.8	0	0.051531	0	0.288183	0.001013	0	0.001668	0.002	0.00362	0.001102	0	0.001814	0.008	0.010344	315.5053	0	81.01569	0.00226	0	0.070142	0.005034	0	0.034674	0.008546	0	0.318482	0.079266	0.238575	1.444228	0.01247	0	0.348698	0.079266	0.238575	1.444228	0.039358	0.730668	0	3.22032	0.003119	0	0.000801
Sonoma	2030	LDT2	Aggregate	Aggregate	Diesel	284.4128	10395.67	10395.67	0	1310.497	0	0.038468	0	0	0.004576	0	0	0.002	0.003656	0.004783	0	0	0.008	0.010446	297.9877	0	0	0.000623	0	0	0.046948	0	0	0.013408	0	0	0	0	0	0.015264	0	0	0	0	0	0.0031	0.145602	0	0	0.002824	0	0
Sonoma	2030	LDT2	Aggregate	Aggregate	Electricity	1062.635	36824.85	0	36824.85	5285.132	14217.43	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	LDT2	Aggregate	Aggregate	Plug-in Hyb	958.0116	41659.09	17857.07	23802.02	3961.378	7188.921	0.002965	0	0.117547	0.000317	0	0.001221	0.002	0.001464	0.000345	0	0.001328	0.008	0.004183	122.5422	0	74.46949	0.000392	0	0.042758	0.00051	0	0.020185	0.001275	0	0.178884	0.02676	0.026574	0.321313	0.00186	0	0.195855	0.02676	0.026574	0.321313	0.017992	0.190733	0	1.393304	0.001211	0	0.000736
Sonoma	2030	LHDT1	Aggregate	Aggregate	Gasoline	6521.007	229482.1	229482.1	0	9715.329	0	0.162587	0.034303	0.594743	0.001613	0	0.000302	0.002	0.0273	0.001754	0	0.000328	0.008	0.078	844.3063	116.9743	25.90841	0.00717	0.106961	0.031384	0.008862	0.002853	0.047908	0.034655	0.392875	0.156237	0.049559	0.298022	3.043991	0.050568	0.573282	0.17106	0.049559	0.298022	3.043991	0.045	1.077512	3.753036	3.235482	0.008347	0.001156	0.000256
Sonoma	2030	LHDT1	Aggregate	Aggregate	Diesel	6325.365	209752.3	209752.3	0	79565.13	0	1.756527	2.039396	0	0.041204	0.026148	0	0.003	0.0273	0.043067	0.02733	0	0.012	0.078	637.9858	132.4149	0	0.00876	0.005098	0	0.100515	0.020862	0	0.188607	0.10976	0	0	0	0	0.214716	0.124954	0	0	0	0	0.168471	0.556904	0.909745	0	0.006045	0.001255	0	0
Sonoma	2030	LHDT1	Aggregate	Aggregate	Electricity	401.741	25016.01	0	25016.01	5627.769	16370.01	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	LHDT2	Aggregate	Aggregate	Gasoline	1003.491	34713.27	34713.27	0	14950.52	0	0.096868	0.034003	0.596175	0.001188	0	0.000159	0.002	0.03185	0.001292	0	0.000173	0.008	0.091	947.5211	135.3721	24.97448	0.003263	0.10822	0.028959	0.006348	0.002878	0.048574	0.013858	0.390299	0.138274	0.038137	0.220269	2.47219	0.020222	0.569523	0.151393	0.038137	0.220269	2.47219	0.045	0.689947	3.775156	3.087357	0.009367	0.001338	0.000247
Sonoma	2030	LHDT2	Aggregate	Aggregate	Diesel	2527.749	87158.93	87158.93	0	31795.9	0	1.262464	1.932125	0	0.035954	0.026901	0	0.003	0.03185	0.03758	0.028118	0	0.012	0.091	760.7058	209.4344	0	0.007537	0.005098	0	0.11985	0.032996	0	0.162272	0.10976	0	0	0	0	0.184736	0.124954	0	0	0	0	0.186844	0.45676	0.909745	0	0.007208	0.001984	0	0
Sonoma	2030	LHDT2	Aggregate	Aggregate	Electricity	101.4218	6044.223	0	6044.223	1344.994	3893.713	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	MCY	Aggregate	Aggregate	Gasoline	8919.366	46274.62	46274.62	0	17838.73	0	0.599049	0	0.143541	0.001878	0	0.003315	0.001	0.0042	0.002009	0	0.003355	0.004	0.012	188.9008	0	50.69062	0.17227	0	0.192786	0.040918	0	0.00832	1.138941	0	1.452324	3.556898	3.992608	4.994778	1.369677	0	1.57884	3.556898	3.992608	4.994778	0.008794	13.62555	0	8.599194	0.001867	0	0.000501
Sonoma	2030	MDV	Aggregate	Aggregate	Gasoline	43637.17	1521765	1521765	0	196576.2	0	0.066456	0	0.358384	0.001026	0	0.001777	0.002	0.003699	0.001116	0	0.001933	0.008	0.010568	385.5154	0	100.2176	0.002763	0	0.085246	0.00583	0	0.037738	0.011132	0	0.418084	0.101245	0.318422	1.887922	0.016244	0	0.457749	0.101245	0.318422	1.887922	0.038657	0.807704	0	3.606472	0.003811	0	0.000991
Sonoma	2030	MDV	Aggregate	Aggregate	Diesel	825.7898	27286.55	27286.55	0	3695.515	0	0.045341	0	0	0.004648	0	0	0.002	0.003854	0.004859	0	0	0.008	0.011011	400.4868	0	0	0.000525	0	0	0.063097	0	0	0.011311	0	0	0	0	0	0.012877	0	0	0	0	0	0.0031	0.230823	0	0	0.003795	0	0
Sonoma	2030	MDV	Aggregate	Aggregate	Electricity	1060.895	36570.42	0	36570.42	5268.017	14119.2	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	MDV	Aggregate	Aggregate	Plug-in Hyb	612.9674	26649.6	11517.12	15132.48	2534.62	4570.461	0.00299	0	0.117549	0.000356	0	0.001375	0.002	0.001465	0.000388	0	0.001495	0.008	0.004185	123.5422	0	91.41604	0.000396	0	0.042802	0.000515	0	0.020224	0.001285	0	0.178888	0.030271	0.032013	0.365898	0.001876	0	0.19586	0.030271	0.032013	0.365898	0.018151	0.192262	0	1.393342	0.001221	0	0.000904
Sonoma	2030	MH	Aggregate	Aggregate	Gasoline	749.2935	6715.176	6715.176	0	74.95932	0	0.294672	0	0.50334	0.00138	0	0.000323	0.003	0.015758	0.001501	0	0.000351	0.012	0.045023	1946.106	0	31.00569	0.0087	0	0.037225	0.020914	0	0.053775	0.032663	0	0.148981	10.10927	0.250437	4.261365	0.047662	0	0.163115	10.10927	0.250437	4.261365	0.045	0.569221	0	3.112292	0.019239	0	0.000307
Sonoma	2030	MH	Aggregate	Aggregate	Diesel	514.3636	4402.26	4402.26	0	514.3636	0	4.183013	0	0	0.101843	0	0	0.004	0.015679	0.106448	0	0	0.016	0.044799	1081.424	0	0	0.006018	0	0	0.170379	0	0	0.129568	0	0	0	0	0	0.147504	0	0	0	0	0	0.150223	0.435354	0	0	0.010247	0	0
Sonoma	2030	MHDT	Aggregate	Aggregate	Gasoline	521.4089	24569.24	24569.24	0	10432.35	0	0.268753	0.08113	0.37749	0.001358	0	0.000486	0.003	0.015758	0.001477	0	0.000528	0.012	0.045022	1720.172	517.8608	43.71408	0.008328	0.264577	0.043078	0.015078	0.006967	0.029787	0.039704	1.023973	0.230633	0.027057	0.228213	2.361834	0.057937	1.494179	0.252515	0.027057	0.228213	2.361834	0.045	0.771807	15.44658	4.875127	0.017006	0.00512	0.000432
Sonoma	2030	MHDT	Aggregate	Aggregate	Diesel	5349.171	21334.1.1	213341.1	0	63105.51	0	0.726654	11.28423	1.598915	0.006302	0.009065	0	0.003	0.015841	0.006587	0.009474	0	0.012	0.045259	1101.012	2150.762	0	0.000624	0.009093	0	0.173465	0.338853	0	0.013437	0.195778	0	0	0	0	0.015297	0.222878	0	0	0	0	0.217136	0.070484	7.517934	0	0.010426	0.020366	0	0
Sonoma	2030	MHDT	Aggregate	Aggregate	Electricity	425.7384	22068.39	0	22068.39	5208.828	23754.92	0	0	0	0	0	0	0.003	0.007914	0	0	0	0.012	0.022611	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	MHDT	Aggregate	Aggregate	Natural Ga	51.88113	2273.593	2273.593	0	554.0146	0	0.097949	5.858532	0	0.001295	0.01839	0	0.003	0.015901	0.001408	0.020001	0	0.012	0.045432	937.1382	4870.323	0	0.72208	14.86182	0	0.191042	0.992847	0	0.010317	0.212346	0	0	0	0	0.736935	15.16758	0	0	0	0	1.06	2.898573	35.85688	0	0	0	0
Sonoma	2030	OBUS	Aggregate	Aggregate	Gasoline	128.416	4852.623	4852.623	0	2569.347	0	0.492217	0.060669	0.417217	0.001145	0	0.00033	0.003	0.015684	0.001245	0	0.000359	0.012	0.044812	1702.792	372.1376	31.35564	0.01176	0.189929	0.03656	0.021353	0.004705	0.029285	0.058564	0.744307	0.201266	0.038761	0.208544	3.745891	0.085457	1.086091	0.220361	0.038761	0.208544	3.745891	0.045	1.299439	5.762787	4.123097	0.016834	0.003679	0.00031
Sonoma	2030	OBUS	Aggregate	Aggregate	Diesel	191.8074	12613.93	12613.93	0	2232.53	0	1.278636	9.514459	1.453788	0.024297	0.00955	0	0.003	0.01994	0.025396	0.009982	0	0.012	0.056972	1285.671	2352.495	0	0.002243	0.038678	0	0.202558	0.370636	0	0.048287	0.832736	0	0	0	0	0.054971	0.948007	0	0	0	0	0.215498	0.161462	13.17564	0	0.012175	0.022277	0	0
Sonoma	2030	OBUS	Aggregate	Aggregate	Electricity	4.541431	376.7337	0	376.7337	90.86496	417.475	0	0	0	0	0	0	0.003	0.007843	0	0	0	0.012	0.022408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	OBUS	Aggregate	Aggregate	Natural Ga	1.836737	114.2093	114.2093	0	16.34696	0	0.105774	1.500808	0	0.001465	0.004772	0	0.003	0.016148	0.001594	0.00519	0	0.012	0.046137	942.9386	1181.93	0	0.836326	3.784927	0	0.192224	0.240944	0	0.011949	0.054079	0	0	0	0	0.853532	3.862796	0	0	0	0	1.06	3.379684	9.321763	0	0	0	0
Sonoma	2030	SBUS	Aggregate	Aggregate	Gasoline	65.12182	3395.691	3395.691	0	260.4873	0	0.219977	0.868542	0.852507	0.000838	0	0.00057	0.002	0.015721	0.000911	0	0.00062	0.008	0.044917	798.4079	2556.383	55.17101	0.003431	2.508051	0.069078	0.017082	0.081249	0.078222	0.015579	10.64152	0.378577	0.14454	0.404854	2.517257	0.022732	15.52808	0.414494	0.14454	0.404854	2.517257	0.045	0.379965	82.24088	8.943879	0.007893	0.025272	0.000545
Sonoma	2030	SBUS	Aggregate	Aggregate	Diesel	396.9095	8624.815	8624.815	0	5747.25	0	2.567954	18.52061	0.514688	0.014637	0.011241	0	0.003	0.015721	0.015299	0.01175	0	0.012	0.044917	1145.501	2202.648	0	0.002428	0.008039	0	0.180474	0.347028	0	0.052268	0.173088	0	0	0	0	0.059504	0.197047	0	0	0	0	0.164826	0.16313	5.167433	0	0.010847	0.020858	0	0
Sonoma	2030	SBUS	Aggregate	Aggregate	Electricity	19.89124	588.3571	0	588.3571	264.8425	619.8081	0	0	0	0	0	0	0.002	0.002804	0.00786	0	0	0	0.011217	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	SBUS	Aggregate	Aggregate	Natural Ga	29.87439	693.279	693.279	0	432.5812	0	0.589197	5.287795	0	0.003378	0.010954	0	0.003	0.015721	0.003674	0.011914	0	0.012	0.044917	1247.825	3977.009	0	3.492392	15.4653	0	0.254377	0.810739	0	0.049899	0.220969	0	0	0	0	3.564242	15.78348	0	0	0	0	1.06	11.91122	19.83808	0	0	0	0
Sonoma	2030	UBUS	Aggregate	Aggregate	Gasoline	48.69525	3527.976	3527.976	0	194.781	0	0.072783	0	0.480798	0.001212	0	0.000345	0.002	0.002254	0.033539	0.001318	0	0.000375	0.009016	0.095826	1105.925	0	55.60481	0.00194	0	0.059744	0.007788	0	0.061083	0.005777	0	0.232539	0.027469	0.099548	0.385851	0.00843	0	0.254601	0.027469	0.099548	0.385851	0.045	0.50214	0	7.124608	0.010933	0	0.00055
Sonoma	2030	UBUS	Aggregate	Aggregate	Diesel	56.14719	5633.031	5633.031	0	224.5888	0	0.377226	0	0	0.006857	0	0	0.002	0.008129	0.0385	0.007168	0	0	0.032514	0.11	1195.998	0	0.003156	0	0	0.18843	0	0	0.06795	0	0	0	0	0	0.077356	0	0	0	0	0	0.22	0.077533	0	0	0.011333	0	0
Sonoma	2030	UBUS	Aggregate	Aggregate	Electricity	14.65998	1857.657	0	1857.657	58.63992	3238.35	0	0	0	0	0	0	0.002	0.006942	0.01925	0	0	0	0.027769	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sonoma	2030	UBUS	Aggregate	Aggregate	Natural Ga	22.23797	2443.971	2443.971	0	88.9519	0	0.13016	0	0	0.000246	0	0	0.002	0.007859	0.0385	0.000257	0	0	0.031435	0.11	1309.397	0	0	3.516398	0	0	0.266929	0	0	0.050242	0	0	0	0	0	3.588742	0	0	0	0	0.97	41.82134	0	0	0	0	0

CalEEMod EMFAC2021 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004002	0.002599	0.012076	0.158044621	0.007896	0	0	0.093739	0
A	CH4_RUNEX	0.001486	0.005038	0.002191	0.002623	0.007502	0.006021	0.007548	0.04797817	0.010072	0.640186559	0.17227	0.184466	0.007638
A	CH4_STREX	0.051242	0.097523	0.068398	0.081057	0.016721	0.009262	0.005667	3.82537E-08	0.019135	0.020525139	0.192786	0.002684	0.022077
A	CO_IDLEX	0	0	0	0	0.165773	0.130233	0.632138	4.499144361	0.669033	0	0	1.193011	0
A	CO_RUNEX	0.542545	1.231638	0.709444	0.769447	0.784235	0.498458	0.154774	0.502112997	0.486056	7.756167471	13.62555	0.823552	0.516213
A	CO_STREX	2.364446	4.982249	3.133335	3.424152	1.723851	0.987404	0.641344	0.001017637	2.15797	2.447675863	8.599194	0.347459	1.845754
A	CO2_NBIO_IDLEX	0	0	0	0	8.776507	14.23087	151.6694	667.0067336	102.0933	0	0	172.9323	0
A	CO2_NBIO_RUNEX	223.7073	305.4603	307.916	372.6941	705.5937	775.4584	1064.948	1456.963698	1369.237	1027.94879	188.9008	1011.564	1603.711
A	CO2_NBIO_STREX	58.16572	82.22509	79.3043	95.79318	13.80389	7.987382	5.750776	0.012185117	16.41109	19.10316457	50.69062	2.143326	18.38802
A	NOX_IDLEX	0	0	0	0	0.071971	0.105207	0.765536	3.576336104	0.373896	0	0	1.128316	0
A	NOX_RUNEX	0.027662	0.103888	0.049979	0.063542	0.873981	0.886498	0.617157	1.632002112	1.031839	0.200540925	0.599049	1.751867	1.834369
A	NOX_STREX	0.197151	0.364401	0.280313	0.340012	0.316877	0.19067	1.322037	2.636875785	0.879512	0.165179429	0.143541	0.474278	0.298507
A	PM10_IDLEX	0	0	0	0	0.000948	0.00152	0.000652	0.001949054	0.000392	0	0	0.000749	0
A	PM10_PMBW	0.008256	0.010685	0.010162	0.010329	0.075899	0.08885	0.043332	0.081286554	0.052892	0.132912514	0.012	0.043924	0.044934
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009807	0.010725	0.012	0.033915468	0.012	0.042780998	0.004	0.010944	0.013584
A	PM10_RUNEX	0.00093	0.001608	0.001089	0.001142	0.020325	0.025956	0.005509	0.021770224	0.018185	0.003391016	0.002009	0.010343	0.043058
A	PM10_STREX	0.001572	0.002636	0.001772	0.001844	0.000175	5.53E-05	6.95E-05	1.74831E-07	0.000188	0.000128921	0.003355	2.41E-05	0.000208
A	PM25_IDLEX	0	0	0	0	0.000907	0.001455	0.000623	0.001859496	0.000375	0	0	0.000714	0
A	PM25_PMBW	0.00289	0.00374	0.003557	0.003615	0.026564	0.031098	0.015166	0.028450294	0.018512	0.04651938	0.0042	0.015373	0.015727
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002452	0.002681	0.003	0.008478867	0.003	0.01069525	0.001	0.002736	0.003396
A	PM25_RUNEX	0.000856	0.001479	0.001002	0.001053	0.019413	0.02482	0.005265	0.020825004	0.017386	0.003231449	0.001878	0.00988	0.041161
A	PM25_STREX	0.001445	0.002424	0.001629	0.001696	0.000161	5.08E-05	6.39E-05	1.60751E-07	0.000173	0.000118538	0.00315	2.21E-05	0.000191
A	ROG_DIURN	0.265041	0.709205	0.305469	0.397011	0.108858	0.05307	0.015529	5.31225E-05	0.097988	0.033140013	4.994778	0.024448	25.26204
A	ROG_HTSK	0.069712	0.181933	0.077033	0.096019	0.026405	0.012197	0.003559	1.46014E-05	0.020287	0.00943693	3.556898	0.005615	5.995331
A	ROG_IDLEX	0	0	0	0	0.017857	0.014314	0.020078	0.283636011	0.052027	0	0	0.114583	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.005361	0.022275	0.008329	0.01072	0.102344	0.114329	0.01474	0.016304923	0.04982	0.039066427	1.138941	0.040467	0.071035
A	ROG_RUNLS	0.201767	0.544621	0.231203	0.301216	0.158785	0.070447	0.030022	0.000133731	0.109149	0.034199975	3.992608	0.015728	0.148522
A	ROG_STREX	0.225343	0.50366	0.310376	0.39716	0.083243	0.044223	0.030341	2.07187E-07	0.10534	0.07988923	1.452324	0.014707	0.088353
A	SO2_IDLEX	0	0	0	0	8.49E-05	0.000136	0.001407	0.005809182	0.000967	0	0	0.00148	0
A	SO2_RUNEX	0.002211	0.00302	0.003044	0.003682	0.006857	0.007453	0.010075	0.013191837	0.013101	0.007606938	0.001867	0.009048	0.015679
A	SO2_STREX	0.000575	0.000813	0.000784	0.000947	0.000136	7.9E-05	5.69E-05	1.20462E-07	0.000162	0.000188854	0.000501	2.12E-05	0.000182
A	TOG_DIURN	0.265041	0.709205	0.305469	0.397011	0.108858	0.05307	0.015529	5.31225E-05	0.097988	0.033140013	0.134652	0.024448	25.26204
A	TOG_HTSK	0.069712	0.181933	0.077033	0.096019	0.026405	0.012197	0.003559	1.46014E-05	0.020287	0.00943693	3.556898	0.005615	5.995331
A	TOG_IDLEX	0	0	0	0	0.024836	0.018982	0.034782	0.468494471	0.066897	0	0	0.232798	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.007809	0.032504	0.012137	0.015581	0.122007	0.131362	0.024261	0.066061059	0.067134	0.686067104	1.369677	0.230144	0.087197
A	TOG_RUNLS	0.201767	0.544621	0.231203	0.301216	0.158785	0.070447	0.030022	0.000133731	0.109149	0.034199975	3.992608	0.015728	0.148522
A	TOG_STREX	0.246722	0.551445	0.339823	0.43484	0.09114	0.048419	0.033219	2.26844E-07	0.115334	0.087468651	1.57884	0.016103	0.096736
A	N2O_IDLEX	0	0	0	0	0.000826	0.001846	0.023552	0.107566318	0.014695	0	0	0.024943	0
A	N2O_RUNEX	0.003572	0.008063	0.005058	0.006579	0.049794	0.083385	0.144182	0.232475625	0.149276	0.129341237	0.040918	0.134634	0.080099
A	N2O_STREX	0.027247	0.037359	0.0338	0.035899	0.025525	0.015535	0.003919	1.22219E-07	0.015327	0.020985331	0.00832	0.003039	0.031891

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.518249	0.034481	0.214924	0.132556	0.038169	0.010517	0.021562	0.021147	0.001476	0.001107	0.003805	0.001094	0.000914

Attachment 4: Project Construction Emissions and Health Risk Calculations

261 N McDowell Blvd, Petaluma, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.0214	CON_DPM	42.9	0.01175	1.48E-03	33,249	4.45E-08
2023	Construction	0.0258	CON_DPM	51.6	0.01413	1.78E-03	33,249	5.35E-08
Total		***0.0472***		***94.5***	***0.0259***	***0.0033***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

261 N McDowell Blvd, Petaluma, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.0671	134.2	0.03678	4.63E-03	33,249	1.39E-07
2023	Construction	CON_FUG	0.0019	3.8	0.00104	1.30E-04	33,249	3.92E-09
Total			***0.0690***	***138.0***	***0.0378***	***0.0048***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

261 N McDowell Blvd, Petaluma, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child	Adult	(-)	($\mu g/m^3$)
2022	0.0086	0.0302	1.53	0.02	0.00	0.04
2023	0.0103	0.0009	1.70	0.03	0.00	0.01
Total	-	-	**3.22**	**0.05**		-
Maximum	0.0103	0.0302	**-**	**-**	**0.00**	**0.04**

Maximum Impacts at Tiny Tots Preschool

Construction Year	Unmitigated Emissions				
	Maximum Concentrations				
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0006	0.0019	0.31	0.0001	0.003
2023	0.0008	0.0001	0.05	0.0002	0.001
Total	-	-	**0.36**	-	-
Maximum	0.0008	0.0019	**-**	**0.0001**	**0.003**

261 N McDowell Blvd, Petaluma, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information					Maximum	
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2022	0.0086	10	0.12	2022	0.0086	-	-			
1	1	0 - 1	2022	0.0086	10	1.41	2022	0.0086	1	0.02	0.00	0.030	0.04
2	1	1 - 2	2023	0.0103	10	1.70	2023	0.0103	1	0.03	0.00	0.001	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**3.22**				**0.05**			

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information					Maximum	
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2022	0.0079	10	0.11	2022	0.0079	-	-			
1	1	0 - 1	2022	0.0079	10	1.29	2022	0.0079	1	0.02	0.002	0.029	0.04
2	1	1 - 2	2023	0.0094	10	1.55	2023	0.0094	1	0.03	0.002	0.001	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.95**				**0.05**			

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 7.6 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
							Modeled				Maximum		
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Infant/Child Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Adult Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2022	0.0069	10	0.09	2022	0.0069	-	-			
1	1	0 - 1	2022	0.0069	10	1.13	2022	0.0069	1	0.02	0.001	0.024	0.03
2	1	1 - 2	2023	0.0083	10	1.36	2023	0.0083	1	0.02	0.002	0.001	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.59**				**0.04**			

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Tiny Tots Pre-School - 1 meter - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	School Infant	School Child	Adult
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	250	250	250
AT =	70	70	70
SAF =	3.73	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	3 - 4	2022	0.0006	10	0.3
2	1	4 - 5	2023	0.0008	3	0.0
3	1			0.0000	3	0.0
4	1			0.0000	3	0.0
5	1			0.0000	3	0.0
6	1			0.0000	3	0.0
7	1			0.0000	3	0.0
8	1			0.0000	3	0.0
9	1			0.0000	3	0.0
Total Increased Cancer Risk						**0.36**

* Children assumed to be 3 years of age or older with 2 years of Construction Exposure

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.0001	0.0019	0.003
0.0002	0.0001	0.001

Attachment 5: Community Risk Modeling Information and Calculations

261 N McDowell Blvd, Petaluma, CA

DPM Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2024	Truck Deliveries	0.0001	TRUCK_DPM	0.1	0.00001	1.84E-06	33,249	5.53E-11
Total		***0.0001***		***0.1***	***0.0000***	***0.0000***		

Construction Hours

hr/day =	24	(12am - 12am)
days/yr =	365	
hours/year =	8760	

261 N McDowell Blvd, Petaluma, CA

PM2.5 Fugitive Dust Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2024	Truck Deliveries	TRUCK_FUG	0.0000	0.1	0.00001	1.12E-06	33,249	3.37E-11
Total			***0.0000***	***0.1***	***0.0000***	***0.0000***		

Construction Hours

hr/day =	24	(12am - 12am)
days/yr =	365	
hours/year =	8760	

261 N McDowell Blvd, Petaluma, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

MEI Location = 1.5 meter receptor height

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
300-kW, 400-hp Generator	0.013	4.86
CalEEMod DPM Emissions	2.43E-03	tons/year

Modeling Information	
Model	AERMOD
Source	Diesel Generator Engine
Source Type	Point
Meteorological Data	2013-2017 Petaluma met data prepared by Lakes Environmental
Point Source Stack Parameters	
Generator Engine Size (hp)	400
Stack Height (ft)	10.00
Stack Diameter (ft)**	0.60
Exhaust Gas Flowrate (CFM)*	2527.73
Stack Exit Velocity (ft/sec)**	149.00
Exhaust Temperature (˚F)**	872.00
Emissions Rate (lb/hr)	0.000555

* AERMOD default

**BAAQMD default generator parameters

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Total Operation - Generator + Deliveries
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Project MEI (28-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0000	10	0.000				
1	1	0 - 1	2022	0.0000	10	0.000				
2	1	1 - 2	2023	0.0000	10	0.000				
3	1	2 - 3	2024	0.0005	3	0.012		0.00009	0.0000	0.0005
4	1	3 - 4	2025	0.0005	3	0.012		0.00009	0.0000	0.0005
5	1	4 - 5	2026	0.0005	3	0.012		0.00009	0.0000	0.0005
6	1	5 - 6	2027	0.0005	3	0.012		0.00009	0.0000	0.0005
7	1	6 - 7	2028	0.0005	3	0.012		0.00009	0.0000	0.0005
8	1	7 - 8	2029	0.0005	3	0.012		0.00009	0.0000	0.0005
9	1	8 - 9	2030	0.0005	3	0.012		0.00009	0.0000	0.0005
10	1	9 - 10	2031	0.0005	3	0.012		0.00009	0.0000	0.0005
11	1	10 - 11	2032	0.0005	3	0.012		0.00009	0.0000	0.0005
12	1	11 - 12	2033	0.0005	3	0.012		0.00009	0.0000	0.0005
13	1	12 - 13	2034	0.0005	3	0.012		0.00009	0.0000	0.0005
14	1	13 - 14	2035	0.0005	3	0.012		0.00009	0.0000	0.0005
15	1	14 - 15	2036	0.0005	3	0.012		0.00009	0.0000	0.0005
16	1	15 - 16	2037	0.0005	3	0.012		0.00009	0.0000	0.0005
17	1	16-17	2038	0.0005	1	0.001		0.00009	0.0000	0.0005
18	1	17-18	2039	0.0005	1	0.001		0.00009	0.0000	0.0005
19	1	18-19	2040	0.0005	1	0.001		0.00009	0.0000	0.0005
20	1	19-20	2041	0.0005	1	0.001		0.00009	0.0000	0.0005
21	1	20-21	2042	0.0005	1	0.001		0.00009	0.0000	0.0005
22	1	21-22	2043	0.0005	1	0.001		0.00009	0.0000	0.0005
23	1	22-23	2044	0.0005	1	0.001		0.00009	0.0000	0.0005
24	1	23-24	2045	0.0005	1	0.001		0.00009	0.0000	0.0005
25	1	24-25	2046	0.0005	1	0.001		0.00009	0.0000	0.0005
26	1	25-26	2047	0.0005	1	0.001		0.00009	0.0000	0.0005
27	1	26-27	2048	0.0005	1	0.001		0.00009	0.0000	0.0005
28	1	27-28	2049	0.0005	1	0.001		0.00009	0.0000	0.0005
29	1	28-29	2050	0.0005	1	0.001		0.00009	0.0000	0.0005
30	1	29-30	2051	0.0005	1	0.001		0.00009	0.0000	0.0005
Total Increased Cancer Risk						**0.19**	**Max**	**0.00009**	**0.0000**	**0.0005**

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Project Emergency Generator
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Project MEI (28-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0000	10	0.000				
1	1	0 - 1	2022	0.0000	10	0.000				
2	1	1 - 2	2023	0.0000	10	0.000				
3	1	2 - 3	2024	0.0004	3	0.011		0.00008	0.0001	0.0005
4	1	3 - 4	2025	0.0004	3	0.011		0.00008	0.0001	0.0005
5	1	4 - 5	2026	0.0004	3	0.011		0.00008	0.0001	0.0005
6	1	5 - 6	2027	0.0004	3	0.011		0.00008	0.0001	0.0005
7	1	6 - 7	2028	0.0004	3	0.011		0.00008	0.0001	0.0005
8	1	7 - 8	2029	0.0004	3	0.011		0.00008	0.0001	0.0005
9	1	8 - 9	2030	0.0004	3	0.011		0.00008	0.0001	0.0005
10	1	9 - 10	2031	0.0004	3	0.011		0.00008	0.0001	0.0005
11	1	10 - 11	2032	0.0004	3	0.011		0.00008	0.0001	0.0005
12	1	11 - 12	2033	0.0004	3	0.011		0.00008	0.0001	0.0005
13	1	12 - 13	2034	0.0004	3	0.011		0.00008	0.0001	0.0005
14	1	13 - 14	2035	0.0004	3	0.011		0.00008	0.0001	0.0005
15	1	14 - 15	2036	0.0004	3	0.011		0.00008	0.0001	0.0005
16	1	15 - 16	2037	0.0004	3	0.011		0.00008	0.0001	0.0005
17	1	16-17	2038	0.0004	1	0.001		0.00008	0.0001	0.0005
18	1	17-18	2039	0.0004	1	0.001		0.00008	0.0001	0.0005
19	1	18-19	2040	0.0004	1	0.001		0.00008	0.0001	0.0005
20	1	19-20	2041	0.0004	1	0.001		0.00008	0.0001	0.0005
21	1	20-21	2042	0.0004	1	0.001		0.00008	0.0001	0.0005
22	1	21-22	2043	0.0004	1	0.001		0.00008	0.0001	0.0005
23	1	22-23	2044	0.0004	1	0.001		0.00008	0.0001	0.0005
24	1	23-24	2045	0.0004	1	0.001		0.00008	0.0001	0.0005
25	1	24-25	2046	0.0004	1	0.001		0.00008	0.0001	0.0005
26	1	25-26	2047	0.0004	1	0.001		0.00008	0.0001	0.0005
27	1	26-27	2048	0.0004	1	0.001		0.00008	0.0001	0.0005
28	1	27-28	2049	0.0004	1	0.001		0.00008	0.0001	0.0005
29	1	28-29	2050	0.0004	1	0.001		0.00008	0.0001	0.0005
30	1	29-30	2051	0.0004	1	0.001		0.00008	0.0001	0.0005
Total Increased Cancer Risk						**0.17**	**Max**	**0.00008**	**0.0001**	**0.0005**

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Truck Deliveries
Impacts at Off-Site Receptors- 1.5m MEI Receptor Heights
Impact at Project MEI (28-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0000	10	0.000				
1	1	0 - 1	2022	0.0000	10	0.000				
2	1	1 - 2	2023	0.0000	10	0.000				
3	1	2 - 3	2024	0.0001	3	0.001		0.00001	0.0000	0.0001
4	1	3 - 4	2025	0.0001	3	0.001		0.00001	0.0000	0.0001
5	1	4 - 5	2026	0.0001	3	0.001		0.00001	0.0000	0.0001
6	1	5 - 6	2027	0.0001	3	0.001		0.00001	0.0000	0.0001
7	1	6 - 7	2028	0.0001	3	0.001		0.00001	0.0000	0.0001
8	1	7 - 8	2029	0.0001	3	0.001		0.00001	0.0000	0.0001
9	1	8 - 9	2030	0.0001	3	0.001		0.00001	0.0000	0.0001
10	1	9 - 10	2031	0.0001	3	0.001		0.00001	0.0000	0.0001
11	1	10 - 11	2032	0.0001	3	0.001		0.00001	0.0000	0.0001
12	1	11 - 12	2033	0.0001	3	0.001		0.00001	0.0000	0.0001
13	1	12 - 13	2034	0.0001	3	0.001		0.00001	0.0000	0.0001
14	1	13 - 14	2035	0.0001	3	0.001		0.00001	0.0000	0.0001
15	1	14 - 15	2036	0.0001	3	0.001		0.00001	0.0000	0.0001
16	1	15 - 16	2037	0.0001	3	0.001		0.00001	0.0000	0.0001
17	1	16-17	2038	0.0001	1	0.000		0.00001	0.0000	0.0001
18	1	17-18	2039	0.0001	1	0.000		0.00001	0.0000	0.0001
19	1	18-19	2040	0.0001	1	0.000		0.00001	0.0000	0.0001
20	1	19-20	2041	0.0001	1	0.000		0.00001	0.0000	0.0001
21	1	20-21	2042	0.0001	1	0.000		0.00001	0.0000	0.0001
22	1	21-22	2043	0.0001	1	0.000		0.00001	0.0000	0.0001
23	1	22-23	2044	0.0001	1	0.000		0.00001	0.0000	0.0001
24	1	23-24	2045	0.0001	1	0.000		0.00001	0.0000	0.0001
25	1	24-25	2046	0.0001	1	0.000		0.00001	0.0000	0.0001
26	1	25-26	2047	0.0001	1	0.000		0.00001	0.0000	0.0001
27	1	26-27	2048	0.0001	1	0.000		0.00001	0.0000	0.0001
28	1	27-28	2049	0.0001	1	0.000		0.00001	0.0000	0.0001
29	1	28-29	2050	0.0001	1	0.000		0.00001	0.0000	0.0001
30	1	29-30	2051	0.0001	1	0.000		0.00001	0.0000	0.0001
Total Increased Cancer Risk						**0.02**	**Max**	**0.00001**	**0.0000**	**0.0001**

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Total Operation - Project + Deliveries
Impacts at Off-Site Tiny Tots Preschool Child Exposure- 1m MEI Receptor Heights
Impact at Project MEI (2-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1200	520	240
A =	1	1	1	1
EF =	250	250	250	250
AT =	70	70	70	70
FAH =	1.00	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
1	1	3 - 4	2024	0.0001	3	0.01		0.00002	0.0000	0.0001
2	1	4 - 5	2025	0.0001	3	0.01		0.00002	0.0000	0.0001
Total Increased Cancer Risk						**0.01**	**Max**	**0.00002**	**0.0000**	**0.0001**

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Project Generator
Impacts at Off-Site Tiny Tots Preschool Child Exposure- 1m MEI Receptor Heights
Impact at Project MEI (2-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1200	520	240
A =	1	1	1	1
EF =	250	250	250	250
AT =	70	70	70	70
FAH =	1.00	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
1	1	3 - 4	2024	0.0001	3	0.01		0.00002	0.0000	0.0001
2	1	4 - 5	2025	0.0001	3	0.01		0.00002	0.0000	0.0001
Total Increased Cancer Risk						**0.01**	**Max**	**0.00002**	**0.0000**	**0.0001**

261 N McDowell Blvd, Petaluma, CA - Cancer Risks from Project Operation
Truck Deliveries
Impacts at Off-Site Tiny Tots Preschool Child Exposure- 1m MEI Receptor Heights
Impact at Project MEI (2-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1200	520	240
A =	1	1	1	1
EF =	250	250	250	250
AT =	70	70	70	70
FAH =	1.00	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
1	1	3 - 4	2024	0.0000	3	0.00		0.00000	0.0000	0.0000
2	1	4 - 5	2025	0.0000	3	0.00		0.00000	0.0000	0.0000
Total Increased Cancer Risk						**0.00**	**Max**	**0.00000**	**0.0000**	**0.0000**

CT-EMFAC2017 Emissions Factors

```
          File Name:   N McDowell Blvd 2022.EF
CT-EMFAC2017 Version:  1.0.2.27401
           Run Date:   10/4/2021 2:41:09 PM
               Area:   Sonoma (SF)
      Analysis Year:   2022
             Season:   Annual

======================================================================

Vehicle Category       VMT Fraction          Diesel VMT Fraction     Gas VMT Fraction
                       Across Category       Within Category         Within Category
        Truck 1             0.022                 0.579                   0.421
        Truck 2             0.021                 0.946                   0.041
      Non-Truck             0.957                 0.017                   0.966

======================================================================

              Road Type:       Major/Collector
     Silt Loading Factor:                CARB        0.032 g/m2
Precipitation Correction:                CARB        P = 69 days     N = 365 days

======================================================================

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

       Pollutant Name        25 mph          30 mph          35 mph
                PM2.5      0.003100        0.002553        0.002224
                  TOG      0.063498        0.051003        0.042941
           Diesel PM       0.001187        0.001064        0.001002

======================================================================

Fleet Average Running Loss Emission Factors (grams/veh-hour)

       Pollutant Name   Emission Factor
                  TOG         1.800063

======================================================================

Fleet Average Tire Wear Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5         0.002086

======================================================================

Fleet Average Brake Wear Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5         0.017401

======================================================================

Fleet Average Road Dust Factors (grams/veh-mile)

       Pollutant Name   Emission Factor
                PM2.5         0.015048

============================END=======================================
```

File Name:	US 101 2022.EF
CT-EMFAC2017 Version:	1.0.2.27401
Run Date:	10/4/2021 3:47:27 PM
Area:	Sonoma (SF)
Analysis Year:	2022
Season:	Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.020	0.579	0.421
Truck 2	0.037	0.946	0.041
Non-Truck	0.943	0.017	0.966

Road Type:	Freeway		
Silt Loading Factor:	CARB	0.015 g/m2	
Precipitation Correction:	CARB	P = 69 days	N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph
PM2.5	0.002527	0.002377	0.002363	0.002469	0.002687	0.002958	0.003272
TOG	0.043519	0.038288	0.035272	0.034051	0.034479	0.036675	0.040930
Diesel PM	0.001338	0.001351	0.001429	0.001572	0.001777	0.001966	0.002119

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.768842

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002137

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.017823

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.008268

END

Traffic Emissions and Health Risk Calculations

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - US 101
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_101	US 101 Northbound	NB	2	830.5	0.52	13.3	43.7	3.4	55	53,045
DPM_SB_101	US 101 Southbound	SB	2	825.7	0.51	13.3	43.7	3.4	62	53,045
									Total	106,090

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	40	35
Emissions per Vehicle (g/VMT)	0.00212	0.001966	0.001351	0.001338

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_NB_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.35%	715	2.17E-04	9	5.11%	2708	7.63E-04	17	6.65%	3525	6.76E-04
2	0.99%	524	1.59E-04	10	5.62%	2983	8.41E-04	18	6.36%	3376	6.48E-04
3	0.83%	438	1.33E-04	11	6.09%	3228	9.10E-04	19	5.62%	2980	5.77E-04
4	0.84%	443	1.35E-04	12	6.44%	3416	6.61E-04	20	4.51%	2392	6.74E-04
5	1.08%	572	1.74E-04	13	6.49%	3441	6.66E-04	21	3.76%	1995	6.06E-04
6	2.15%	1142	3.47E-04	14	6.64%	3520	6.82E-04	22	3.15%	1671	5.08E-04
7	3.76%	1992	6.05E-04	15	6.67%	3539	6.85E-04	23	2.53%	1344	4.08E-04
8	4.72%	2505	7.06E-04	16	6.77%	3590	6.88E-04	24	1.90%	1006	3.06E-04
								Total		53,045	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	385	1.16E-04	9	5.69%	3017	8.45E-04	17	6.57%	3484	9.76E-04
2	0.58%	309	9.32E-05	10	5.68%	3013	8.44E-04	18	6.28%	3331	9.33E-04
3	0.65%	344	1.04E-04	11	5.83%	3095	8.67E-04	19	5.07%	2690	7.54E-04
4	1.08%	572	1.73E-04	12	6.11%	3242	9.08E-04	20	3.85%	2042	6.17E-04
5	2.46%	1304	3.94E-04	13	6.26%	3321	9.30E-04	21	3.03%	1606	4.85E-04
6	4.84%	2569	7.76E-04	14	6.34%	3365	9.43E-04	22	2.30%	1219	3.68E-04
7	5.62%	2979	8.35E-04	15	6.45%	3421	9.59E-04	23	1.58%	837	2.53E-04
8	5.56%	2949	8.26E-04	16	6.43%	3412	9.56E-04	24	1.02%	541	1.63E-04
								Total		53,045	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - US 101
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_101	US 101 Northbound	NB	2	830.5	0.52	13.3	44	1.3	55	53,045
PM2.5_SB_101	US 101 Southbound	SB	2	825.7	0.51	13.3	44	1.3	62.291667	53,045
									Total	106,090

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	40	35
Emissions per Vehicle (g/VMT)	0.003272	0.00296	0.002377	0.002527

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.35%	715	3.35E-04	9	5.11%	2708	1.15E-03	17	6.65%	3525	1.28E-03
2	0.99%	524	2.46E-04	10	5.62%	2983	1.26E-03	18	6.36%	3376	1.22E-03
3	0.83%	438	2.05E-04	11	6.09%	3228	1.37E-03	19	5.62%	2980	1.02E-03
4	0.84%	443	2.08E-04	12	6.44%	3416	1.16E-03	20	4.51%	2392	1.01E-03
5	1.08%	572	2.68E-04	13	6.49%	3441	1.17E-03	21	3.76%	1995	9.36E-04
6	2.15%	1142	5.35E-04	14	6.64%	3520	1.20E-03	22	3.15%	1671	7.84E-04
7	3.76%	1992	9.35E-04	15	6.67%	3539	1.21E-03	23	2.53%	1344	6.30E-04
8	4.72%	2505	1.06E-03	16	6.77%	3590	1.30E-03	24	1.90%	1006	4.72E-04
								Total		53,045	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	385	1.79E-04	9	5.69%	3017	1.27E-03	17	6.57%	3484	1.47E-03
2	0.58%	309	1.44E-04	10	5.68%	3013	1.27E-03	18	6.28%	3331	1.40E-03
3	0.65%	344	1.60E-04	11	5.83%	3095	1.30E-03	19	5.07%	2690	1.13E-03
4	1.08%	572	2.67E-04	12	6.11%	3242	1.37E-03	20	3.85%	2042	9.52E-04
5	2.46%	1304	6.08E-04	13	6.26%	3321	1.40E-03	21	3.03%	1606	7.49E-04
6	4.84%	2569	1.20E-03	14	6.34%	3365	1.42E-03	22	2.30%	1219	5.68E-04
7	5.62%	2979	1.26E-03	15	6.45%	3421	1.44E-03	23	1.58%	837	3.90E-04
8	5.56%	2949	1.24E-03	16	6.43%	3412	1.44E-03	24	1.02%	541	2.52E-04
								Total		53,045	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - US 101
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_101	US 101 Northbound	NB	2	830.5	0.52	13.3	44	1.3	55	53,045
TEXH_SB_101	US 101 Southbound	SB	2	825.7	0.51	13.3	44	1.3	62.291667	53,045
									Total	106,090

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	40	35
Emissions per Vehicle (g/VMT)	0.04093	0.03668	0.03829	0.04352

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.35%	715	4.19E-03	9	5.11%	2708	1.42E-02	17	6.65%	3525	2.20E-02
2	0.99%	524	3.08E-03	10	5.62%	2983	1.57E-02	18	6.36%	3376	2.11E-02
3	0.83%	438	2.57E-03	11	6.09%	3228	1.70E-02	19	5.62%	2980	1.64E-02
4	0.84%	443	2.60E-03	12	6.44%	3416	1.87E-02	20	4.51%	2392	1.26E-02
5	1.08%	572	3.35E-03	13	6.49%	3441	1.89E-02	21	3.76%	1995	1.17E-02
6	2.15%	1142	6.70E-03	14	6.64%	3520	1.93E-02	22	3.15%	1671	9.81E-03
7	3.76%	1992	1.17E-02	15	6.67%	3539	1.94E-02	23	2.53%	1344	7.88E-03
8	4.72%	2505	1.32E-02	16	6.77%	3590	2.24E-02	24	1.90%	1006	5.90E-03
								Total		53,045	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	385	2.24E-03	9	5.69%	3017	1.58E-02	17	6.57%	3484	1.82E-02
2	0.58%	309	1.80E-03	10	5.68%	3013	1.57E-02	18	6.28%	3331	1.74E-02
3	0.65%	344	2.01E-03	11	5.83%	3095	1.62E-02	19	5.07%	2690	1.41E-02
4	1.08%	572	3.33E-03	12	6.11%	3242	1.69E-02	20	3.85%	2042	1.19E-02
5	2.46%	1304	7.61E-03	13	6.26%	3321	1.74E-02	21	3.03%	1606	9.37E-03
6	4.84%	2569	1.50E-02	14	6.34%	3365	1.76E-02	22	2.30%	1219	7.11E-03
7	5.62%	2979	1.56E-02	15	6.45%	3421	1.79E-02	23	1.58%	837	4.88E-03
8	5.56%	2949	1.54E-02	16	6.43%	3412	1.78E-02	24	1.02%	541	3.16E-03
								Total		53,045	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - US 101
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_101	US 101 Northbound	NB	2	830.5	0.52	13.3	44	1.3	55	53,045
TEVAP_SB_101	US 101 Southbound	SB	2	825.7	0.51	13.3	44	1.3	62.291667	53,045
									Total	106,090

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	40	35
Emissions per Vehicle per Hour (g/hour)	1.76884	1.76884	1.76884	1.76884
Emissions per Vehicle per Mile (g/VMT)	0.02721	0.02948	0.04422	0.05054

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.35%	715	2.79E-03	9	5.11%	2708	1.14E-02	17	6.65%	3525	2.55E-02
2	0.99%	524	2.05E-03	10	5.62%	2983	1.26E-02	18	6.36%	3376	2.45E-02
3	0.83%	438	1.71E-03	11	6.09%	3228	1.36E-02	19	5.62%	2980	1.89E-02
4	0.84%	443	1.73E-03	12	6.44%	3416	2.17E-02	20	4.51%	2392	1.01E-02
5	1.08%	572	2.23E-03	13	6.49%	3441	2.18E-02	21	3.76%	1995	7.78E-03
6	2.15%	1142	4.45E-03	14	6.64%	3520	2.23E-02	22	3.15%	1671	6.52E-03
7	3.76%	1992	7.77E-03	15	6.67%	3539	2.24E-02	23	2.53%	1344	5.24E-03
8	4.72%	2505	1.06E-02	16	6.77%	3590	2.60E-02	24	1.90%	1006	3.92E-03
								Total		53,045	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	385	1.49E-03	9	5.69%	3017	1.27E-02	17	6.57%	3484	1.46E-02
2	0.58%	309	1.20E-03	10	5.68%	3013	1.27E-02	18	6.28%	3331	1.40E-02
3	0.65%	344	1.33E-03	11	5.83%	3095	1.30E-02	19	5.07%	2690	1.13E-02
4	1.08%	572	2.22E-03	12	6.11%	3242	1.36E-02	20	3.85%	2042	7.92E-03
5	2.46%	1304	5.06E-03	13	6.26%	3321	1.40E-02	21	3.03%	1606	6.23E-03
6	4.84%	2569	9.96E-03	14	6.34%	3365	1.41E-02	22	2.30%	1219	4.73E-03
7	5.62%	2979	1.25E-02	15	6.45%	3421	1.44E-02	23	1.58%	837	3.24E-03
8	5.56%	2949	1.24E-02	16	6.43%	3412	1.43E-02	24	1.02%	541	2.10E-03
								Total		53,045	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - US 101
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_101	US 101 Northbound	NB	2	830.5	0.52	13.3	44	1.3	55	53,045
FUG_SB_101	US 101 Southbound	SB	2	825.7	0.51	13.3	44	1.3	62.291667	53,045
									Total	106,090

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	60	40	35
Tire Wear - Emissions per Vehicle (g/VMT)	0.00214	0.00214	0.00214	0.00214
Brake Wear - Emissions per Vehicle (g/VMT)	0.01782	0.01782	0.01782	0.01782
Road Dust - Emissions per Vehicle (g/VMT)	0.00827	0.00827	0.00827	0.00827
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02823	0.02823	0.02823	0.02823

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.35%	715	2.89E-03	9	5.11%	2708	1.10E-02	17	6.65%	3525	1.43E-02
2	0.99%	524	2.12E-03	10	5.62%	2983	1.21E-02	18	6.36%	3376	1.37E-02
3	0.83%	438	1.77E-03	11	6.09%	3228	1.31E-02	19	5.62%	2980	1.21E-02
4	0.84%	443	1.79E-03	12	6.44%	3416	1.38E-02	20	4.51%	2392	9.68E-03
5	1.08%	572	2.31E-03	13	6.49%	3441	1.39E-02	21	3.76%	1995	8.07E-03
6	2.15%	1142	4.62E-03	14	6.64%	3520	1.42E-02	22	3.15%	1671	6.76E-03
7	3.76%	1992	8.06E-03	15	6.67%	3539	1.43E-02	23	2.53%	1344	5.44E-03
8	4.72%	2505	1.01E-02	16	6.77%	3590	1.45E-02	24	1.90%	1006	4.07E-03
								Total		53,045	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	385	1.55E-03	9	5.69%	3017	1.21E-02	17	6.57%	3484	1.40E-02
2	0.58%	309	1.24E-03	10	5.68%	3013	1.21E-02	18	6.28%	3331	1.34E-02
3	0.65%	344	1.38E-03	11	5.83%	3095	1.24E-02	19	5.07%	2690	1.08E-02
4	1.08%	572	2.30E-03	12	6.11%	3242	1.30E-02	20	3.85%	2042	8.21E-03
5	2.46%	1304	5.24E-03	13	6.26%	3321	1.34E-02	21	3.03%	1606	6.46E-03
6	4.84%	2569	1.03E-02	14	6.34%	3365	1.35E-02	22	2.30%	1219	4.90E-03
7	5.62%	2979	1.20E-02	15	6.45%	3421	1.38E-02	23	1.58%	837	3.37E-03
8	5.56%	2949	1.19E-02	16	6.43%	3412	1.37E-02	24	1.02%	541	2.18E-03
								Total		53,045	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - N McDowell Blvd
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_MCD	N McDowell Blvd Northbound	NB	2	750.3	0.47	13.3	43.7	3.4	30	12,988
DPM_SB_MCD	N McDowell Blvd Southbound	SB	2	759.2	0.47	13.3	43.7	3.4	30	12,988
									Total	25,977

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00106			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_NB_MCD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	4.10%	532	7.33E-05	9	6.78%	880	1.21E-04	17	5.63%	731	1.01E-04
2	3.44%	447	6.16E-05	10	7.91%	1027	1.41E-04	18	4.01%	521	7.17E-05
3	3.44%	447	6.16E-05	11	6.10%	793	1.09E-04	19	2.84%	369	5.09E-05
4	1.97%	256	3.52E-05	12	7.11%	923	1.27E-04	20	1.18%	154	2.12E-05
5	1.64%	213	2.93E-05	13	6.29%	816	1.12E-04	21	2.97%	386	5.31E-05
6	2.13%	277	3.81E-05	14	5.96%	774	1.07E-04	22	4.28%	556	7.66E-05
7	4.96%	644	8.87E-05	15	5.30%	689	9.49E-05	23	3.13%	407	5.61E-05
8	3.85%	499	6.88E-05	16	4.15%	540	7.43E-05	24	0.84%	109	1.50E-05
								Total		12,988	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_MCD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	4.10%	532	7.42E-05	9	6.78%	880	1.23E-04	17	5.63%	731	1.02E-04
2	3.44%	447	6.23E-05	10	7.91%	1027	1.43E-04	18	4.01%	521	7.26E-05
3	3.44%	447	6.23E-05	11	6.10%	793	1.11E-04	19	2.84%	369	5.15E-05
4	1.97%	256	3.56E-05	12	7.11%	923	1.29E-04	20	1.18%	154	2.15E-05
5	1.64%	213	2.97E-05	13	6.29%	816	1.14E-04	21	2.97%	386	5.38E-05
6	2.13%	277	3.86E-05	14	5.96%	774	1.08E-04	22	4.28%	556	7.75E-05
7	4.96%	644	8.97E-05	15	5.30%	689	9.60E-05	23	3.13%	407	5.67E-05
8	3.85%	499	6.96E-05	16	4.15%	540	7.52E-05	24	0.84%	109	1.52E-05
								Total		12,988	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - N McDowell Blvd
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_NB_MCD	N McDowell Blvd Northbound	NB	2	750.3	0.47	13.3	44	1.3	30	12,988
PM2.5_SB_MCD	N McDowell Blvd Southbound	SB	2	759.2	0.47	13.3	44	1.3	30	12,988
									Total	25,977

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.002553			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_NB_MCD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.17%	152	5.03E-05	9	7.18%	932	3.08E-04	17	7.48%	971	3.21E-04
2	0.47%	61	2.01E-05	10	4.47%	581	1.92E-04	18	8.16%	1060	3.50E-04
3	0.53%	69	2.28E-05	11	4.71%	612	2.02E-04	19	5.64%	733	2.42E-04
4	0.24%	32	1.05E-05	12	5.92%	769	2.54E-04	20	4.23%	549	1.81E-04
5	0.51%	66	2.19E-05	13	6.13%	796	2.63E-04	21	3.21%	417	1.38E-04
6	0.92%	120	3.95E-05	14	6.04%	784	2.59E-04	22	3.28%	426	1.41E-04
7	3.71%	482	1.59E-04	15	6.97%	905	2.99E-04	23	2.45%	319	1.05E-04
8	7.62%	989	3.27E-04	16	7.12%	925	3.06E-04	24	1.85%	240	7.94E-05
								Total		12,988	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_SB_MCD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.17%	152	5.09E-05	9	7.18%	932	3.12E-04	17	7.48%	971	3.25E-04
2	0.47%	61	2.03E-05	10	4.47%	581	1.94E-04	18	8.16%	1060	3.55E-04
3	0.53%	69	2.30E-05	11	4.71%	612	2.05E-04	19	5.64%	733	2.45E-04
4	0.24%	32	1.06E-05	12	5.92%	769	2.57E-04	20	4.23%	549	1.84E-04
5	0.51%	66	2.21E-05	13	6.13%	796	2.66E-04	21	3.21%	417	1.39E-04
6	0.92%	120	4.00E-05	14	6.04%	784	2.62E-04	22	3.28%	426	1.42E-04
7	3.71%	482	1.61E-04	15	6.97%	905	3.03E-04	23	2.45%	319	1.07E-04
8	7.62%	989	3.31E-04	16	7.12%	925	3.09E-04	24	1.85%	240	8.03E-05
								Total		12,988	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - N McDowell Blvd
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_MCD	N McDowell Blvd Northbound	NB	2	750.3	0.47	13.3	44	1.3	30	12,988
TEXH_SB_MCD	N McDowell Blvd Southbound	SB	2	759.2	0.47	13.3	44	1.3	30	12,988
									Total	25,977

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.05100			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_MCD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.17%	152	1.01E-03	9	7.18%	932	6.16E-03	17	7.48%	971	6.41E-03
2	0.47%	61	4.01E-04	10	4.47%	581	3.84E-03	18	8.16%	1060	7.00E-03
3	0.53%	69	4.55E-04	11	4.71%	612	4.04E-03	19	5.64%	733	4.84E-03
4	0.24%	32	2.09E-04	12	5.92%	769	5.08E-03	20	4.23%	549	3.63E-03
5	0.51%	66	4.37E-04	13	6.13%	796	5.26E-03	21	3.21%	417	2.75E-03
6	0.92%	120	7.90E-04	14	6.04%	784	5.18E-03	22	3.28%	426	2.81E-03
7	3.71%	482	3.18E-03	15	6.97%	905	5.98E-03	23	2.45%	319	2.11E-03
8	7.62%	989	6.53E-03	16	7.12%	925	6.11E-03	24	1.85%	240	1.59E-03
								Total		12,988	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_MCD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.17%	152	1.02E-03	9	7.18%	932	6.23E-03	17	7.48%	971	6.49E-03
2	0.47%	61	4.06E-04	10	4.47%	581	3.88E-03	18	8.16%	1060	7.08E-03
3	0.53%	69	4.60E-04	11	4.71%	612	4.09E-03	19	5.64%	733	4.90E-03
4	0.24%	32	2.12E-04	12	5.92%	769	5.14E-03	20	4.23%	549	3.67E-03
5	0.51%	66	4.42E-04	13	6.13%	796	5.32E-03	21	3.21%	417	2.78E-03
6	0.92%	120	7.99E-04	14	6.04%	784	5.24E-03	22	3.28%	426	2.85E-03
7	3.71%	482	3.22E-03	15	6.97%	905	6.05E-03	23	2.45%	319	2.13E-03
8	7.62%	989	6.61E-03	16	7.12%	925	6.18E-03	24	1.85%	240	1.60E-03
								Total		12,988	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - N McDowell Blvd
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_MCD	N McDowell Blvd Northbound	NB	2	750.3	0.47	13.3	44	1.3	30	12,988
TEVAP_SB_MCD	N McDowell Blvd Southbound	SB	2	759.2	0.47	13.3	44	1.3	30	12,988
									Total	25,977

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.80006			
Emissions per Vehicle per Mile (g/VMT)	0.06000			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_MCD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.17%	152	1.18E-03	9	7.18%	932	7.24E-03	17	7.48%	971	7.55E-03
2	0.47%	61	4.72E-04	10	4.47%	581	4.51E-03	18	8.16%	1060	8.24E-03
3	0.53%	69	5.35E-04	11	4.71%	612	4.76E-03	19	5.64%	733	5.69E-03
4	0.24%	32	2.46E-04	12	5.92%	769	5.98E-03	20	4.23%	549	4.27E-03
5	0.51%	66	5.14E-04	13	6.13%	796	6.19E-03	21	3.21%	417	3.24E-03
6	0.92%	120	9.29E-04	14	6.04%	784	6.10E-03	22	3.28%	426	3.31E-03
7	3.71%	482	3.74E-03	15	6.97%	905	7.03E-03	23	2.45%	319	2.48E-03
8	7.62%	989	7.69E-03	16	7.12%	925	7.19E-03	24	1.85%	240	1.87E-03
								Total		12,988	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_MCD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.17%	152	1.20E-03	9	7.18%	932	7.33E-03	17	7.48%	971	7.63E-03
2	0.47%	61	4.77E-04	10	4.47%	581	4.57E-03	18	8.16%	1060	8.33E-03
3	0.53%	69	5.41E-04	11	4.71%	612	4.81E-03	19	5.64%	733	5.76E-03
4	0.24%	32	2.49E-04	12	5.92%	769	6.05E-03	20	4.23%	549	4.32E-03
5	0.51%	66	5.20E-04	13	6.13%	796	6.26E-03	21	3.21%	417	3.28E-03
6	0.92%	120	9.40E-04	14	6.04%	784	6.17E-03	22	3.28%	426	3.35E-03
7	3.71%	482	3.79E-03	15	6.97%	905	7.12E-03	23	2.45%	319	2.51E-03
8	7.62%	989	7.78E-03	16	7.12%	925	7.27E-03	24	1.85%	240	1.89E-03
								Total		12,988	

261 N McDowell Blvd, Petaluma, CA - Off-Site Residential
Cumulative Operation - N McDowell Blvd
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2022**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_MCD	N McDowell Blvd Northbound	NB	2	750.3	0.47	13.3	44	1.3	30	12,988
FUG_SB_MCD	N McDowell Blvd Southbound	SB	2	759.2	0.47	13.3	44	1.3	30	12,988
									Total	25,977

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00209			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01740			
Road Dust - Emissions per Vehicle (g/VMT)	0.01505			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03454			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_MCD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.17%	152	6.81E-04	9	7.18%	932	4.17E-03	17	7.48%	971	4.34E-03
2	0.47%	61	2.71E-04	10	4.47%	581	2.60E-03	18	8.16%	1060	4.74E-03
3	0.53%	69	3.08E-04	11	4.71%	612	2.74E-03	19	5.64%	733	3.28E-03
4	0.24%	32	1.42E-04	12	5.92%	769	3.44E-03	20	4.23%	549	2.46E-03
5	0.51%	66	2.96E-04	13	6.13%	796	3.56E-03	21	3.21%	417	1.86E-03
6	0.92%	120	5.35E-04	14	6.04%	784	3.51E-03	22	3.28%	426	1.90E-03
7	3.71%	482	2.16E-03	15	6.97%	905	4.05E-03	23	2.45%	319	1.43E-03
8	7.62%	989	4.42E-03	16	7.12%	925	4.14E-03	24	1.85%	240	1.07E-03
								Total		12,988	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_MCD

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.17%	152	6.89E-04	9	7.18%	932	4.22E-03	17	7.48%	971	4.39E-03
2	0.47%	61	2.75E-04	10	4.47%	581	2.63E-03	18	8.16%	1060	4.80E-03
3	0.53%	69	3.12E-04	11	4.71%	612	2.77E-03	19	5.64%	733	3.32E-03
4	0.24%	32	1.43E-04	12	5.92%	769	3.48E-03	20	4.23%	549	2.48E-03
5	0.51%	66	2.99E-04	13	6.13%	796	3.60E-03	21	3.21%	417	1.89E-03
6	0.92%	120	5.41E-04	14	6.04%	784	3.55E-03	22	3.28%	426	1.93E-03
7	3.71%	482	2.18E-03	15	6.97%	905	4.10E-03	23	2.45%	319	1.44E-03
8	7.62%	989	4.48E-03	16	7.12%	925	4.19E-03	24	1.85%	240	1.09E-03
								Total		12,988	

261 N McDowell Blvd, Petaluma, CA - Highway 101 Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (1.5 meter receptor height)

Emission Year	2022
Receptor Information	Construction Residential MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

Lakes Environmental Petaluma Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0102	0.2120	0.1712

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.1683	0.1521	0.0162

261 N McDowell Blvd, Petaluma, CA - N McDowell Blvd Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Residential MEI Receptor (1.5 meter receptor height)

Emission Year	2022
Receptor Information	Construction Residential MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Construction Residential MEI location

Meteorological Conditions

Lakes Environmental Petaluma Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction Residential MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)*		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0008	0.0308	0.0363

Construction Residential MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)*		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0224	0.0209	0.0015

261 N McDowell Blvd, Petaluma, CA - Highway 101 Traffic Cancer Risk
Impacts at Construction Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2022	10	0.0102	0.2120	0.1712	0.139	0.016	0.0008	0.16
1	1	0 - 1	2022	10	0.0102	0.2120	0.1712	1.682	0.199	0.0095	1.89
2	1	1 - 2	2023	10	0.0102	0.2120	0.1712	1.682	0.199	0.0095	1.89
3	1	2 - 3	2024	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
4	1	3 - 4	2025	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
5	1	4 - 5	2026	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
6	1	5 - 6	2027	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
7	1	6 - 7	2028	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
8	1	7 - 8	2029	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
9	1	8 - 9	2030	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
10	1	9 - 10	2031	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
11	1	10 - 11	2032	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
12	1	11 - 12	2033	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
13	1	12 - 13	2034	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
14	1	13 - 14	2035	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
15	1	14 - 15	2036	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
16	1	15 - 16	2037	3	0.0102	0.2120	0.1712	0.265	0.031	0.0015	0.30
17	1	16-17	2038	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
18	1	17-18	2039	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
19	1	18-19	2040	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
20	1	19-20	2041	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
21	1	20-21	2042	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
22	1	21-22	2043	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
23	1	22-23	2044	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
24	1	23-24	2045	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
25	1	24-25	2046	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
26	1	25-26	2047	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
27	1	26-27	2048	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
28	1	27-28	2049	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
29	1	28-29	2050	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
30	1	29-30	2051	1	0.0102	0.2120	0.1712	0.029	0.003	0.0002	0.03
Total Increased Cancer Risk								7.62	0.901	0.043	**8.57**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00205	0.15	0.17

* Third trimester of pregnancy

261 N McDowell Blvd, Petaluma, CA - N McDowell Blvd Traffic Cancer Risk
Impacts at Construction Residential MEI - 1.5 meter receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2022	10	0.0008	0.0308	0.0363	0.010	0.002	0.0002	0.01
1	1	0 - 1	2022	10	0.0008	0.0308	0.0363	0.126	0.029	0.0020	0.16
2	1	1 - 2	2023	10	0.0008	0.0308	0.0363	0.126	0.029	0.0020	0.16
3	1	2 - 3	2024	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
4	1	3 - 4	2025	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
5	1	4 - 5	2026	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
6	1	5 - 6	2027	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
7	1	6 - 7	2028	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
8	1	7 - 8	2029	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
9	1	8 - 9	2030	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
10	1	9 - 10	2031	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
11	1	10 - 11	2032	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
12	1	11 - 12	2033	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
13	1	12 - 13	2034	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
14	1	13 - 14	2035	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
15	1	14 - 15	2036	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
16	1	15 - 16	2037	3	0.0008	0.0308	0.0363	0.020	0.005	0.0003	0.02
17	1	16-17	2038	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
18	1	17-18	2039	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
19	1	18-19	2040	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
20	1	19-20	2041	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
21	1	20-21	2042	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
22	1	21-22	2043	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
23	1	22-23	2044	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
24	1	23-24	2045	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
25	1	24-25	2046	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
26	1	25-26	2047	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
27	1	26-27	2048	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
28	1	27-28	2049	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
29	1	28-29	2050	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
30	1	29-30	2051	1	0.0008	0.0308	0.0363	0.002	0.001	0.0000	0.00
Total Increased Cancer Risk								0.57	0.131	0.009	**0.71**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00015	0.02	0.02

* Third trimester of pregnancy

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**9/30/2021**
Contact Name	Zachary Palm
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x117
Email	zpalm@illingworthrodkin.com
Project Name	Home Depot Petaluma
Address	261 N McDowell Blvd
City	Petaluma
County	Sonoma
Type (residential, commercial, mixed use, industrial, etc.)	Commercial
Project Size (# of units or building square feet)	136k sqft
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A ncomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google E[illegible] search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B [illegible]lue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Construction MEI: Distance Adjustment Multiplier	Construction MEI: Adjusted Cancer Risk Estimate	Construction MEI: Adjusted Hazard Risk	Construction MEI: Adjusted PM2.5
1000+	11308	SRM Alliance Hospital Services	400 N McDowell Blvd	37.2	0.06	0.05		Generators		2018 Dataset	0.13	4.91	0.008	0.01
950	13876	City of Petaluma Dept of Water Resources	202 N McDowell Blvd	0.29	0.00	0.00		Generators		2018 Dataset	0.04	0.01	0.000	0.00
1000+	19349	Raley's	157 N McDowell Blvd	0.00	0.00	0.00		Generators		2018 Dataset	0.04	0.00	0.000	0.00
1000+	22312	Friedman's Home Improvement	429 N McDowell Blvd	1.36	0.00	0.00		Generators		2018 Dataset	0.04	0.05	0.000	0.00
1000+	109964	City of Petaluma Water Dept	202 N McDowell Blvd	0.32	0	0		Gas Dispensing Facility		2018 Dataset	0.02	0.00	0.000	0.00

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

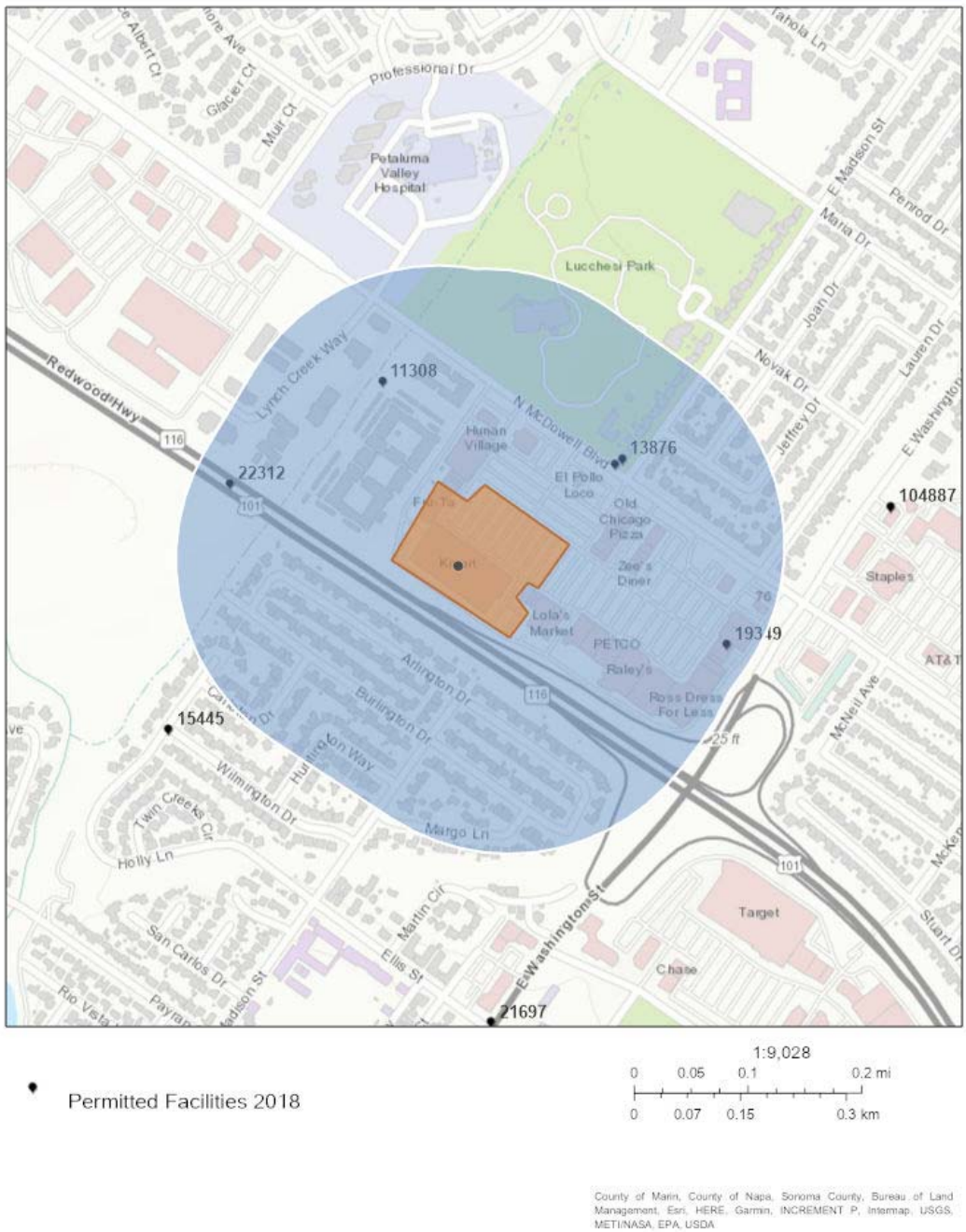
Date last updated:
03/13/2018

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 5,757,761.84 ft²

Sep 30 2021 11:23:11 Eastern Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	5	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	11308	SRM Alliance Hospital Services	400 N McDowell Blvd	Petaluma	CA
2	13876	City of Petaluma Dept of Water Resources	202 N McDowell Blvd	Petaluma	CA
3	19349	Raley's	157 N McDowell Blvd	Petaluma	CA
4	22312	Friedman's Home Improvement	429 N McDowell Blvd	Petaluma	CA
5	109964	City of Petaluma Water Dept	202 N McDowell Blvd	Petaluma	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	94954	Sonoma	37.200	0.060	0.050	Contact BAAQMD	1
2	94954	Sonoma	0.290	0.000	0.000	Generators	1
3	94954	Sonoma	0.000	0.000	0.000	Generators	1
4	94954	Sonoma	1.360	0.000	0.000	Generators	1
5	94954	Sonoma	0.320	0.000	0.000	Gas Dispensing Facility	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

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